

Research Report

Addressing the Educational Needs of Boys

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1. INTRODUCTION AND METHODOLOGY

1.1 Introduction

In March 2001, the Analysis and Equity Branch of the then Department of Education, Training and Youth Affairs (DETYA) commissioned the Centre for Learning Change and Development at Murdoch University to undertake research to investigate the educational needs of boys.

1.2 Aims of the Study

The aim of the study was to investigate how systemic factors affect the educational performance and outcomes of boys and how these can be addressed in the school context. These systemic factors include family, school and community environments, peer culture, student-teacher relationships, and teacher classroom practices. The research seeks to understand how these variables affect the educational experiences and achievement of boys and girls from different socio-economic status (SES) backgrounds and to determine which school and classroom strategies ensure the best academic and social outcomes for all students.

The focus of this Synthesis Report is to:

- identify and examine the relative importance of the above influences on student attitudes, expectations, aspirations and engagement with schooling.
- examine how students respond to the different pressures and influences on them and how these responses differ between boys and girls across SES groups and school/classroom types (including single and mixed-sex arrangements) as manifested in students' attitudes to school, school-work, subject choice, classroom behaviour and attendance, and their overall educational performance and outcomes.
- analyse how the above pressures and influences impact on boys' and girls' educational outcomes across SES groups and school classroom types.

A discussion and an evaluation of the specific strategies and programs implemented in the Case Study Schools to facilitate learning for boys is also included. On the basis of this analysis, we draw some conclusions about what schools can do to achieve positive academic and social outcomes for both boys and girls.

1.3 Methodology and methods

The research involved both quantitative and qualitative methodologies. There were three main components to the study:

- a literature review
- case study research in schools
- surveys of teachers and students

The literature review dealt with the issues listed in the Aims Section above (1.2). The research consists of a qualitative case study component and a questionnaire-based quantitative component. (See Appendix Two for the psychometric properties of the survey instrument.)

The qualitative component consists of 19 case studies of schools, both primary and secondary, involved in particular programs concerning boys. Originally there were 18 schools, but one school withdrew from the research after some initial data collection had been completed because of a change of principal. We have retained that school in this research report because of some interesting findings from the first stages of data collection.

The sample was a purposive one, providing a range of school types and a range of programs. Within each of the Case Study Schools there were various data collection methods. These included analysis of school documents and policies, and classroom and school ground observations. Additionally, in depth semi-structured interviews were conducted with the principal, deputies, counsellors, guidance officer, heads of department, teachers and up to four parents in each school. Students (at least 6 girls and 6 boys) were also interviewed in each school. In the primary school these students were drawn from the second last year of school, while in the secondary schools the students interviewed were from either the second year or the penultimate year. In each case study, focus groups were conducted with 6 teachers selected on the basis of their work in the school after consultation with administration. Focus groups were also conducted with two groups of students in each school, consisting of 6 girls and 6 boys selected from the age group that was targeted for that school.

A student questionnaire was also created for administering to all the students at the year levels being studied in both primary and secondary schools. The student survey also provides additional insights into school environment, attitude to teachers, bullying, and family and peer influences. A teacher questionnaire was created and administered to all teachers in 17 of the 19 Case Study Schools and provides an additional database to complement that obtained through the case study approach. These two questionnaires were piloted in two schools to check the validity and reliability of their psychometric properties prior to being administered in 17 Case Study Schools.

This Synthesis Report draws upon qualitative and quantitative data from the Case Study Schools.

1.4 This Report

This Report is structured under the following headings, corresponding to the major influences of family/community, school environment, peer groups, gender concepts and the inter-relationship between a range of factors. In so doing, the Report builds a picture of the range of intersecting factors and their relative importance that have an impact on student responses and interactions at school and ultimately on their learning outcomes:

(i) Family influence and out-of school environment

This refers to parental expectations and encouragement, family background, differing patterns of extra-curricular activities, including different reading habits, and community environment.

(ii) School environment and culture

This takes into account the influences of school culture and ethos, incorporating the public image and messages regarding learning and achievement expected of students, student/teacher relationships and their impact on attitudes and engagement, and single-sex or mixed-sex arrangements. Importantly, school environment also includes curriculum, teachers' pedagogical practices and a consideration of the extent of the development of a teacher professional learning community within a school.

(iii) Influences of peer groups

The association of poor school attainment with peer cultures that promote anti-academic and anti-success attitudes, delinquency and other anti-social behaviours and how SES background and gender influences these attitudes are considered here.

(iv) Influence of gender concepts on attitudes and behaviour

This section considers the overall effects of gender on attitudes to school, subject choices, classroom behaviour, and absenteeism across SES school locations. Attention is also given to the relationships between the SES composition of the school and boys' attitudes and expectations regarding learning and performance outcomes and post-school aspirations.

(v) The various inter-relationships between a range of factors

These factors include SES composition, school culture, gender, family background, peer group, teacher expectations, and how these impact on different attitudes to school learning.

Within a consideration of the above influences, Case Study data sets are explored to examine student responses across SES groups and particular school/classroom types. Some analysis is also made of:

- how students subjected to negative influences have succeeded in overcoming them;
- how positive influences have helped to bring about good outcomes for students otherwise 'at risk'.

Also outlined are what some of the implications might be for professional development for teachers and schools with regard to addressing identified issues in the performance of boys.

1.5 Report on Analysis of Case Study Schools

This Report begins with a brief description of each of the Case Study Schools. It then provides a preliminary examination of the currently available academic performance data for the Case Study Schools. This is followed immediately by a more detailed analysis of the various influences outlined above which are identified as having an impact on the educational and social experiences of boys and girls in the Case Study Schools. The research shows the

complexity of the patterns of evidence regarding academic performance and boys causing the majority of behavioural issues in schools.

1.5.1 Description of Schools

Full descriptions are provide in Appendix A in the back of the report

- Case Study A is a rural school, with a co-educational learning environment. While it is not considered disadvantaged, many of the students fall in the low SES category.
- Case Study B is a metropolitan school with a focus on middle schooling and boys' education. Boys outnumber girls 3:1 in the school. There is a mix of students in the school, reflecting a range of educational achievement.
- Case Study C is an all boys' school situated in a low-middle socio-economic area. The school has a high population of boys from culturally and linguistically diverse backgrounds, and this impacts on the school's overall academic performance, particularly in relation to literacy.
- Case Study D is a co-educational Catholic high school located in a semi-rural area. The school population comes from a differing socio-economic status. It also has a mix of different ethnic backgrounds. According to the school documents, the school tends to perform relatively well in terms of University Admission Scores.
- Case Study E is a co-educational government primary school. Students from the school come from a wide range of socio-economic backgrounds. The school is situated not far from the State's main female prison and there are students at the school whose mothers are imprisoned there. Others come from very poor families in the local area. However, at the same time, due to the school's good reputation there are children from wealthier backgrounds who come from outside the area.
- Case Study F is a co-educational government primary school located in an area of high unemployment and entrenched poverty (13.6% of the population are unemployed and over 25% live in public housing). The school has a culturally diverse population. A significant proportion of the student population has learning difficulties and in 1997/1998, 50% of year 2 students had been caught in the Year Two Net. In the last three years literacy results have improved dramatically as a result of the introduction of a whole school focus on literacy. Now only 14-20% of students are being caught in the Net.
- Case Study G is an all boys' Catholic school located in a satellite city. The boys at this school come from a variety of backgrounds. However, there are large numbers of students from low SES backgrounds at this school. It has recently formed a group of high achieving senior boys to promote academic excellence. Additionally, it has tried to promote cultural programs. It has recently formed a group to focus on boys' education, which has organised events such as a 'dads and lads' night.

- Case Study H is a co-educational government high school with 350 students in a small rural town, 250 kilometres from the state capital city and 40 kilometres from two large rural towns of 30-35,000 people. The students come from a range of SES backgrounds. The community is generally very supportive of the school.
- Case Study I is a large co-educational government primary school. The population is predominantly Anglo-Celtic. It has a focus on behaviour management. It has utilised a sub-school structure to promote care within the school and has single gender-based classes. It has recorded academic gains for girls in classes, but not a corresponding improvement for the boys in the gender-based classes. However, there was a definite improvement for boys in terms of a reduction in referrals for behaviour related offences.
- Case Study J is a large co-educational government high school situated in a large Queensland provincial city. There are 1400 students and about 140 teachers. Traditionally, the school has been attended by students from low SES backgrounds. However, a range of school reforms and programs (e.g. a new outcomes-based, success-oriented, non-graded Year 8 curriculum and the introduction of a soccer school of excellence) has attracted more middle class students to the school. The school also has a successful Job Pathways Program and outstanding sporting facilities. The English Department has been active in building a teacher professional learning community with focused professional development about subject English and the construction of masculinity.
- Case Study K is co-educational a government primary school located in an area of high unemployment and entrenched poverty. The school has a culturally diverse population. In the last few years the literacy results have improved dramatically as a result of the introduction of a whole school focus on literacy. This school works closely as part of an educational alliance with Case Study F. This school originally developed a boys' program to deal with literacy issues, but has recently formed a group called 'Which boys? Which girls?' to deal with literacy issues in a more nuanced way.
- Case Study L is a small co-educational (180 students) inner city primary school. It has a multi-ethnic population and the students come from low to middle SES backgrounds. It has a well developed teacher professional learning community. It does not have any specific gender programs. It also has a focus on creating democratic classrooms.
- Case Study M is a co-educational government K – 12 school in a very small rural town 400 kilometres from the state capital city and 100 kilometres from the nearest large rural town. There are 230 students. The town serves a mixed farming community. Virtually all primary aged children from the town/district attend the school, but many of the children from the higher SES are sent to boarding schools for their secondary schooling.
- Case Study N is a Catholic co-educational high school of approximately 700 students. It is situated in a metropolitan area and draws students from low to middle SES backgrounds. There are no specific boys' programs at this school.

- Case Study O is a small government primary school located in a low SES area in a large provincial city. Approximately 33% of students are Indigenous and the school attempts to ensure that Indigenous students and their cultures are valued within the school. It has an excellent support structure for students who are underachieving and a strong focus on improving pedagogies within the school. It has been a leading proponent of the 'Peace Builders' program currently being trialed within the local area.
- Case study P is a government coeducational high school with 600 students located in an ethnically diverse metropolitan area noted for socio-economic disadvantage, public housing estates and families struggling with issues like entrenched poverty, alcohol and drug abuse. The school has difficulty raising funds through annual voluntary contributions from parents. The school has a welfare team with a school-appointed Head Teacher (Welfare), two student advisers working with each year, a Home School Liaison Officer, plus an Aboriginal Education Assistant and a Pacific Islander Community Liaison Officer. There is also a school-appointed Head Teacher (Administration) who deals with attendance. The school has one extension class in each year, but the summary of results for the 2000 High School Certificate (HSC) show that most classes performed below the state average.
- Case Study Q is a government single sex boys' high school with 640 students in a metropolitan area that reflects a diverse mix of socio-economic status. The school has difficulty raising funds through annual voluntary contributions. The school is identified as a centre of excellence in boys' education, with the immediate past Principal noted for his expertise and conference presentations. The school boasts a focus on boys' literacy linked to a university study, visual arts, sports, and vocational education. Notable recent initiatives have been the formation of the Anti-bullying Taskforce, the Evaluation of the school welfare system, and the introduction of the Glasser system of discipline linked to a code of conduct. The school operates through teams, e.g. the literacy team and the welfare team.
- Case Study R is a coeducational government secondary school of about 1000 students located in a mid-size provincial city with high levels of unemployment and low SES status. In 1997 the school established a boys' project because of the low male retention rate to year 12 and because of poor academic performance of boys overall compared with girls. The school's reform focus changed to competency-based education and then in 2001 to a new focus upon creating a teacher professional learning community with a targeted focus on establishing a school-wide pedagogical vision aligned with outcomes-based assessment. Professional development about productive pedagogies has been central to the new reforms, along with structured time for teacher professional conversations. The dominant view within the school is that this pedagogy focused reform has been more successful in engaging both boys and girls in their schooling than the earlier approach. However, some staff still believed a focus on boys was required.
- Case Study S is a large (1200 students), long-established, non-government, all boys' secondary school with an outstanding academic reputation. In Years 11 and 12 boys are not allowed to choose a full science/maths program, rather they are 'forced' to choose a suite of subjects across the maths/science and social sciences/humanities divide. In lower secondary

the boys do two languages. The school's philosophy also emphasises 'balance' across its academic focus, extra-curricular activities and pastoral care. There is a formal pastoral care program structured into the curriculum, with Year Level coordinators and a school-wide committee.

1.5.2 Student Performance

There are different forms and qualities of performance data available from the Case Study Schools. What follows is the data which schools have at hand in relation to social and academic outcomes of students. Some of this data is anecdotal, while other data has been obtained from school documents. In some instances schools have analysed the available data and some have not. This lack of analysis on the part of some schools is indicative of the need for schools to develop research skills that will enable them to use data in ways which help them to develop appropriate responses to their students' academic and social needs. The research has shown very clearly the need for schools to collect and disaggregate their data for the categories of boys and girls in relation to both social and academic outcomes.

Case study E has some of the best available data. The school is renowned for its pedagogical practices and data on the school's student literacy performances on state wide year 2 literacy testing, grade 5 and grade 7 tests place the school well above the State and 'like schools' means. It performs extremely well in a number of maths competitions. The school was reported in the state newspaper as having the State's best record on literacy results. The principal at the school regularly did gender based analyses and has determined that there are no discernible differences in the performance of boys and girls on all academic measures in the school.

The quality of the teaching practices at Case Study E appears to benefit both genders, with boys and girls performing equally well academically. We have termed these practices 'productive pedagogies' as they are similar to those, which have been described by the Queensland School Reform Longitudinal Study (2001) and Lingard, Mills and Hayes (2000). Productive pedagogies have the following elements: they are intellectually demanding, connected to the students' biographies and worlds with purchase beyond the classroom, socially supportive and encouraging of risk-taking, and engage with difference. This form of pedagogy is not gender blind, but rather in connecting to the world, in supporting students and recognising difference, it brings to play often implicit, but nonetheless sophisticated understandings of gender issues. The effects of such pedagogies on the academic performance of boys in the school reinforce other research findings that have stressed the importance of teachers and their pedagogies to successful performance for boys (Trent and Slade, 2000; Rowe, 2000). This highlights the role that teachers play in contributing to particular school/learning cultures, and in producing positive educational and social outcomes for students. The influence and role of teacher knowledges, values and pedagogies, combined with the influence of school environment in terms of developing professional learning communities, emerge as important influences in terms of their impact on the educational outcomes of all students (QSRLS, 2001; Hayes et al., 2001).

This general finding is supported by the experience of a senior student at Case Study P, who has overcome adverse circumstances in his life and re-focused on school. This change can be attributed to the principal's and teachers' commitments to productive pedagogies and good teacher/student relationships. The student noted: 'Excellent teachers here, best teachers. I have been to three different high schools and (this one) has definitely got the best teachers'. Moreover, the school has received prestigious awards for its school and teaching quality. The school states that 'The staff and community at (this school) recognises the most significant factor affecting individual and whole school academic and social performance is the quality of classroom teaching. To that end, we have structured an intensive Training and Development program for all staff, which endeavours to enhance the capacity of every teacher to consistently deliver high quality lessons for every student, every day'.

This situation is verified by the principal at Case Study E who attributes the negligible differences between boys' and girls' performance at her school to the learning culture within the school. This learning culture is evidenced in the classrooms where students are stimulated, engaged and challenged. It is also evidenced in the staffroom where teachers continually reflect upon and theorise their practices. These staffroom discussions are one component of a strong teacher professional learning community within this school (Louis, Kruse and Marks, 1996; Lee and Smith, 2001), which other research has shown contributes to enhanced student outcomes (QSRLS, 2001).

Case Study S, an all boys' non-government school, has achieved outstanding academic results at the end of secondary school for a considerable time. This success reflects the alignment between the middle class parental culture and expectations and those of the school. This also reflects the school's academic focus and high academic standards, teaching of critical thinking skills, an emphasis upon demanding pedagogy, extensive professional development and creation of a teacher professional learning community. The principal of Case Study D identified the performance and achievement of boys as a problem. For example, in the school newsletter dated July 27, 2001, a report read:

Following an analysis of semester one reports for Years 7-10, I have extracted the following statistics:
Of the students identified for Outstanding Achievement the distribution for boys and girls was:

| | |
|----------------|-----------------|
| Year 7 | 6 boys 17 girls |
| Year 8 | 7 boys 15 girls |
| Year 9 | 5 boys 16 girls |
| Year 10 | 2 boys 14 girls |

We obviously have a problem and we need a think tank to address it.

These data, however, only tell part of the story. They do not give subject breakdowns or subject patterns of performance and only concentrate on the upper levels of performance rather than looking at the overall patterns for all students and then for boys and girls. Further

sophisticated data analysis would perhaps be more useful in developing policy solutions for all students at the school.

Evidence from Case Study F would also seem to suggest whole school approaches that do not necessarily focus explicitly upon boys, but upon improving the quality of both curriculum and pedagogies for all students, are effective for boys. However, having an understanding of gender issues relating to, for instance, boys and literacy seems to be important as a threshold basis of teacher knowledge for informing pedagogical approaches (see Alloway & Gilbert, 1998; Martino, 1997; Millard, 1997). For example, three years ago this primary school identified that the majority of students with literacy difficulties, who were being caught in the Queensland Year 2 Net, were boys. Subsequently, members of the staff have been involved in several conferences on boys' education, and are well informed in this area. The school is involved with a local program referred to as the 'Which boys? Which girls?' Project. The focus on improving literacy throughout the school has involved a whole school, as well as improved pedagogy/classroom approaches to reform, informed by understandings of gender. This appears to have had dramatic results, and the school's commitment and success in improving its literacy levels have received widespread recognition in Queensland.

School K is a similar school located close to School F. It too has had significant improvements in its literacy results. It has been part of a research project seeking to provide students deemed to be 'at risk' with the support necessary to improve their literacy standards. One teacher at the school describes this project:

It was basically aimed at identifying children, boys and girls, who are identified as being at risk, and by at risk we mean children who don't receive any extra support. That could include your ESL kids or kids who just fall below the average bracket but above the learning support or special ed kids, and also could include your gifted and talented kids who are sort of flat out in their learning and don't receive any extension work ...our school especially, we are keen to start with four different year levels. We were invited to work with a group of children in our class, identify the kids first, work with that group and try and increase their literacy skills and pretty much through a variety of strategies.

Through this research, which was originally entitled 'Which girls, Which boys?', members of the school's research team came to the conclusion that it was pedagogy rather than focussing upon particular gender issues which would improve students' literacy skills. The deputy principal, who is also the literacy coordinator, at the school comments:

We decided that we would really focus on text analysis and critical literacy. That's an aspect of our programme that we hadn't had enough focus on. We're doing all the other three sort of goals of the reader fairly well... the code breaker, the text user, the text participant – but that text analysis, it's still something that's a challenge to some of our teachers. With the other changes we've been making in our literacy strategy, our focus is assessment, pedagogy, curriculum and we've taken the pedagogy, we have to change the pedagogy here first from that philosophy of everyone sitting in rows, in little isolated boxes that are divided down the middle. And you would notice that. There's

not one room now with dividers. But when I first arrived at the school, they were those really big heavy boards on wheels... So we've broken down all those barriers first. When I first arrived here, my first teaching buddy when I was putting all my chairs out in groups, she said 'You'll never get the children at K to work in groups'. So they've been the challenges in pedagogy that we had to overcome. So we've done that, and we're looking at assessment and evidence-based teaching, data-driven teaching.

It is interesting that the research based literacy program operating at this school began as a boys' program but changed along the way. One teacher who was a member of the 'Which boys? Which girls?' group at the school, explains why the group at the school uses this title, and in doing so how the school's literacy program evolved to a focus on both girls and boys:

I got involved ... because I thought it was looking at boys in literacy and the problem boys have. X and I just went to a conference at Chandler looking at low-achieving boys while addressing the needs of the girls. That was pretty much more what I thought that we'd be doing, but the focus sort of changed as to what came out of it initially. And so we are looking at both of them, which is better in a way anyway because you've got to investigate needs. Yeah, I think that 'Which Boys? Which Girls?' is really like a question saying which boys and which girls are at risk, so it's a bit of a catch phrase.

The situation at Case Study A is quite different. It has a strong focus on boys. The academic results for boys at this school appear to be quite good. Four of the top five places in the Higher School Certificate were taken by boys in 2000. The school was very proud of the performance of the boys. This school has a heavy boys' education focus. Again there is a need to consider patterns of performance across the entire student population and through time for the most effective educational interventions to occur for boys and girls.

School G has an active boys' committee. This committee is operating within a school where there has been a significant attempt to collect data in ways which seek to determine both academic and social outcomes. Some of these different kinds of data, and the ways in which they can be used, are outlined at length by a deputy principal at the school:

...people can compare one school to another and they often do it on the simple basis of how many (high year 12 performers a school has), and there's a very poor comparison. We have a remit -- part of that enterprise education we talked about -- to make sure we provide an appropriate service for all of our kids. We have here a very broad range of ability, talents, qualities for kids, we've kids here in need of a lot of help through to kids who are very bright, very able, very independent in their learning. There's a fair spread, I mean, it's not that we've got a couple of kids who are not very bright and a couple of kids who are very, you know, there's a good sort of spread across the spectrum if you like.

So, we look at other things in terms of our performance: How well students are actually doing? Are they having a happy day? Can they sustain having a happy day? Do they feel fulfilled? Are they moving along from us either from one year to the next and their growth? Or are they being static? So if they move Year 8 to 9, is that perceived by them as a growth? Can we see there's growth there? And when they

leave us, again is there an opportunity for growth either in terms of career path they might take up or in terms of the further study they might go onto as well?

On those sorts of measures, which are not as nice and hard and crunchy as the sort of data you get from the Board, then I think that the school actually performs very well.

The deputy admits that these data have not been used in ways yet which have impacted upon the pedagogies utilised in the school. However, they clearly are represented in the ways in which this school has developed an extremely supportive pastoral care program. The use of anecdotal data advocated by these deputy principal points to the need for schools to develop action based research projects, like School K, which determine the needs of their own school population. This is one important component of a school's approach to developing a locally based policy.

Anecdotal evidence from School R suggests that their new pedagogically focused reform approach has resulted in more engagement and better academic outcomes for all students. This approach had grown out of and ultimately replaced the schools' earlier boy-focused approach to improving boys' academic performance. This policy shift has caused some debate within the school. Data analysis was also part of the professional conversations within the school's learning community

The research has indicated very clearly the need for schools to collect data on academic and social outcomes and to disaggregate the data as a step towards effective professional interventions. Professional discussions about data need to be at the core of a school's teacher professional learning community.

There is the potential that an emphasis upon competitive academic performance could lead to a neglect of desirable social outcomes from schooling. Questions need to be raised in relation to the extent to which students, both boys and girls, who do not fit into the top category of performance are being challenged or assisted in these environments.

1.5.3 Behaviour management issues, school cultures and their impact on student learning

According to both the qualitative and quantitative evidence, more boys than girls are identified as exhibiting negative behaviours and attitudes towards schooling.

Behaviour management of boys emerged as an important issue across most of the Case Study Schools, regardless of SES composition or whether they were single sex or co-educational. How this problem was perceived and dealt with in the various schools was often informed by particular understandings staff had about boys' behaviour which contributed in significant ways to the development of particular school cultures and learning environments. Of the co-educational schools included in the sample, data suggest that boys are perceived as presenting more difficulties than girls in terms of behavioural issues. This is consistent with a substantial amount of research (Collins et al., 1996; House of Representatives Standing Committee, 1994; Mills, 2001; Milligan et al., 1992; Fitzclarence, 1993; Morgan et al., 1988; Duncan, 1999). In some instances, the Case Study Schools have sought to address behavioural issues in terms of gender, in others they have not. In Case Study School R, the approach of the school changed

from a specific focus on boys to a focus on pedagogy and on-going teacher learning with apparently more success.

Across nearly all Case Study Schools there was evidence of boys' disruptive behaviour being associated with particular attitudes and values understood on certain occasions in terms of 'acting cool', and at other times as a protest against school and school work (see Kessler et al., 1985; Connell, 1999; Jackson, 1998; Martino, 1999). This kind of behaviour cut across SES locations and appeared to be related to gaining approval within the peer group. (Mac an Ghaill, 1994; Walker, 1988; Epstein et al., 1998; Martino & Pallotta-Chiarolli, 2001). However, it did seem to be the case in School S, an elite all boys' academically oriented school, that a broader range of ways of being a middle class boy was acceptable because of work within the school culture to value a range of extra-curricular activities, such as debating, public speaking, music, as being equal to more traditional sports such as rugby and rowing. Many students in the research schools also suggested that there were more peer group pressures on boys than on girls, or at least that the pressures upon boys were more strongly enforced, both physically through bullying and through verbal put-downs, particularly through the use of homophobic behaviours. Survey data appeared to confirm that boys have peer relations that are less favourable to schooling when compared to girls' peer relations.

The school in Case Study A has identified the behaviour of boys as an issue of concern. The project team did observe that boys in the school were more inclined towards 'boisterous' behaviour than girls, both inside the classroom and in the playground. This issue was raised in a discussion paper produced by the school:

A great deal of poor and destructive behaviour exhibited by boys is directed at female teachers. In term 4, 27 boys [from a total of 32] were suspended for violence and disobedience. 16 of the 20 suspensions of boys for disobedience came from students with low academic and literacy achievements.... Of the suspensions, 3 students accounted for 8 of the suspensions.

The detention records at Case Study D also indicate that boys' behaviours are more of a concern than girls' behaviours. This reflects the systemic data patterns on this issue. Thus, of the 19 Year 12s kept in for Tuesday afternoon detention, only one was a girl. Similarly, only one girl was among the 20 Year 9 students who had been put on detention in 2001. The record of discipline concerns kept by the Head Teacher provides a slightly different view, with 32 Year 12 boys being referred for infringements as compared to 37 Year 12 girls. By contrast, 28 Year 9 boys had been referred to the Head teacher, but only 14 Year 9 girls.

There appears to be some difference in the types of infringements reported for boys and girls, with boys being more liable to be referred for disciplining on the basis of rudeness to staff, swearing at staff, fights and breaking of property. Girls' infringements included excess jewellery and inappropriate haircuts. Some infringements, such as truancy, lateness to class, and failure to complete assessment tasks, were common to both groups.

Teachers at School R had developed a grid consisting of Bloom's Taxonomy set against Gardner's multiple intelligences. This was utilised by teachers to ensure a broad range of

assessment practices. Teachers argued convincingly that this approach better met the learning needs and learning styles of more students, both boys and girls. The school had also developed a whole school vision about pedagogy that linked to the attempt to practise productive pedagogies in all classrooms. Furthermore, the school had implemented an outcomes based approach to assessment across all curriculum areas in the junior school, aligned with curriculum purposes and productive pedagogies. A lot of professional conversations and development had gone on within the school about these issues. The assessment approach mandated certain outcomes that all students had to achieve across all curriculum areas. In identifying early learning difficulties of certain students through an outcomes based assessment approach, the teachers believed many behaviour problems were averted. One deputy principal noted:

I think the reason why we don't have the behaviour management problems, even though we have millions of them, is because going through this process, we've actually been able to say – identify much earlier that the child might have learning difficulties. And because of that, we've then really forced ourselves to have a much more coordinated approach in the last 18 months in particular to the fact that we can't keep going this way.

The principal also believed that giving students an opportunity to re-do work and reach the standard also changed many students' perceptions of teachers and the learning process. The principal observed, 'I think the kids also see the teachers in a different light. The teacher actually goes back and gives the chance to the kid to re-do something. I also think the student also tends to gain a bit more confidence in the teacher'. The principal also argued, on the basis of behaviour data, that the school focus on pedagogies aligned with outcomes based assessment had meant fewer behaviour problems in classrooms. School suspensions were now as likely to be because of inappropriate behaviour in the school grounds as for classroom misdemeanours.

The interview data indicates a perceived difference in behaviour management issues emerging for boys and girls. Across all the schools, boys were seen as more disruptive. Whilst the analysis of students' responses to the student surveys revealed that students' attitudes to these issues do not vary greatly by gender, there is some evidence in the form of responses to individual items, and sub-scale responses that support the argument presented thus far.

The survey results indicated that in general both boys and girls disagreed with the proposition that they disrupt class. Twenty-four percent of secondary boys admitted to disruptive behaviour compared with fourteen per cent of secondary girls. Primary boys did not significantly differ on this item from secondary boys. However this scale does not indicate the severity of the disruption; it is possible then that boys disruptive behaviour is more intrusive.

Boys were also more likely to agree with the proposition that they bullied other students. Recoding responses to find the proportion of students who admitted to bullying, does not indicate any significant difference between genders in the rates of admitted bullying. Thirty per cent (29.9%) of boys compared with twenty-two per cent (22.4%) of girls admitted to

bullying. Both boys and girls reported that subject area influenced their attitudes and behaviour.

There was a view expressed by some girls and some boys that boys were more harshly treated than girls in respect of some behaviours. That is, it was believed that the same behaviour from a boy resulted in harsher treatment for the boy than for the girl. The survey of secondary students revealed that boys were more likely to disagree with the proposition that boys and girls are disciplined equally for bullying. The average response for girls to the question was mild agreement, while the average response for boys was disagreement.

This is a phenomenon that has been identified and explored in other research (see Kenway et al., 1997; Skelton, 2001; Francis, 2000). Francis (2000, p. 137), for example, found that 'boys are told off more than girls because they tend to be louder, more overtly disruptive and to draw attention to themselves more than do the majority of girls'. It might be the case that boys' generally more disruptive behaviour in class, as evidenced in most of the Case Study Schools and in the research literature, means that teachers treat boys more harshly than girls for similar behaviour. There is possibly an anticipatory logic to these practices. This can lead to a tension for some teachers between giving priority to behaviour management or pedagogy, an emphasis on control or educating. It might be the case that some teachers emphasise control with boys rather than pedagogy. There are also possible tensions between teachers' conception of the ideal student and boys' behaviour in class. There are also issues to do with gender-based differences in behaviour. It is possible that teachers' conceptions of the ideal student are closer to stereotypical perceptions of a girl rather than a boy (Trent & Slade, 2000; Skelton, 2001). At the same time we need to consider the possible negative outcomes for girls in coeducational settings of teachers focusing upon boys' behaviour and attention seeking, while also recognising the possible negative effects for boys (see Kenway et al., 1997).

Parents at School R also argued that some teachers held negative views of boys. For example, one parent observed, 'We have so many people in this school who perceive boys as being naughty, who develop a poor rapport with them...and never really see the positive side'. Another parent confirmed this type of claim and noted:

There are so many teachers in our school who do not show boys respect, who expect respect in return, and therefore get up on their high horse frequently. 'How dare you do this, how dare you do that, don't act like that in my class...You need to do such and such'. Rather than respecting them for what they are and what they are capable of achieving with the behaviour that they have, because sometimes you can turn what are poor behaviours into really positive behaviours by really encouraging some features that boys have that are quite endearing.

This idea of the ideal student is confirmed by the Student Services Manager at Case Study I who talked about instructing 'problem boys' how to be a proper or ideal student. He reiterated the need to teach students important lessons and, hence, strategies for dealing with teachers with whom some of the boys were experiencing difficulties. He talked about how he was joking around with a student, but beneath the humour there was a level of seriousness and a lesson about how to relate to teachers in order to have them respond favourably. There are

certain kinds of desirable or ideal behaviours that teachers expect, and the Student Services Manager was instructing the boys that being a student is a kind of game with rules:

I always tell kids and I always make a stupid joke -- just did it half an hour ago -- I always say 'Do you want me to get your teacher to give you extra marks without trying hard?' I reel them in and I tell them, 'Make sure you've got the notes if you need them' as soon as your teacher walks in 'Get this out and ...'. So it's a bit of a game. Remember you've got to sit like you're interested, make sure you're on the edge of your seat or at least facing her. Look like you're interested so when she walks around the room. Follow her. Ask questions. 'Excuse me, can you tell me what you mean?' Don't ask the same question she's just answered because she'll probably shout at you. Nod, mmmmm. Talk, talk to her, ask questions about her life, 'What did you do on the weekend, miss?' So when she's sitting down 10.30 at night marking your report she thinks 'Oh that boy, Wayne, he was interested in what I was talking about'.

This is particularly interesting given the boys' focus group discussion at Case Study N, which highlighted that it is girls who know how to relate to these teachers in precisely the manner outlined by the Student Services Manager above, and which, as a result, leads them to be favoured by teachers in the boys' eyes. In other words, girls are willing and make more of an effort to be pleasant to teachers and to relate to them, whereas the boys do not think that it is 'cool' to relate in this way and, in fact, consider it to be about 'sucking up' to the teacher.

Single sex and coeducational arrangements

In relation to single sex schools and classrooms, the data suggest that that there is no clear consensus on the impact of these arrangements on behaviour management issues. For example at School G, a Catholic all boys' secondary school, two boys who had come from co-educational schools claim that they behaved much better in the single sex school than they had in their previous school. However, they also noted that the relationships between staff and students were better at this school than in their previous schools; thus perhaps suggesting it is the quality of the relationships between students and teachers, rather than the gender of the students in the classroom or the school, which impacts upon behavioural issues within this school.

This suggestion is reinforced by numerous comments by students in other schools that it is the relationships between teachers and students, and students and students that impact most upon the ways in which boys behave in class. For example, at School J, a provincial city coeducational government school, two male students in year nine who had recently left a prestigious all boys' private school, claimed that the teachers at their current school were far more approachable and relaxed in relation to students than they had been in the prestigious school. At this same school, a couple of Year 12 Boys had been suspended for behaviour deemed inappropriate by the female deputy, but which was apparently acceptable to a senior male teacher. The acceptability of these boys' behaviours to this male teacher might very well represent gender collusion, as has been cited in some of the research literature (Mills, 2000, Skelton, 2001, Roulston and Mills, 2000).

The boys at Case Study G who had come from a coeducational school believed that the single sex arrangement was not good for them socially. This is complemented by the comments from the boys at School J above, who stated that it was 'a bit strange' at first having girls in their classes, but that 'you get used to it after while, because they are normal people'.

In Case Study I, a government primary school, which had introduced some gender based classes in Years six and seven, girls at the school claimed that they liked the arrangement because it meant that their learning was not disrupted by the behaviours of the boys. They also said that they felt more comfortable about discussing issues relating to growing up and their bodies. A difference according to these girls was that they were able to learn in an environment that was 'less rough'. Some of the boys in the single sex classes at this school said that they had more fun in these classrooms, which tended to focus on sport and 'boys' things', but that there tended to be far more arguments amongst the boys than in the coeducational classrooms.

Case Study S, an all boys' non-government school, with its whole school emphasis on balance between the academic curriculum, extra-curricular activities and a strong pastoral care approach, appeared to manage behaviour issues amongst its middle class boys very well. Teacher consensus at the school was that very structured requirements for boys, particularly in the junior secondary years, were necessary to good behaviour and to focus on academic work. The principal made the point that while he had specifically attempted to broaden and soften the school culture, that the boys themselves (and sometimes their families and the broader culture) still created their own hierarchies of valuing extra-curricular activities. This sometimes set up some antagonisms between some boys.

The teacher survey data indicate that, whilst overall teachers believed that single sex schools could be beneficial, this preference was not significantly influenced by the gender of the teacher. The same was true of single sex classrooms.

Somewhat similar to the situation in School R, the deputy principal in Case Study P highlighted the significant role of the particular school culture, professional development and the idea of a professional learning community in addressing behaviour management issues:

The only way you can give them the teaching strategies is to continually in-service, taking up the whole process of behaviour management, taking it up at a faculty level, an executive level, a whole school level, staff conference thing, extra afternoon workshops...what to do for kids, effective teaching strategies, engaging kids, all of those sorts of things. You have to continually in-service. You can't expect a teacher to know something without helping them to do it, especially in places like this, it is too difficult.

1.5.4 Subject Choice

With some exceptions, notably School S, data collected from the high schools in the sample suggest that students are commonly tending towards traditionally gendered subjects. For example, although Case Study D displayed posters encouraging boys into non-traditional subject areas, a student survey demonstrated that boys tended to favour Technology and Sport,

while girls tended to favour English, Art and Drama. Teachers also had the view that while both boys and girls undertook Humanities subjects, more girls took History and more boys took Economics. In general, boys did not appear as keen on subjects that involved reading and writing. Comments from Year 9 boys include:

Some subjects are [interesting] and some aren't like taking notes and stuff.

Yeah, like, I prefer when we have discussions and stuff like that where you can say your bit, like the whole class is in. I find that a bit better.

Only in subjects [like] English and RE (Religious Education) where we just get sheets and take notes and we don't do much practical work. It's a bit boring. Like subjects like electronics and computers and woodwork where you actually do stuff, it's practical and have discussion. It's better than just taking notes sometimes.

Student statistics from Case Study A suggested that boys and girls in the school were opting towards traditionally gendered subjects. For example, substantially more boys were enrolled in Physics, Woodwork and Metalwork, while more girls were enrolled in Hospitality. Nevertheless, girls stated that they did not feel constrained by traditional female subject choices, but made their choices on the basis of future career prospects, even though some broader evidence would suggest that male subject choices complement university entrance and future labour market aspirations better than do those of girls (Collins, Kenway and McLeod, 2000). The principal at Case Study A also described the role that the teacher-student relationship plays in terms of subject choice: 'Teachers, with their attitudes towards the kids have a major bearing on it as well ... so subject choices are influenced by teachers that are teaching the kids'.

It was evident at Case Study C, a 'boys only' school, that the Humanities do not carry the same status as Mathematics and Science. Interviews suggest that Mathematics and Science are seen by both students and staff as passports into high status, and high paying, jobs. By contrast, the Humanities are seen as areas of the curriculum where there are not very many certainties, and are therefore considered 'risky' in terms of University entrance.

School S, an academically focused, all boys' non-government school, had a distinctive policy that required all boys to choose subjects from across the Maths/Sciences and Social Sciences/Humanities divide in upper secondary school. This policy was an integral component of the school's commitment to a broad liberal education for all students. In effect, it meant that the typical gendered pattern of subject choices in post-compulsory schooling was not evident in this school. It should also be noted that this school did not offer 'voc ed' subjects or other more instrumental curricula domains, reflecting the school's philosophy and its middle class clientele. In contrast, at School R in a provincial city serving a low SES community, a teacher commented: 'Even in addressing the needs of boys with voc ed, we have gone lopsided, the academic is minimal, the voc ed is lopsided for senior schooling because of the reflection of needs, community, social, all sorts of things'. The contrast between Schools S and R is reflective of SES differences.

An activities-based curriculum, introduced at Case Study B, involved the first 30 minutes of every day being devoted to undertaking some type of physical activity such as walking, jogging, swimming, bike riding or dancing. It is worth noting, however, that at this school no boys were enrolled in dance. There was a perception among the students that the boys were not given the option of enrolling in the subject. One boy, however, stated that he did not think that any boys would have wanted to enrol in the subject. There is a way in which boys' conception of what it is to be a boy circumscribes their subject choices, perhaps more so than conceptions of what it is to be a girl circumscribe girls' subject choices. (On the topic of school-boys and dance, see Gard, 2001.)

Evidence from many of the case study schools indicates that cultural and peer pressures are central factors in boys' selections of subjects. For example, at School J, when talking about two boys studying dance, one boy stated: 'Girls can sort of do guy things, whereas if a guy did something that a girl does, then other people call him gay' This is borne out by a teacher at the school who notes that when it come to boys doing drama or dance: 'The perception of a lot of students is that they're poofs.' At school N, the counsellor identified a similar phenomenon related to boys' policing of acceptable masculinity. She indicated that boys:

...seem to have a fairly narrow set of behaviours and I think that the boys are quite restricted by it. For example we had our school production... it was Joseph and his Technicolour Dreamcoat. Joseph didn't have lots of brothers he had lots of sisters, it had to be changed to brothers for this school because there were no boys who would take part...

and

It may be... that's why the boys didn't join Joseph and his Technicolour Dreamcoat production, because that's a gay thing to do.

The principal at School N believed that the problem of gender and subject participation for boys could be solved by encouraging the 'footy players and the soccer players' to become involved in non-traditional masculine pursuits. There are, however, limitations to this strategy, in terms of addressing the issue of power that these boys wield over other boys in the first place and the accompanying need to encourage those boys to reflect on their use of power:

I know other schools, like where my kids go, they've got specific programs in place to encourage boys' dance and so on. Because one of the best things you can do in schools is to try and get the footy players and the soccer players to be able to get up and dance. If you can form a male dance group or something with guys who are your machos then half your problems are solved, because it's okay to do that. No longer do you have this sense that it's not cool to get up and be involved in cultural activities or community service or whatever the case may be.

However, he makes the point that there are limited financial resources available to support the implementation of such a program at a lower SES school.

The principal, using a stereotypic interpretation of Mediterranean masculinities, attributed the boys' unwillingness to cross the gender divide in terms of subject choice and participation to the traditional sexist attitudes about gender roles upheld by the fathers of boys from culturally diverse backgrounds:

I still think it's the ethnicity and as much as I love the kids because of their cultural diversity, they are absolutely gorgeous kids and so, so friendly compared to my middle class school, but the reality is that along with that comes the ethnic influence. And dad doesn't want his Italian son to be involved in school dance or anything like that, no, he can be in the school soccer team but no way he's going to get up in front of the school and sing at mass or whatever the case may be ... [it's related to] traditional roles, and women are put down. A lot of our kids come from Portuguese families where ...the women are put down. It's that macho thing coming through again, women are inferior in the eyes of the boys and the dads.

It should be noted that boys' avoidance of humanities subjects also steers them away from areas of the curriculum that have the potential to engage them in critical reflection on issues of gender, (Lewis & Davies, 1989; for a discussion of this issue see Kenway et al., 1997; Gilbert & Taylor 1991). This applies equally to girls and to their participation in the gendered curriculum and the implications of this for their post-school labour market options (see Collins et al., 2000).

There are also costs to girls of this gendering of the curriculum that need to be considered, particularly in terms of their participation and performance. Some girls specifically mentioned their dislike of doing sport with the boys because the latter tended to tease them. One girl commented that:

I seem to like school except for like days that the sports on with the boys because I don't mind doing sport on a Monday because that's just with our class but on Wednesday we always have sport with the boys and stuff and I don't really like it.

Another said:

Every Wednesday you know you're up for getting teased by the boys about being slow or something or missing the ball when you go to catch it.

Girls at other schools shared these sentiments.

This supports the view that specific interventions are needed to encourage boys to reflect critically on their behaviour and what it means to be cool. This would involve more than just getting the cool boys to cross the gender divide in terms of subject choice and participation. An interesting comment, though, from one of the girls at School I did point to the fact that the boys who do not play the cool sports, such as footy, are different in the sense that they are described as being more 'kind'.

The girls also said that they preferred single sex classes at this school for art and sport for two reasons. Firstly, in art this afforded them the opportunity to do more 'girlie stuff', which raises the issue of the need for critical reflection in these gender based classes for girls. Secondly they found it easier to enjoy participating in Sport and Health.

Once again, the students reiterate their preference for doing certain subjects and discussing particular topics, such as those related to sex education, separately from the boys. While gender-based classes might be conducive to addressing particular kinds of topics for both boys and girls, the question is one that still has to do with pedagogy. Are the boys and girls being encouraged to reflect on their behaviour and how they relate to one another and on their participation and learning at school? These are critical questions, given the emphasis in the literature on the nature of the effects of gender on boys' and girls' participation in the curriculum at school. A girl from Case Study N illustrated this in the following way:

I don't think that they're (boys) interested as much, they're like more interested in doing sport and hands on things, like woodwork, metalwork, stuff like that. Well I know because I have two brothers that when we get home from school they hate doing homework, they hate sitting down, they want to go outside and they want to run around and everything. I just don't reckon that they like it as much because they have to actually sit down and use their brain.

What needs to be emphasised is that across all Case Study Schools the role of the teacher and his/her pedagogies emerged as a very significant influence in terms of the capacity to impact on students' engagement and participation in the curriculum. For example, in Case Study N, a Catholic, co-educational high school, both boys and girls, aged 14, talked about certain subjects being boring and they attributed this to the teacher and to the pedagogical practices executed in those classes, rather than to an issue of the gender differentiated curriculum or knowledges. The following girl from this school spoke about her participation in maths and English, but makes the point that the former subject could be made more interesting and draws attention to the role that pedagogy might play in this:

Student: I think maths is the most important as well, because everything nowadays you need to have mathematic skills to do like your job and that. Most important but the most boring ... You just sit there doing figures and everything, the whole class. There's nothing creative to it. Like English and that you've got like stories and that you do, but maths is just work, test; work, test.

Interviewer: Do you think it could be made more interesting?

Student: It could be ... Like not copying off the board so much and that. You could have work sheets and that, that are fun kind of thing, but actually have a learning point to them. Like games and things that have a learning, like you're learning something but you're having fun while you're doing it. That's just one point.

The Year 9 focus group girls at School I also mentioned that they liked science because, 'You get to do like experiments, have fun, do group work as well' and the 'teacher jokes around'.

However, the Year 9 boys at the same school had a different teacher and talked about hating science because of the teacher's pedagogy. They complained about having to do too much writing and just copying notes from the board, and the learning tasks were considered to be routine, repetitive and boring:

Yes because people had her last year and they got a lot of writing as well. Because we had Miss X last year, she joked around a bit like she got serious when it came to doing work and that's alright because you've got to do it. But like she done a lot of experiments with us. This year she kind of skipped a few, not a few, mostly pretty much writing. It's not interesting to learn.

The boys also made the point that the pedagogy was not challenging enough in other subjects like maths:

Sometimes [maths] gets like boring, it gets like the same thing and it's like not hard enough, sometimes just can't be bothered doing it or it's not actually got a bit of a challenge. It's like, especially maths, it's mostly the stuff you learnt that in like Year 4 or something, some of it and you're still doing it now.

Similarly, for these students, English classes were also considered to be boring because of lack of variety. The same boy commented:

And like our maths teacher, either we work out of the book or he gives us a sheet that we have to fill in. And it's just so boring because it's like the same questions for a whole week, and you almost can't handle it sometimes. You just want to sit there and fall asleep or something.

The girls at School N made similar comments about teachers in terms of their capacity to make the lesson fun or more interesting:

It's also the teacher I think that you get, because they make it more fun or if it's just boring.

And

It depends how they explain things too. Some teachers explain it and then other teachers just say, 'Do the work sheet, and you've got to figure out how to do it yourself'.

This need for teachers to consider their pedagogies is a theme running through all of the student interviews, and indeed pedagogical considerations were present in many of the schools that had good student outcomes. This research indicates that students' subject participation requires an analysis that draws attention to the role that effective pedagogies play in enhancing the engagement of both boys and girls in learning. This will be examined in greater depth throughout the Report. School S also showed another way to broaden the subject choices of boys in the upper secondary years through forcing choice, underpinned by a commitment to a

broad liberal education for all boys. It must be remembered, however, that this is a long-established all boys', non-government school, with a history of academic excellence and a middle class student base.

1.5.5 Students' Attitudes Towards the Curriculum

The survey data provide some useful background on the gendered nature of students' attitudes towards learning (see Table 1 below). For instance, it is evident that in general boys rated English as more difficult and less relevant than did girls. Boys also seemed to identify English as a girls' subject. This resonates with other qualitative research where English has been described as either a subject for 'girls' or 'poofters' (Martino, 1997). The association of English as a 'reading and writing' subject may also explain boys' dissatisfaction with English. The survey data shows that girls had a higher reported agreement with the proposition that they enjoyed reading books and discussing them, whereas boys were less supportive of this proposition, and that boys were more in agreement than were girls that mathematics was easier than English because of the lesser requirement of writing in mathematics. However, it should be noted that in the first instance neither value on this survey item exceeds the notional scale midpoint (3.5), indicating that neither boys nor girls expressed a strong interest in reading books and discussing them; and in the second, that the average response from both boys and girls was below 3.5, indicating general disagreement. So while some boys were likely to agree with this proposition the majority were not.

There are also gender issues relating to technology within the curriculum that need to be considered by schools. For instance, boys were more likely to agree that computers would motivate them to work harder than did the girls. This perhaps would suggest that boys felt more comfortable with computers than did girls. Indeed, boys were more likely than girls to claim that they knew more about computers than their teachers. The data would seem to suggest that a greater use of computers throughout year levels and curriculum areas, accompanied by professional development for teachers on ICT, would benefit boys in terms of motivation and girls in terms of exposure to new technologies.

Table 1: Mean item scores for teacher scale.

| | Gender | |
|--|-------------|-------------|
| | Male | Female |
| I feel best working in small groups | 4.03 | 3.98 |
| I prefer to work alone | 3.23 | 3.27 |
| I like answering questions and doing short exercises in class | 3.30 | 3.36 |
| I like reading books and discussing them in class * ^a | 2.78 | 3.07 |
| I prefer facts rather than fiction | 3.23 | 3.06 |
| I tend to disrupt the class to get attention | 2.73 | 2.54 |
| I tend to disrupt the class when I don't understand. | 3.00 | 2.86 |
| I like listening to teachers in class. | 3.40 | 3.24 |
| My teachers explain things clearly in class | 3.40 | 3.21 |
| My teachers explain things differently to boys and girls. ** | 3.12 | 2.79 |
| Maths is made easier because there is less writing than other subjects.* | 2.59 | 2.28 |
| English is a difficult subject * | 3.37 | 3.01 |
| English is a better subject for girls. *** | 3.32 | 2.75 |
| I don't see the relevance of the subject English ** | 3.06 | 2.68 |
| I would work harder if I could use computers more. *** | 3.71 | 3.19 |
| I know more about computers than my teachers. *** | 3.73 | 3.09 |

a. * p < .05, ** p<.01, *** p<.001

Note that the survey uses a six point scale with 1 representing strong disagreement, and 6 representing strong agreement. Values less than 3.5 indicate disagreement, and above 3.5 indicate agreement. Numbers bolded have a significant difference between the mean (average) response for each sex.

The survey data provide a general overview of differences between girls and boys on the survey items. However, there is a need for care when using the above data. The survey data do not provide indications of differences amongst 'boys' and amongst 'girls'. The interview data highlight many of these differences. For instance, some boys did like English and some girls did prefer maths. Thus, whilst this broad set of survey data indicates trends, there is still a need to examine localised data from a 'Which girls? Which boys?' perspective.

2. FINDINGS FROM THE RESEARCH

2.1 Factors Influencing the Educational Experience of Boys

2.1.1 Family influence and out of school environment

The family environment was identified by a number of teachers as being a key influence in terms of students' attitudes to school and their behaviour at school. There is a huge amount of research literature to support this observation (e.g. Connell et al., 1982). In many cases staff adopted deficit models of parents and students to explain some students' lack of achievement and behaviours. For instance, a comment from a teacher at Case Study A was:

There's a lot of children who are at risk because they might initially come from very dysfunctional families where the way of dealing with everything is with personal aggression.

A similar comment was made by a school counsellor in Case Study H, and added that the school was expected to solve these problems:

A number of our students 'at risk' come from low SES/dysfunctional families. Often they bring their problems into the school and expect the school to solve them. Their kids get little support at home.

The health and physical education teacher elaborated further:

The parents are a major influence. Where they come from has a major influence on whether the kids accept school or not accept school.

The link between parent attitudes to schooling and student attitudes was borne out in a focus group conducted with four male students at the school. All students had discipline problems (three were carrying conduct cards, and one had been suspended twice). The students contended that, with the exception of one mother, their parents hated school and did not see school as important.

Two parents from the same school also argued that problem students were mostly boys from 'dysfunctional' and/or 'transient' families. Mostly they associated this with low socio-economic status families. Some teachers attributed part of the blame for student misbehaviours to single parent families. This was the case with a teacher from Case Study B:

They all had parents that were really concerned about them and I had a lot of contact with the parents of these kids but they were all single parents and most of them were working and although they were doing their best for their children, they just did not have the support to sort of insist. You could almost see that there would be a stage with the parent and the child interacting where the child wanted to go to the disco or stay out late or go to this party or whatever, and the parent would say

‘No, I don’t think you could’. ‘Oh but ...’ The parent would get worn down because they just don’t have that sort of partner or extended family back up.

In Case Study M a hyper-masculine culture was strongly embedded in the small, closely-knit rural community and impacted significantly on the boys’ attitudes to schooling. The school culture was described by the school principal in the following way:

The thing about if you’re a boy you played rugby and you drank. And you always drank before you were old enough and the fathers encouraged that. And that was the activity you knew on weekends. You went to the rugby, you had a few beers or quite a few beers ... That’s what boys were expected to do. And that goes hand in hand that the concept of school is not that important as long as you are one of the boys. Then that’s all you need to do. And that is where the recognition of success comes from. If you are a good rugby player or good sports person, and you can drink with the rest of them, a lot of the fathers see that as the way their sons should end up because that’s the role model they’re portraying. If that doesn’t change, I mean how can you say when you’re talking about alcohol abuse to kids, you shouldn’t drink when that is what their fathers do ... That’s a very difficult message to get across and we are actually trying to tell these kids not to follow their fathers’ footsteps.

Not all teachers in the Case Study Schools subscribed to the deficit model of the family. For instance at School O, a low SES school with a high Indigenous population, the learning support teacher commented in response to a question relating to whether or not issues of poverty had an impact upon the students’ achievement at that school:

Not necessarily. In some cases I would say definitely, but I’ve seen some children here who come from very impoverished backgrounds who are just flying. It comes down to the children’s natural ability to begin with, but also comes down to whether – you know, you can come from an impoverished background, but still spend a lot of time with your children. I think that quality of the relationship that child has with their parents very, very important... I’ve got the most wonderful parents in my Year 2 classroom at the moment and you can see it ... My children, because the parents are prepared to come in and they’re prepared to learn. They mightn’t have the skills, but any training that we have offered in our school for Support a Reader, Support a Writer, whatever it happens to be... they are prepared to come in and learn it and therefore spend time with their children on it, and that’s where you see the difference. So I think that impoverishment is in terms of not having that care and that love from the parents, not so much money.

This, of course, does not suggest that poverty is a non-issue nor that teachers can ‘compensate for society’. However, rejections of a deficit model that characterises negatively all parents from low SES backgrounds can help to reduce the barriers between schools in low SES areas and their communities, and challenge the damaging stereotypes of poor parents.

The principal of Case Study P, a low SES school, makes the point that parents have high expectations for their children, but have limited financial resources:

The parents probably have a greater hope that the school can provide a better life for their kids and for them. So their expectations and their hope for their kids, by virtue of what school can achieve, are very, very high... Some people will mistakenly say this community doesn't care about education, the parents are poor or stupid or whatever. People here wouldn't say that...they understand that education is a way to a better life and that, but their own experience of education is often negative and their own capacity to support kids is often limited.

This is also supported by the principal of Case Study N, a Catholic, co-educational, lower/middle SES secondary school with a culturally diverse student population:

I find that our parents predominantly are very supportive of this school ... but I suspect in some way it is because they've not had good experiences of schools themselves or they're not confident in approaching the school. So therefore from that perspective as a parent body they're probably a little bit easier to deal with than in a more middle class school. But they are certainly less demanding of staff and less unrealistic in their expectations of their students' ability to achieve compared to a more middle class school.

A teacher at Case Study L was also adamant to point out that the problem for NESB students was not so much the language background of the family, but rather an issue of cultural and class capital in terms of what was valued at home and how this matched with what was valued by the school in terms of language use. For example, she talked about a correlation between the home and school literacy practices regardless of NESB:

Children who come from homes where certain things are taken for granted as being normal will pick up those things and go on with them very, very easily. If the things they see as being normal have to do with reading and writing and thinking outside of the box, you know, perhaps, you know the 'what ifs' and these sorts of questions, if they're like that, if that's what they're used to, then at school, that's where we can take them on and that's important for us to then to be extending them in that way. So, that's an important family influence and conversely where there may be books in the house, but the parents aren't seen to be readers or to use them or to do any of these sorts of things, then school learning becomes school learning fairly much, and it can be more difficult to motivate and stimulate the children towards learning.

And importantly this teacher also added:

And there are a lot of children whose main language at home, regardless of what language it's spoken in but the way they talk is strictly within context. You know, 'It's time to go to bed. Can I have something to eat?' this sort of language. It's harder to stimulate those children to think, into using language in a different way. At home where there is a lot of de-contextual language about anything, all sorts of things, particularly the querying sorts of things, that lends itself to a continuation of that at school, and teachers can interfere with that by not picking up on it, by not recognising that that's a student's need and you'll find sometimes those complaints.

Children who have a rich language environment within their own language will be fine at school because once they've got a hang of the language, then they will just go on in the same way so it actually doesn't really matter what language it's happening in at home.

Comments from respondents at Case Study C, which had a very diverse ethnic population, focused on the cultural background of the family and the significant role it played in shaping student attitudes towards schooling. In some instances teachers used this to account for student misbehaviours. One comment included:

I think that one of the big factors that impact[s] on students' attitudes is the cultural and the family background that they come from. I do not for one moment believe that I, as a teacher, have as much impact on my students really as educators, experts would have me believe. I think part of what happens in the classroom is very often a reflection of what's coming from home...I find that that...there's also different groups where I can see this and, without being racist, I notice with some groups of Asian students, their expectations, which come from home...are very different perhaps from another group, umm, it might be Middle-Eastern, or Australian.

In relation to this, the teacher commented that Australian-born, Anglo-Saxon-Celtic students experienced 'more distractions...more footy...less discipline'. Comments from the school counsellor about the situation in the local school community also reflect the importance of the family's experiences in shaping students' behaviour:

The parents of our Arabic speaking children have lived a lot of their life in quite violent situations in the Middle East, and I think it would be true to say that this particular group of students...the only way they know to react is in some sort of violent way. Whereas people who have been in this country a longer time are much better at negotiating ways through difficult situations.

One teacher speculated that the cultural background of students might also be a factor in perpetuating an attitude that says, 'No, you better play it safe rather than risk'.

The teachers also suggested that parents at the school were less inclined to take an active role in the education of their students. This was seen to be a result of both linguistic barriers and cultural attitudes towards education:

Parents are not as keen if they can't follow the language. They're embarrassed about that. That's just the perception I have.

The parents largely come from a history where they virtually hand over the boys to be educated and then don't want to hear further.

The resulting lack of involvement in the students' education was seen to impact negatively on their educational attainment.

By contrast, another teacher at the same school felt that many of the students experienced a lot of pressure from home in terms of achievement, and that this seemed to impact negatively on the students' capacities to achieve at school:

Like we've had a few students, like, they've had cousins that have been dux of the school, or they've had...older brothers and sisters. I know some of the Year 10s have got older brothers and sisters that are...achieving so much that when it comes down to them, they're rebelling, like, 'I can't achieve those marks. My mum and dad are putting so much pressure on me'

At Case Study L, the principal spoke at length about the impact of family and cultural background on a group of Muslim boys at the school in terms of their participation and attitude to school. She drew attention to the impact of sexist attitudes on the boys' rejection of schooling and response to female teachers:

So, that sort of parental type thing ... You know, being gentle with the girl and making the boys tough ...I think it still, you know, exists here... we have a few Muslim children, and that's a big thing with the boys, like they're very superior to the women... they try to do it at school but they don't (succeed),because it's just not accepted. It has impacted on their education because they're just anti the teacher... They don't respect the women teachers... they're only disadvantaging themselves.

In relation to this group of Muslim boys, the principal makes the point that the 'expectation of the family wasn't there for the boys to succeed'. This relates, she conjectures, to the fact that the boys' fathers have manual jobs which earn them 'good money':

Maybe they go out and get a manual job because dad actually worked at the wharves so he's a wharfie and earns good money.

This also emerged in Case Study N, a Catholic co-educational, multi-cultural school, where a number of the boys from culturally diverse backgrounds mentioned being able to work for their fathers and earn a lot of money, without having to study hard at school. In short, they expressed the view that the school credential was not necessary to guarantee them a gateway to work and a highly paid wage in the labour market. However, it is important to emphasise that it was the view of many staff and students that parents from culturally diverse backgrounds have very high expectations for their children in terms of performing well, as indicated earlier by the principal of Case Study School H.

Case Study O had a number of issues that related to the high Indigenous population of the school, approximately one third of students were Indigenous. Many of the teachers spoke of the problem of students who only stayed at the school for short periods of time and of issues with absenteeism. In some instances this was quite emotionally draining upon both the teachers and support staff. An interview with two 'DETYA tutors', both were parents of students at the school and one identified as Aboriginal, highlighted this as an issue.

I had one little boy that was coming along really well. Unfortunately he left town. So it makes a difference when the kids don't turn up for school due to whether they're sick or for various reasons, but when you see the progress and then all of a sudden they're just up and off, it just makes you feel really, you know ... Are they going to get that same support at the next school? You know, you kind of work so hard to like get them to that point and yeah, but you just hope that ... well maybe they might decide to come back. But then the next one, you know, if one leaves, you've always got another one coming in, and one little fellow I'm working with now at the moment, Y in grade 1, you know, when he first came here which was about 2 months ago, he knew 3 sounds of the whole alphabet. Now he can write his name, he's writing in the lines properly and he's really pleased how he's coming along.

The school has sought to address this issue by engaging in activities that promote Reconciliation and that value Indigenous cultures. However, this has not often been sufficient to counter issues external to the school.

Parental educational attainment

Parental educational attainment arose as an issue influencing the expectations parents had of their children. It appears that the students, boys and girls, who come from middle class family backgrounds, where parents are working in professional and business occupations, seem to be more cognisant of the importance of school-work for their chosen career paths, and also appear to be more focussed throughout their high school years. It seems that those parents who had experienced tertiary studies, and/or were teachers, were more 'in tune' with the school culture, geared towards high achievement in the university entrance exam and what was required of students. This parental/school alignment was very obvious at School S, a middle class all boys' school.

This is not to say that parents from working class or low SES backgrounds do not encourage their children at school or do not want them to succeed (Connell et al., 1982; Lareau, 1987). In fact, the counsellor at Case Study C felt that parents who had not had an education themselves often wanted their children to have the best possible education, and to succeed. Rather, it would seem there is a difference in the way that lower SES families encourage their students, telling them to 'try to do their best', but not being able to provide them with insight into the requirements of school work, and much less university or TAFE. For example, one parent who had not been through tertiary education commented:

We always try and encourage them like telling them to do their best and 'Don't worry if you can't get it right, just as long as you try', and all that sort of thing if you are having any problems. But my children never seem to come to me with school problems like...

Lareau (1987) also found that teachers build up perceptions of the level of parental support for their children's education that might not reflect the reality, but which relates more to parental capacity to actually provide support.

At School E with a mixed SES cohort there was a rejection of any notion of deficit in relation to either students or their families. This was a core feature of the approach within this school to pedagogy. The teachers in this school were consistent in their belief that all children can learn. In order to ensure that this occurs, there was a commitment amongst the teachers not to blame learners or their families for students' lack of achievement or poor behaviours. A striking feature of this school was the ways in which the teachers believed that they as individuals through their practice had an impact upon students' achievement. These are important characteristics of effective teachers as indicated in some relevant research literature (Newmann & Associates, 1996; QSRLS, 2001; Lee and Smith, 2001). In contrast, there is also a body of literature (eg Connell et al., 1982; Connell, 1985; Freebody & Ludwig, 1997; Ramsay, 1987) which has shown that teachers working in schools in disadvantaged communities often work with cultural deficit views of students, which in turn serves to close off opportunities for students and to 'dumb down' pedagogy and curriculum (Anyon, 1981; Hatton, 1998).

Lareau's (1987) research also showed how teachers read the differential relationships to schooling of parents from different SES backgrounds in either positive or negative ways. Lareau showed that these differential relationships reflected the different material and cultural capitals of the different sets of parents, rather than their attitudes to their children's schooling. The Newmann and Associates' (1996) research in the US and the QSRLS (2001) demonstrated that intellectually demanding pedagogy can make a difference for disadvantaged students, while Lee and Smith (2001) demonstrated that the presence of a sense of efficacy in relation to student learning and responsibility for it were important elements of the culture of effective schools.

Student expectations and attitudes

The Case Studies suggest that students who have set clear post-schooling goals tend to be more motivated to learn, and to have higher levels of educational attainment. This usually translates into a positive attitude toward schooling. Many of these behaviours appear to be shaped by outside of school influences such as family. The view about students setting clear goals is expressed in the conversation between two teachers at Case Study C:

Teacher 1: When you have the physics groups, or the chem. groups, they're different to other groups...They're a lot more motivated.

Teacher 2: They've got goals like 'I need to get into medicine, I need to get this'.

Teacher 1: My kids in accounting should be able to whiz through that stuff because ...it just requires basic numeracy skills, adding, subtracting, whatever else it is. But is it because they don't have that strong goal? Why don't my kids in accounting achieve like the kids in physics achieve?

Teacher 2: I think it's a goal, because they know, like some courses have to be physics. If you don't do well in physics you're not going to make it, and I know half my class are going to Melbourne Uni to do those tests to get into Melbourne Uni, and... I have to get into engineering, I have to get this mark.'

Teachers at Case Study C implied that for the majority of students, there is a dichotomy between the expectations that teachers have of students at school, and the expectations that students have of school:

Teacher 1: They don't come to school to learn necessarily, and because that's their main objective, then we [teachers], coming from an educational point of view, are always going to be in conflict with them.

Teacher 2: They come to school to be with their friends.

Teacher 3: So quite often the boys who are the worst behaved are the ones that love coming to school because it's all social, you know. 'Oh gosh', you know, 'I'm getting all this attention from teachers and from other kids'.

Year 12 boys interviewed at Case Study D regarded school as something in which they had no choice. One student expressed his views by stating: 'You have to come so I don't really care. It is something you have to do'. There was an expectation that they would do enough at school to gain entry into their chosen fields, nothing more, nothing less. Boys, particularly from lower SES family backgrounds, tended to drift along, enjoying school for what it had to offer in terms of the social and sports aspects. Schoolwork was not a prime focus in their lives; they were there because they had to be there. For these boys post-secondary education/training and career prospects were geared towards apprenticeships. Girls from working-class backgrounds were also perceived to be drifting along, but as one father commented: 'They have more aspirations about where they want to be'.

However, the survey data would seem to indicate that despite some perceptions about the gendered nature of aspirations, there is little difference between girls' and boys' aspirations (see Table 2). Nor did the survey data indicate that there were any significant differences between boys' and girls' perceptions of their own ability, or their liking of school. Perhaps a matter for some concern was that both sexes had low average responses to the 'liking of school' question. Again, there would seem to be a need to consider issues of pedagogy, curriculum and assessment for both boys and girls.

Table 2: Mean scores for aspirations, self rating of ability and liking for school by gender.

| | | Gender | |
|--------------------------|------|--------|--------|
| | | Male | Female |
| Aspirations ^a | Mean | 2.12 | 2.25 |
| | sd | 1.00 | .97 |
| Self rating of ability | Mean | 2.56 | 2.62 |
| | sd | .77 | .65 |
| Liking for school | Mean | 1.77 | 1.86 |
| | sd | 1.26 | .82 |

^a. Scales range from 1 to 5. Low scores indicate low aspirations, or self rating of ability.

Teachers from Case Study A were also of the opinion that lower achieving male students did not see the need to excel at school because they saw that they would go into some type of manual labour, with the mines in the area being seen as the first choice. This highlights the significant influence of SES and geographical location in shaping students' attitudes and responses to schooling. Changes in local labour markets also appeared to affect boys' attitudes to 'voc ed' style courses in lower secondary in School R, where local apprenticeships were going to boys with reasonably high tertiary entrance scores. Teachers at this school were concerned about these attitudinal issues.

One teacher in Case Study N, a low to middle SES Catholic high school, however, indicated that he thought many low achieving students saw school as a prison sentence, and that this was exacerbated by many of them having to continue to Year 12 as a result of changing labour market conditions:

The jobs for a lot of the lower ability kids in particular that were once there -- that provided the opportunity for them to leave -- have gone and as a result these kids are here and they don't really want to be here. They'd like to leave but there isn't work available ... A lot of the manual, the low skills sort of jobs have effectively dried up and ... they go through the motions. I think one of the things we have is that kids just progress from 8 to 9 to 10 to 11 to 12 and they don't consciously think about where they're going or what they're doing. It's just well I'm going from 10, I'll go to 11 and I don't think they look beyond that particular year.

However, another teacher at this school, attributed the low achieving students' disenchantment with school to the nature of the core curriculum, pedagogies and class size, which she believed did not cater for these students' needs:

I don't think that they're [low achieving students] given a chance even with the core subjects, I don't think the courses are written for their benefit. I think it's written for what's perceived to be beneficial for them. I don't think that it actually is. I think if they are to be doing these core subjects, then there needs to be more put into it so that there is something to get out of it. And there needs to be a priority to make the classes

smaller so they can do, or have more attention, because kids, especially the boys, with the special needs ... don't have as much patience to sit there and to get on with their work or to wait and be patient while they get help, can often lead to them not caring. They go 'Well, I won't even bother trying because I don't get the help that I need'. So then they've lost it straight away.

The male teacher in response indicated that he felt that these students 'shouldn't be sitting' in classrooms for long periods of time and saw this as an imposition enforced 'for administrative convenience and for economic reasons'. He added that:

One [reason for keeping these kids in classrooms] is that 32 is a nice number for the bureaucrats, the economists and the accountants. But the reality is those kids shouldn't sit in class. They should be out doing things, applying those maths. Then say 'What maths do I need to do this job?' Therefore on a needs basis, so fulfilling.

These teachers draw attention to how wider social, institutional, economic and administrative factors impact on and contribute to students' disenchantment with learning at school, as well as on their post-school options.

The girls interviewed as part of the focus group at School N had definite ideas about what they wanted to do when they left school and this made a difference. Knowing what you wanted to do when you leave school was a significant factor in motivating students to learn:

Also if you know what you want to do when you leave school, then it motivates you to do well in school. Because some people they don't know what they want to do, they don't try kind of thing to get a good future.

They also thought that girls had a tendency to put more effort into their work:

Student 1: I think girls put more effort into work and everything, like you present it well, and guys just -- you know -- shove ...

Student 2: The night before ...

Student 1: Yes. Night before things and all that on file paper or whatever. But girls will put it in a nice file and present it really well. But guys just don't care as much, I guess.

Student 2: Then they wonder why they get bad marks for it.

But the girls also believed that they had to work harder because they felt that there were limitations placed on them in terms of choice of employment possibilities. These attitudes are consistent with those expressed by the girls in the study conducted by Francis (2000) in the UK: '[Girls] generally work harder or concentrate on schoolwork more than boys, either because girls are more worried about their future job prospects, and so must work harder, or because boys take their ability to find work in the future for granted' (p. 86). However, the

girls at Case Study School N also felt that they were more realistic than boys in their perception of the kind of employment available to them:

Student 1: But also like guys have more opportunities in sporting areas than girls, like they can do football and soccer. So maybe that's why they don't really care as much because they think they're going to do professional something, and girls they don't always have the chance, so they just study hard. But guys just think they're going to be a professional footballer or soccer [player].

While many of the students at Case Study E are too young to be thinking about their post-school options, it would appear that students from wealthier backgrounds have a greater sense of where their future is likely to take them. Some of these children state that once they finish Year 7 at this school, they will be going to elite private schools. This raises crucial questions about family background and SES composition in terms of provision of certain cultural capital that is not readily available or accessible to students from lower SES or poverty stricken backgrounds.

However, what does emerge is an apparent non-engagement with schooling in many boys' cultures as evidenced from the Case Study work. This observation is supported by other research (see Martino, 1999; Gilbert & Gilbert, 1998; Epstein et al., 1998; Jackson, 1998; Epstein, 1998). Non-engagement by boys from low SES backgrounds may occur for a number of reasons, for instance, in relation to issues of relevant curriculum and appropriate pedagogies. Moreover, it is important to note that boys from low SES backgrounds do not have equivalent cultural capital in terms of financial and educational resources to support their learning outside of school. However, particular ways of being a boy based upon class and ethnicity/race are also implicated. Such constructions work both in relation to the ways in which boys 'police' each others' behaviours (Walker, 1988; Cannan, 1996) and the ways in which they are treated by teachers (Trent & Slade, 2000; Sewell, 1997; Sewell, 1998; Wright et al., 1998). This draws attention once again to the inter-relationship of gender with other factors such as SES and cultural background.

There are exceptions, of course. Some low SES boys talked about the worth of school and education. One of the boys in Case Study P described his friends' approach to learning, which counters the charge of anti-intellectualism among low SES students:

All the Year 11s – except for the guys who hang around the back and smoke and stuff – the Year 11s, they all hang around and talk. They socialise together. If we are doing good in an assessment and get our marks back, and we get 19 out of 20, all the guys are like 'Yeah, good!'. You really try to do good 'cos the guys encourage it. It is not like 'You are a nerd'. It is the complete opposite. All the other guys (say) 'Congratulations'.

This is attributed to the school's emphasis on creating a professional learning community for teachers with a focus on pedagogy.

2.1.2 Extra curricular activities

The survey results show some significant differences between boys' and girls' extra-curricular activities (see Table 3). For instance, this data would seem to suggest that:

- Girls tend to spend more time on 'social' activities, eg. talking or socialising with friends.
- Boys socialise more in certain contexts, eg. playing sport, using computers and video games.
- Girls were more likely to receive encouragement for academic pursuits from peers.
- Girls were more likely to study with their peers than boys, although both sexes generally disagreed with that proposition.
- Although both sexes were unlikely to agree that they 'don't have any true friends', boys were slightly more likely to agree with that statement than girls.

Table 3: Differences in extra-curricular activities by gender

| | Gender | |
|---------------------------------------|-------------|-------------|
| | Male | Female |
| Dont really have any true friends | 2.11 | 1.94 |
| peers talk/socialise *** ^a | 4.24 | 4.96 |
| peers encourage academic pursuits*** | 3.11 | 3.80 |
| peers study together*** | 2.46 | 2.98 |
| play video games with peers*** | 3.37 | 2.55 |
| use computers with peers** | 3.39 | 2.92 |
| plays sport with peers*** | 3.82 | 3.29 |
| spend most time with peers | 3.71 | 3.92 |

a. * p<.05, ** p<.01,***p <.001

Note that the survey uses a six point scale with 1 representing strong disagreement, and 6 representing strong agreement. Values less than 3.5 indicate disagreement, and above 3.5 indicate agreement. Numbers bolded have a significant difference between the mean (average) response for each sex.

The gendered nature of extra curricular activities is important in that the data collected across the Case Study Schools suggest that differing patterns of extra curricular activities may have an impact on student educational performance and behaviour within school. For instance, this seems to be particularly the case in relation to poor performance at school for students who are involved in alcohol and drug related activities outside school.

A student from Case Study B described how the practices within some sub-cultures at the school were geared towards alcohol and drugs. Moreover, a lot of these students have friends who have finished school or failed school, and their attitudes to schooling have a negative impact on their performance and achievement at school:

Well they've got mates, mates out of school, that failed school. They're scared that if they're going to pass a subject they're going to go to their mates and they're going to find out. Then they're going to be told to go away, and they think these mates are so cool, so really, really good and everything like this, that they have to fail every subject.

A similar culture of alcohol in evidence at Case Study A was also seen to put students at risk academically.

At Case Study E, more primary age boys appear to engage in sport on the weekends than girls. While boys from low SES backgrounds and boys from higher SES backgrounds both play sport, boys from higher SES backgrounds were more likely to play a musical instrument as well (cf Collins et al., 1996). Girls tended to do drama and dancing rather than sport.

In Case Study Q, the school counsellor described the school's unorthodox approach to competitive sport, which de-emphasised the competitive elements in the interests of boys gaining more from sport than winning and kudos:

There is a big emphasis on non-competitive sport, and not the school status. We did not want that on the first rugby team. There are other issues, and other ways of being involved in sport, without having to be the best.

The principal at School S indicated that he had worked hard over a period of time to ensure that the various extra-curricular activities in the school were equally valued. This included the equal valuing of sport and non-sport activities and the equal valuing of the various activities within each of these categories. However, he noted that some boys still preferred some sports over other activities despite all the best efforts of the school. Some teachers at the school also suggested that some fathers still preferred their sons to play sport, rather than engage in a broad range of activities.

2.1.3 Differing reading habits

As noted in section 1.5.3, girls report marginally more interest in reading books and discussing them than do boys. However, there were no overall significant differences in parental support for reading between boys and girls. Examination of means shows parents support reading regardless of the child's sex (see Table 4). Scores of 4 or greater indicate parental support for reading, whereas scores of 3 or less indicate lack of support for reading. Note that the differences between genders indicated by difference in mean ratings for boys and girls is much smaller than the typical variation between individuals (indicated by the standard deviation). Mothers are identified as being more likely to read to children than fathers were. Once again note that the difference between mean ratings of maternal and paternal support for reading is relatively small relative to the difference between individuals..

Table 4: Parental support of reading at home.

| | | Gender | |
|---------------------------|------|--------|-------|
| | | Boys | Girls |
| parents encourage reading | Mean | 4.05 | 4.02 |
| | sd | 1.39 | 1.32 |
| father read to me | Mean | 3.41 | 3.68 |
| | sd | 1.61 | 1.63 |
| mother read to me | Mean | 4.00 | 3.97 |
| | sd | 1.49 | 1.62 |

There is some evidence in the Case Study Schools that girls are more inclined towards reading than their male counterparts, and that students from higher socio-economic backgrounds have ‘better’ reading habits than students from lower socio-economic backgrounds (see Alloway & Gilbert, 1998). This is consistent with the available data on literacy that shows many more boys than girls are performing badly – lower average scores and more boys at the lower end of performance (DETYA, 1997; DETYA, 2000). The research has also noted that some groups of boys are doing particularly badly on these measures: lower socio-economic boys, boys in rural areas, those from non-English speaking backgrounds, and Indigenous boys. The gender gap in literacy performance is greater for low socio-economic than for high socio-economic boys. At Case Study A, for example, reading was seen to be particularly problematical with low SES groups, but particularly with low SES boys. The head of English at Case Study A was of the opinion that boys were, in general, less interested in reading than girls, but that this was not specific to the school:

Sometimes the boys might view reading and reading of books as being not quite masculine enough for them and that can be a problem. Although having said that, I mean I run into that at every school.

The head science teacher at the school argued along similar lines:

There are kids, boys in particular, I believe, that have been sent to school far too early. They weren’t ready to learn. They haven’t been picked up on because of large class numbers and things in primary schools.

In this comment we also see the argument about boys maturing later than girls with hypothesised consequent effects on their school achievement.

The librarian at Case Study School H made the point that there is a link between boys’ lower reading levels and behaviour problems:

Well the boys that can’t read are a problem. If you can’t read, you can’t do the work and then you’re a big behaviour problem because you are bored. Bored out of your brain. The boys then become very restless and rowdy.

Similarly, boys did not appear to have a solid history of reading at Case Study D, either at school or in their families. They were more interested in manual pursuits.

At School O, the 'DETYA tutors' who were employed to work with the school's Aboriginal children, who were underachieving, reinforced the importance of not assuming that it is only boys who are having problems at school. They had more girls than boys in their program, as did the learning support teacher.

At Case Study C, students from lower socio-economic backgrounds tended to have lower levels of literacy than students from higher socio-economic backgrounds (cf Comber & Hill, 2000). However, this was due more to the fact that many of the lower socio-economic students were from culturally and linguistically diverse backgrounds, where English was not spoken at home. The difficulties with English literacy experienced by many of the students at the school were identified as a major cause of frustration for many students, particularly in the senior years.

From a primary school perspective, there appeared to be little difference in the reading habits of boys and girls at Case Study E. However, it seems students from higher socio-economic backgrounds were more likely to read at home (both boys and girls). Observation showed that both boys and girls were fully engaged in the silent reading in class time and, in fact, a number of boys complained when they were asked to stop in order to move onto another activity. The selection of reading material was often gendered, with girls being more likely to read romance novels and boys more likely to read adventure stories. Nevertheless, *Harry Potter* was equally popular amongst both boys and girls. The head of English at School J indicated that there were two ways to get boys into more reading: one was to add boys' stories onto the reading lists, while the other, more difficult but more rewarding, was to have more demanding stories.

The head teacher of English in Case Study Q, a woman in a single-sex boys' high school, talked about instilling her own love of literature and education in boys:

I guess boys don't have that love of school. I try and instil that in them. I think if I can get them to love a book, or even just to enjoy a character, I find that a tremendous buzz, and find (we have) something in common.

There is a growing body of writing that deals with the issue of boys and literacy, some of which is grounded in simplistic, often essentialist, notions of gender. More useful for teachers' understandings of gender and literacy are those works based upon sound research. Hence, teacher understandings need to be enhanced through professional development based on this research literature (e.g. Martino, 2001; Alloway & Gilbert, 1998; Hall & Coles, 1997; Millard, 1997). A current DEST commissioned research on boys and literacy is designed to enhance understanding of issues to do with gender and reading and effective school strategies. Case Study F also seems to offer some possible ways forward through its focused "Which girls? Which boys?" approach to literacy education.

2.1.4 School environment and culture

Influence of School Culture

The apparent success of Case Study Schools A, E, F, K, L, O and S in academic terms raises significant questions about whether the single most important factor in students learning effectively is good pedagogy. The evidence from School R, where there had been a notable shift from a boy focus to a focus on pedagogies, also appears to support the central significance of pedagogies to achieving good outcomes for boys.

There is a body of research now within the school effectiveness literature (eg Rowe & Hill, 1998; Rowe, Turner & Lane, 1999; Rowe, Hill & Holmes-Smith, 1995; Rowe, 2000; Rowe & Rowe, 2000; Scheerens et al., 1989; Scheerens & Bosker, 1997; Sammons et al., 1995) and school reform literature (Newmann & Associates, 1996; QSRLS, 2001) that concedes that teachers have more effect on student outcomes than whole school reforms. In early studies, school effectiveness research was concerned with what elements of a school, including structure, culture and leadership, could be used to bring about enhanced student learning. Subsequently, it was found that there was greater variation between teacher practices than between whole school effects. However, more recently, there has been some debate that the statistical approach of the school effectiveness literature has tended to overstate the significance of teachers as the central variable in student outcomes (Rowe, 2000; Rowe & Rowe, 2000; Slee, Weiner & Tomlinson, 1998; Thrupp, 1999). This research can also downplay the significance of contextual factors (Slee et al., 1998, Lingard, Ladwig and Luke, 1998). Having said that, the literature and the data from the schools stress the central significance of teachers and their practices to the achievement of good outcomes for all students. The classical United States research by Coleman and colleagues (1966) suggested that teachers are the most important contributing variable to student outcomes, contributing up to about 25% of the variance in student outcomes, once student backgrounds were held constant. This percentage can be contrasted with some contemporary school effectiveness research that suggests a figure of up to than 60% (eg, Rowe, 2000; Rowe & Rowe, 2000). Whole school effects within the school effectiveness literature are usually argued to account for up to 10% of the variance in student outcomes (eg Scheerens, 1993; Scheerens & Bosker, 1997; Reynolds & Packer, 1992; Reynolds & Cuttance, 1992; Bosker et al., 1995; Cuttance, 2001). The effects of principal leadership on student learning are mediated and minimal (Hallinger and Heck, 1996, Lingard, Hayes, Mills and Christie, 2003). Despite disagreements about figures, what this body of literature demonstrates quite clearly is the significance of teachers to quality student learning.

Effective whole school reform must begin with reform of pedagogies, and attempt to spread good pedagogies throughout the school. This strategy was in evidence in School R and School S. The development of a 'teacher professional learning community', which in a collaborative fashion focuses on enhancing student learning, is vital to the spread of good pedagogies across a school (Louis et al., 1996; QSRLS, 2001). Consequently, the 'trick' with whole school reform is to create a school culture and structure which enhance the spread of good pedagogies across the school, and which align high quality curriculum, pedagogy and assessment. This appears to have occurred in a number of the Case Study Schools. Principal leadership which

focuses on 'leading learning' and dispersing such leadership across the school can also have positive effects (Lingard et al., 2003).

School R, for example, had moved to develop a whole school vision and pedagogy approach aligned with outcomes based assessment practices. Teacher professional development days had been used to develop these commitments. Furthermore, the school had structured into the timetable the time after lunch every Thursday for meetings of professional communities. This time for substantive professional conversations had been achieved through releasing the Year 11 and 12 students from school at lunch-time on Thursdays and through employing outsiders and utilising volunteers to take sport for the rest of the school at that time.

The nature of teacher pedagogical practices is a central influence on students' engagement with schoolwork and their achievements. Research and the data from the Case Study Schools demonstrate the need for such 'productive pedagogies' (QSRLS, 2001; Lingard, Mills & Hayes, 2000, Newmann & Associates, 1996). School R was working explicitly with productive pedagogies, while School S was utilising the dimensions of learning to focus on classroom practices. The other teachers and schools that utilised such pedagogies had arrived at similar conceptions of good pedagogies from different starting points. School B, for example, arrived at activity-based pedagogies as opposed to teacher 'chalk and talk' from assumptions about the needs and learning styles of boys. In contrast, School E arrived at such a conception from other professional knowledge, a commitment to teaching philosophy across the school and a multi-age approach. Nonetheless, the data demonstrate the centrality of intellectually demanding pedagogies which link to students' experiences, while supporting them and recognising differences amongst them. The evidence from the Case Study Schools shows very clearly the significance of good teachers and effective pedagogies framed by whole school reform to achieving good social and academic outcomes for all students.

These characteristics of effective pedagogies as outlined by the Queensland School Reform Longitudinal Study (QSRLS, 2001) – namely intellectual demand, connectedness, social support and recognition of difference – must be complemented by aligned and similar assessment practices. School R, a co-educational provincial secondary school, had implemented outcomes based assessment that they suggested had positive effects for most students. They were also attempting to align this approach in lower secondary with productive pedagogies. The QSRLS (2001) found that high quality teachers expressed a real sense of efficacy and responsibility with respect to their impact upon student learning. Furthermore, outstanding teachers were also knowledgeable about educational policy, educational theory and research; in short, they were very well-informed in an educational and professional sense. Lee and Smith (2001) demonstrate that such a sense of responsibility and efficacy within the culture of an entire school has similar positive effects on student learning, including for schools serving disadvantaged communities. Lee and Smith (2001) speak of the 'collective responsibility for student learning' within the culture of a school as a central contributing factor to the enhancement of student outcomes. The most 'successful' of the Case Study Schools (eg Schools E and S) served to reinforce this research-based insight. Leadership at School E was also focused on enhancing classroom practices and as such was effective (cf Lingard et al., 2003).

The Case Study analysis supports the need for specific kinds of intervention and professional development for teachers that are grounded in soundly based research. In addressing boys' academic performance or behaviours, responses or interventions can either be described as student-centred or school-centred. However, it is not simply a question of choosing either a student-centred approach or a school-centred approach as the basis for addressing the educational needs of boys and girls. Rather, the research and our analysis show that the most effective approaches to dealing with boys' performance and behaviours integrate and navigate the two foci. Furthermore, the most effective interventions in coeducational schools seem to be those where the educational needs of girls receive as much priority as those of boys. There is certainly now a need to ensure that a focus on boys does not precipitate a neglect of girls' educational needs.

Behaviour management

The analysis of the Case Study Schools suggests that behaviour management is best dealt with through challenging pedagogies, supportive teacher-student relationships and supportive school culture. The principal and teachers at School R also suggested that outcomes based education also contributed to better behaviour across the board and to constructing more positive perceptions of teachers for some traditionally alienated students. All of these elements of reform are necessary to the achievement of both academic and social outcomes for all students. Clearly, schools have academic as well as social purposes. A focus on one or the other alone sells all students short.

School L provides a good example of the productive pedagogies model that had a positive impact on educational outcomes for both boys and girls at the school. The principal at this school had fostered and engendered a particular culture in which teachers felt valued and respected as professionals. The teachers at this school also talked about their commitment to breaking down power imbalances between students and staff and that this was something that cut across the whole institution. One of the strategies involved not making a distinction between everyday persona and the teacher persona. One teacher noted:

I think my point about there not being a distinction between staffed personalities around the staff room table and in their class room, and with the children in the yard, the fact that you don't have that sort of split personality is very, very powerful.

This teacher also indicated a strong commitment to a more democratic approach in her teaching:

There's not one set of conditions for children and one set of conditions for adults. 'Please don't shout at me. I will never shout at you'. 'You don't have to sit on the floor because I'm not going to sit on the floor, you know'.

Moreover, this teacher spoke about allowing children to choose where to sit and encouraging them to take responsibility for the decisions they make:

I mean, children basically choose where they sit and they have to make a commitment for a term ... So they could have their desks the way they wanted them. So we had all sorts of personalising of the desks that I thought was good, so they own the space, they own the table tops within the courtesy level of their neighbours and the cleaner.

This teacher also indicated that there needed to be structure in her teaching, but also flexibility – another important aspect of productive pedagogies. In relation to this, she spoke about ‘Choosy Morning’, a strategy designed to encourage student initiative and enquiry:

One morning a week, we have 'Choosy Morning', which they think is free time. It's not quite free time. You've got to choose, but while we're having Choosy Morning, two children a week select a small group of children and they're teacher for the morning for that small group. They have to plan and prepare and decide what they're doing.

This involves a lot of reflection, but the teacher indicates that ‘we're actually talking about the whole teaching learning thing all the time’.

Another teacher also spoke about how the school attempted to share power with students and how this was something that was acknowledged across the school community by all teachers:

And the important thing I think is that if children see that if they're got ideas that they're heard, you know, we acknowledge what their ideas are and they've got a voice, you know, not just pushed aside ... You know, it's amazing when you ask the children what ideas they have for the betterment of the school, how many ideas they do have.

The curriculum and pedagogies at this school were also connected to the world outside the classroom. There was an emphasis at this school on environmental programs with the children being involved in working for a sustainable environment. The children were required to look after chickens and to tend to a vegetable garden. This contact with animals was considered to be important opportunity for children, particularly those without pets at home, ‘to develop another sign of caring and responsibility’. One of the teachers indicated that this was a ‘skill that they can then take into adult life’. Teachers at the school also spoke about the students ‘being very in tune’ with the environment as a result of their involvement in the program:

We've also done quite a few excursions or activities beyond the school like tree planting and environment water testing down the creek. So it's sort of going a bit beyond just the schoolyard and the playground. Then we, I mean the kids, also know about recycling paper. They know you can't just waste paper or put it in the bin.

Another teacher mentioned how she managed to turn around a group of very difficult boys in her class and to enhance their learning through the benefits of this program, which involved looking after pets as an important part of the school curriculum. She mentions a critical incident involving a very difficult boy, whom she had caught looking through the girls' school bags. This boy actually took out a doll from one of the girl's bags and ‘was holding it and patting it’:

I thought oh, yeah, okay, he needs something to actually love, to be able to ... he didn't have a lot of TLC. So, I thought okay, guinea pigs. I don't like guinea pigs, they're really boring, but they're mammals, they're warm, and they're pliable, so hence guinea pigs. I've actually fallen in love with them. But we have a guinea pig roster. Children hold them all through the day. They're not in the cage.

Through this program that has provided all students with the opportunity to regularly 'calmly touch and love something', the teacher has noted positive effects on these disengaged boys' attitudes to learning and behaviour at school. The teacher claimed that the pets added a sense of calmness to the classroom learning situation, which she considered essential to the stimulation of thought and enquiry. Students at this school also worked in multi-aged groups and were encouraged to engage in collaborative learning. Through such programs and pedagogical approaches, School L indeed exemplified many elements of the productive pedagogies model, particularly in relation to connecting the work done in school to the world beyond the classroom.

Many of the teachers interviewed at School S, an all boys' academic secondary school, emphasised the need for substantial structure in classroom practices for boys in lower secondary. This suggests a need for structure that reflected boys' overall later maturing when compared with girls.

School culture does appear to influence student achievement and behaviour. For example, Case Studies C and D can be described as having somewhat authoritarian foci with discipline being strongly valued at both schools. It seems that this may have a negative impact on those students who perhaps did not do so well academically, as they seek to rebel against the school culture. Students at Case Study D described the school community's commitment to the students' achievements, but also expressed some disquiet with its discipline policy. One student commented:

The expectations ... especially at this school where they rave on about the HSC. It's shocking, especially for guys like me in maths who have to go and get involved in sporting curriculum and things like that, where you have to go out and perform, and then have to come back here, and the expectations are even higher. It's terrible. It is hard doing academic and sport, you have to juggle it.

Another Year 12 boy who was not involved in sport had a similar view:

Just the assumption that school makes of your time. They assume they own you, even when you are not at school. And it spills into stupid things like uniforms, and that you know. Like piercing, they are dictating what you look like outside of school as well.

The boys appear to be reacting against the expectations placed on them by the school, the difficulties involved in balancing sporting and academic demands, and at attempts to control their appearance.

The school culture at Case Study E is firmly committed to the principles of multi-age classrooms. The working out of this approach created a supportive school environment that prevented behaviour problems. In the multi-age classrooms, older students are expected to take care of the younger ones and to support the learning of the younger students. Both the older boys and girls are engaged in these kinds of nurturing activities, which appear to have positive academic and social consequences for both the younger and older students. The school does not engage in inter-school competitive sport. While some boys expressed their disappointment about this, they were aware of the school's reasons for this decision. A number of students at the school were, however, engaged in playing cricket at lunchtime. There were girls as well as boys playing, although there were more boys engaged in this. By contrast, more girls than boys were found sitting in groups talking at lunchtime.

The rejection of the notion that all problems with student learning can be traced directly to students and their families – a 'deficit student' and 'deficit family' approach – within School E also served to create a culture that was very student-friendly. This did not mean that there were not high expectations of students, on the contrary, quite the opposite was the case. Students were also provided with the social skills to avoid conflicts. Within this culture, students were expected to treat teachers with respect, however, at the same time they were able to engage with teachers in frank and open discussion. It was not unusual to hear students disagree with teachers. When this did occur, it happened in ways that enabled both teachers and students to ventilate their opinions and to usually reach meaningful resolutions to the disagreement. Teachers attributed these skills on the part of students to the introduction of philosophy into the classroom. Some teachers at the school expressed concerns about what might happen to the students at the school when they went onto high school, where such student behaviours might be misinterpreted. Parents also expressed this concern when choosing a secondary school for their children.

Case Study S has attempted to create a particular school culture around the concept of balance. The principal described it this way:

...a balance between the academic program or a boy's involvement in the academic program and his involvement in the extra-curricular program, a balance within the extra-curricular program between cultural and sporting type of activities and a recognition of balance and equity within activities, just as within subjects in the school... in a big school like this I think we ought to try to provide niches for different students within the school community.

Case Study O has sought to alter the school culture through a program called 'Peace Builders'. This program was designed to encourage students to sort out problems using trained peer-mediators. The learning support teacher felt that this had served to alter the culture in such a way that learning was facilitated. However, some parents and students suggested that the program only really worked with younger students. Indeed some students felt that the program meant that teachers abrogated their responsibility to mediate in conflicts between students.

Case Study B has a particular humanist focus on the student as person, coupled with a commitment to middle schooling. The principal, the two deputies and teachers spoke of this as

being at the basis of their approach to dealing with students. The importance of developing a relationship with the students was flagged as central to effective learning and enhancing educational outcomes for boys. The commitment to middle schooling principles was reiterated with the focus on developing positive relationships with students as people. The principal stated that 'Boys learn teachers and not subjects' to explain the need for a focus on relationships as being central to enhancing effective learning at school. This, the principal argues, is at the basis of the school's commitment to middle schooling where subject specialisation is not so much the focus. Rather the attention is on the teacher having as much contact with the same class or group of students so that a positive relationship based on knowing the students can be developed. All the teachers interviewed reiterated the importance of developing relationships with the boys as a key to improving the educational outcomes for boys. This permeated their views on their approaches to disciplining students that focused in helping the individual to develop a communal sense of responsibility and critical reflection on the consequences of their actions. There appeared to be a genuine commitment to helping students overcome their problems, as opposed to administering punishments to enforce a particular power relationship between teacher and student.

In Case Study L, a small inner city primary school with a culturally diverse student population, there was also a particular 'child-centred philosophy' which was identified as impacting significantly on teachers' pedagogies and relationships with their students. As one female teacher at the school commented:

All right, well, the most important thing about the philosophy of this school is that it's very child centred. The teachers have a very authentic relationship with the kids. They are very real with the kids, not another personality in the staff room ... From my point of view it's very crucial, and it's a very de-institutionalised sort of school.

This notion of a 'de-institutionalised sort of school' is talked about in terms of the way that many teachers executed their classroom pedagogies with attempts being made to connect the curriculum and learning with students' outside of school lives. It also extended to addressing issues of 'power sharing' in classrooms with students being encouraged to take responsibility for their own behaviour and learning. The principal had a key role in fostering this culture, with the above staff member mentioning a critical incident in her professional life at the school with a male student who was emotionally distraught:

He was really reacting very badly so he was out of control. So it was me and him and [I didn't know] what to do, to do what I do with the other ones or if I should call in support for him. So, I called the principal and I said 'Can you take over. I'll take my kids out for kick ball, you know if you take over'. So, I know I can call on her. I only had to do it once and the child was beside himself in the corridor, throwing himself against the wall. She was saying 'Come on, come on' and she was sort of touching him and he slid down and sat on the floor with his back against the wall just with his feet out, and she just slid down the wall opposite him, on the opposite wall ... I looked out and she's sitting with her back against

the wall, feet out, and he's over there with his head down in exactly the same position, and she just sat there and didn't say anything.

A part of the culture engendered in this school by the principal is clearly one committed to nurturing both staff and students within the context of respectful and caring relationships. This is also related to espousal of the following five factors, considered to be integral to the school's *modus operandi* and linked explicitly to the enhancement of student educational outcomes:

Factor 1: Respecting teachers as professionals

Factor 2: Breaking down power imbalances between teachers and students

Factor 3: Environmental programs

Factor 4: Cross-age classes

Factor 5: Encouraging students to work cooperatively

These factors and how they contribute to the development of productive pedagogies at this school will be discussed in other sections of the Report. It is important to note here, though, that such pedagogies are driven by a particular philosophy and professional learning community at the school engendered and supported by the principal.

In Case Study Schools H and N staff also commented on the engendering of a particular culture in the schools, but one which militates against boys taking an active role in leadership and public commitment to academic achievement. This was attributed to boys' investment in acting cool and to a culture of mediocrity. For example, the deputy principal at School H states:

I think it is basically the culture we have engendered in schools within boys ... The girls seem to have taken up the roles more willingly than the males. The males are now content to sit back and just allow the girls to basically take the position ... We have ended up with two school leaders, two girl school leaders, rather than the male simply because the males see it as not cool to present that public image ... [The boys] say, 'Leave me alone, don't ask me to do anything, don't expect too much from me'.

In School N this is attributed by the principal to the 'macho-culture' that impacts on boys' behaviours and attitudes at school. He also mentions the boys' lack of maturity:

It's not cool ... It's not macho to be a leader. I think they don't have the same level of maturity as young teenagers that the women have at that age ... If [the boys] were actually nominated for a prize, or they came up to get a certificate even, or a prize for an award, an academic award, there'd be all this sort of ho, ho and laughter and mockery.

While both schools are aware of the need to change this masculinist culture, they did not know how to address the issue. The principal from School N stated:

I must admit we've failed the kids a bit, but we've not put any specific strategies in place to say 'Right, this is what we are going to do'. We've said 'Yes, this is a problem, let's try and put a lid on it. Let's try and stop the mockery at assemblies when kids go up and get awards', and that sort of stuff. We've done that but in terms of actually having a particular strategy, I have to say we probably haven't formalised it in any way.

Teachers at Case Study R also commented on similar attitudes amongst some boys to leadership positions within the school. However, the school had worked explicitly on these negative attitudes with some positive effects.

In Case Study School N, the deputy principal of this Catholic co-educational secondary school, also spoke at length about the influence of a particular hyper masculine culture which in this case was related to and driven by homophobia:

... the culture here of anti-gay language among the boys is very, very powerful and it's quite loud, you hear it everywhere.

One female staff member at this school also made the point that, apart from the bullying program, 'There isn't anything in place to try to address the language of students and the way that language is used to denigrate other groups'. She also reiterated that teachers in many Catholic schools are wary of addressing homophobia in their classrooms for fear of retribution. She talked at length in her interview about homophobia as an 'issue of invisibility':

We have no gay students here whatsoever, they do not exist ... I don't suppose that can be addressed ... You can only address an issue of invisibility if you're willing to see it and I think the Catholic system is not willing to acknowledge that there are gay students unless a particular individual makes it 'an in your face' confrontation, and that rarely happens. So no I don't see that there is going to be any change. They do not address homophobia and I think that increasingly teachers are wary of addressing it in the classroom for fear of, I think they have concerns, will they be singled out as taking a non-Catholic line. So I think yes, it is not dealt with. So for everybody in the school it's much easier to pretend it doesn't exist.

This admission is important and highlights some of the problems around addressing issues of homophobia in schools (Mills, 1996). There was also evidence from one of the Case Study Schools, where one male teacher had developed a game that he played with students, where losers were labelled as gay. These silences, and indeed trivialisations of homophobia, along with some teachers' own homophobia do little to address many of the gender-based problems occurring in schools.

The Case Study research has shown that homophobia functions more broadly within school cultures and the wider society as a mechanism for 'policing' what is considered to be acceptable gender behaviour, regardless of a person's sexuality (Martino, 2000). This is confirmed by other research that illustrates how macho cultures are driven by homophobia to impact significantly on boys' attitudes to schooling, particularly with regards to their learning

and subject participation (see Jackson, 1998; Martino, 1994; 1997). Moreover, significant research in Australian schools, undertaken by Collins et al. (1996), has also drawn attention to the sex-based and gendered dimensions of bullying (see also Laskey & Beavis, 1996; Mills 2001).

Teacher professional learning communities

There is now a large body of research that notes that schools are not confronted with a simple choice between teacher or whole school reform (Newmann & Associates, 1996; QSRLS, 2001; Hargreaves & Evans, 1997; Fullan, 1999; Lingard, et al., 2003). Certain cultures, structures and practices across a whole school can enhance the spread of good pedagogies through the development of a teacher professional learning community (Louis, Kruse & Marks, 1996; Louis, Marks & Kruse, 1996; QSRLS, 2001). The creation of such a community, combined with effective professional development for teachers around school issues and professional development provided external to the school, also enhance teacher classroom practices (QSRLS, 2001). At the same time there is the need to ensure that the establishment of such a community does not become an end in itself (Lippman, 1998); rather, the relationship between ongoing teacher learning and the enhancement of students' learning needs to remain the central focus. This was the case in several of the research schools.

There is some evidence now that teachers actually prefer professional development that is school and student learning focused (McRae, Ainsworth, Groves, Rowland & Zbar, 2001). The QSRLS (2001) demonstrated the positive effects on classroom practices of both professional development internal and external to the school. In a sense, the two types of professional development are linked to individual and organisational capacity building. The research in the Case Study Schools supports both types of teacher professional development with a focus on gender issues in schooling and upon good classroom practices. A school's support for such professional development is a surrogate measure of a school's valuing of teachers.

The QSRLS research and analysis from the Case Study Schools also stress the importance of teacher professional development around pedagogical repertoires. 'Pedagogical repertoires' refers to the range of teacher classroom practices that take account of student differences and subject matter being covered. Both sets of evidence demonstrate the importance of the quality and character of the pedagogies which students experience.

The QSRLS noted that the quality of pedagogies experienced by students was an important social justice issue. Schools in disadvantaged communities need to guard against 'dumbing down' the curriculum for their students. The QSRLS (2001) and the research of Newmann & Associates (1996) elaborate the characteristics of effective pedagogies, that is:

- intellectual demandingness,
- connectedness to the world beyond the classroom,
- social support, and
- engagement with difference.

Case Study Schools confirmed this research about productive pedagogies, while Schools E, F, L, R and S in particular demonstrated the effectiveness of such pedagogies, as well as the

significance of teacher professional development about such pedagogies and related assessment practices. The English department at School J also demonstrated the significance of teacher professional development and the creation of a teacher professional learning community for enhancing pedagogical practices. As noted earlier in this Report, the creation of such a learning community was working effectively at School R. Indeed, it was central to their reform approach. School S also emphasised the significance of professional development for teachers and this was very evident in the interviews and focus groups with the teachers at the school. The impression was of a very professionally informed and committed teaching staff, involved in extensive professional development in respect of academic and pastoral care matters. The principal in fact pointed out enhanced professional development for teachers was central to his change strategy on taking up his position at the school.

Teacher threshold knowledges

Survey results indicate that that boys' peer groups are less engaged with school learning and that boys are more likely than girls to view English as an irrelevant subject. Clearly boys have an enormous amount to benefit from stronger pedagogy in the classroom that better challenges and engages them and makes connections with boys' lives outside school.

An emphasis on pedagogy and the qualities necessary for achieving the best outcomes for both boys and girls does not neglect the need for requisite teacher knowledges (see Hattam & Smyth, 1998). The relevant research suggests that effective classroom practices (both pedagogical and assessment) demand sets of teacher threshold knowledges about subjects, students, community and policy (Darling-Hammond, 2000; 2001). Shulman (1987) argues, and other research has supported his claims (eg McMenniman, Cumming, Wilson, Stevenson & Sim, 2000), that teachers' practices are impacted upon by research and professional literatures, often in an indirect fashion, and that their practices relate to their knowledge base of content, pedagogy, curriculum, learners, contexts, and purposes and values. Educational policy needs to be added to Shulman's list as another factor that mediates teacher practices, where policy refers to both system-wide and school-based policies.

The alignment of pedagogies and assessment practices is important for effective school reform, as demonstrated in School R, for example. The QSRLS (2001) also demonstrated the need for teacher subject or discipline knowledges at a threshold level (Darling-Hammond, 2000), as well as the need for teacher knowledges about social contexts, the social influence on identities, and other developmental and psychological insights. Good pedagogy demands teacher knowledges that will allow for connectedness to the world beyond the classroom, social support and engagement with difference.

The Literature Review and the analysis of the Case Study School supports the view that this split between pedagogy and teacher professional knowledge has to be avoided. Furthermore, the need for both good pedagogies and appropriate teacher knowledges offers a useful way to move beyond an either/or approach to boys' schooling. One common approach is underpinned by 'tips for teachers' and commonsense assumptions (Bleach, 1998). Another is based in the heavily theorised sociology of masculinity and gender literature (Mac an Ghaill, 1994; Connell, 2000; Lingard & Douglas, 1999; Martino & Meyenn, 2001; Kenway, 1995; Kenway

et al., 1997; Skelton, 2001; Francis, 2000; Epstein et al., 1998; Mills, 2001; Martino & Pallotta-Chiarolli, 2003). The latter usually does not offer practical strategies for reform. The most current research literature (eg Skelton, 2001; Francis, 2000), however, is arguing the need for these two approaches to boys' schooling to be pulled together to create particular kinds of school environments and cultures that are conducive to enhancing effective learning and engagement. The analysis in this Report also suggests the need to go beyond these 'either/ors'. This offers a possible way forward in boys' education. Case Study F demonstrated such an approach in embryonic form with its firm focus on literacy for all students, its stress on productive pedagogies and its support for the enhancement of teacher knowledges through professional development on gender and schooling, as well as on pedagogies. The approach of the English department at Case Study J also worked in this holistic way. While School R had moved from a specific boys' focus to reform around pedagogy, some teachers in the school cogently argued the need for combining the two approaches.

Case Study P also indicated a commitment to the ideas and practices of professional development and a professional learning community, quality teaching and learning, and teachers' threshold knowledge of gender equity, through the *Boys' Own* project and a tied grant project on the social construction of masculinity. The *Boys' Own* project aims at engaging boys mostly at risk of suspension and expulsion. After the school identifies the boys and seeks permission for their involvement in the project, they are assigned in small groups to teachers who act as mentors. The boys are required to work on a year-long project from one of four areas: mechanical, computing, creative arts or outdoor activities. After the successful completion of their project, they attend a wilderness adventure camp.

SES

SES background of students also framed the attitudes and expectation of some teachers of particular students. Research exists to suggest that there is a correlation between high expectations and student performance (Rosenthal & Jacobsen, 1968). Interviews at the schools reinforce this link. However, it would be difficult to isolate at these schools whether it is the teacher expectations that shape student performance, or whether previous student performance has shaped the expectations of teachers. The reality probably involves an interplay between these two factors. There also needs to be further exploration of the extent to which teacher expectations at the schools are affected by matters of class and ethnicity (Sewell, 1997; 1998).

Some of the significant finding from the student survey in regards to SES are:

- Students from high SES backgrounds have higher aspirations and self rating of ability than students from lower SES backgrounds. The relationship is particularly strong for aspirations.
- Students from lower SES backgrounds are more likely to report disrupting class for attention.
- Students from lower SES backgrounds are less likely to report finding English relevant.

Teacher expectations are clearly an issue at Case Study C where a key teacher made a significant comment in relation to teacher attitudes and expectations of students at the school:

We have low expectations [of the students] and that's what we get.

Another teacher confirmed this:

One thing that concerns me here, a lot of people [are], oh, you know, low socio-economic background and migrant background and therefore we should expect low. I think that's very wrong.

Another teacher stated:

I think we underestimate our students' willingness. They want to work.

The utilisation of deficit models of particular students potentially serve to abrogate teacher responsibility for learning and too often have consequences for the quality of pedagogy experienced by these students (QSRLS 2001). Lee and Smith (2001) have also demonstrated that a sense of responsibility for student learning is a necessary feature of whole school culture in effective schools. This is particularly so, they demonstrate, for schools serving disadvantaged communities. As Connell (1985) has argued, for some teachers, a deficit account of students serves as a 'protection' mechanism, placing the blame for poor student performance outside teachers' control. The QSRLS (2001) also demonstrated that the best teachers had a sense of efficacy and responsibility for student learning. This teacher trait and whole school sense of responsibility for student learning were evident in the most successful of the Case Study Schools.

Interviews with students at Case Study D indicated that there were two recognised groups of students at the school: those who were considered high achievers by the teachers and those who were not. It appeared from interviews with teachers and class observations that there was little consideration of why some students were achievers and others not. Rather, there seemed to be an assumption that boys and girls who were not high achievers and who were troublesome were simply that, not high achievers and troublesome. One teacher explained that 'lower ability' boys in a Year 10 Maths class preferred not to do the work if they thought they would not succeed, and instead they disrupted the class. Within this school, few questions were asked about the boys' behaviour, participation, performance, and achievements, nor about the patterns across different cultural groups. Instead, the situation was simply attributed to boys' 'fear' of not succeeding.

Teacher expectations formed on the basis of the SES status of their students does have a role in conveying messages about the expected learning and achievement behaviours of students (NSW Department of School Education, 1998). For example, in a Disadvantaged Schools Program (DSP) discussion paper published by NSW Department of Education, it is argued that 'many teachers have predetermined expectations about their students which inevitably influence not only the students' approaches to learning and self-esteem, but their learning outcomes' (1998: 6). This observation of the effects of both positive and negative expectations is supported by the Case Study data analysis in some of the schools and classrooms.

However, there are a number of teachers in the Case Study Schools who do not have this preconceived notion of their students. The learning support teacher at School O, which had a significant number of Indigenous students and students from low SES backgrounds, clearly had high expectations of her students:

You've got to set the bar and hope that they're going to achieve it. And sometimes you do set the bar too high. But if you don't set it high enough, they're going to give you mediocre type work. ...Every child's got their abilities and strengths and you've just got to find what their strengths are.

At Case Study A where the students come from low SES backgrounds, most of the staff appear to have high expectations for the majority of students, and there is a general sense that the school, students and staff perceived themselves and the community to be working very well with outstanding achievements in diverse academic, sporting and cultural fields. This appears to offer an example of the effects of positive teacher and school expectations. Similarly, Case Study E, where students come from a range of SES backgrounds, is a school with very high expectations of students both in terms of academic rigour and behaviour. The impression gained from observation in this primary school is that it is characterised by warm 'demandingness', which is present in both the classroom and the playground. Research such as the QSRLS (2001) has found that such warm demandingness is a necessary characteristic of pedagogies that make a difference in academic and social outcome terms. This concept of 'warm demandingness' refers to the required pedagogical mix of support for all students, but demand that they work hard and at work that is intellectually challenging. Students tend to live up to the expectations placed upon them (Rosenthal & Jacobsen, 1968). This has important implications for professional and skills development forums, where knowledge about productive pedagogies needs to be provided and where spaces for teachers to undertake action research and to reflect on their own pedagogical practices can be fostered (see Hatton, 1998).

Differences in teacher expectations of boys and girls

The survey data provide an indication of some trends in the teachers' expectations of boys and girls (see Table 6).

Table 6: Gender expectations by teacher gender

| | | Teacher's Gender | |
|---|------|------------------|--------|
| | | Male | Female |
| <i>Boys are responsible for most bullying at this school</i> ^a | Mean | 4.76 | 4.24 |
| | sd. | 1.14 | 1.13 |
| Girls are responsible for most bullying at this school | Mean | 2.83 | 3.01 |
| | sd. | 1.24 | .79 |
| Being bullied stops some students from studying | Mean | 4.76 | 4.60 |
| | sd. | .89 | .93 |
| <i>I feel that I have sufficient skills and knowledge to address bullying</i> | Mean | 4.23 | 3.83 |
| | sd. | .95 | .89 |
| It's not cool for boys to do well | Mean | 3.94 | 3.72 |
| | sd. | 1.05 | .92 |
| Boys are disadvantaged compared to girls | Mean | 3.59 | 3.24 |
| | sd. | 1.08 | 1.06 |
| Girls are disadvantaged compared to boys | Mean | 2.94 | 3.17 |
| | sd. | .84 | .88 |
| <i>Educational needs of boys have been neglected in the past decade</i> | Mean | 4.02 | 3.51 |
| | sd. | .99 | 1.01 |
| Girls dominate classroom discussions | Mean | 3.21 | 3.21 |
| | sd. | .93 | .79 |
| Boys dominate classroom discussions | Mean | 3.55 | 3.53 |
| | sd. | 1.06 | .80 |
| I prefer teaching girls | Mean | 3.26 | 2.91 |
| | sd. | 1.02 | 1.01 |
| I expect more from girls | Mean | 3.10 | 2.87 |
| | sd. | 1.03 | .89 |
| I expect more from boys | Mean | 3.07 | 2.76 |
| | sd. | 1.02 | .88 |

^a. Italics indicate significant differences at the .05 level. Boldface type indicates the larger mean.

Note that the survey uses a six-point scale with 1 representing strong disagreement, and 6 representing strong agreement. Values less than 3.5 indicate disagreement, and above 3.5 indicate agreement. Numbers bolded have a significant difference between the mean (average) response for each sex.

Some of the main findings from these data suggest that male teachers are concerned about the issue of boys' issues in schooling. For instance, male teachers generally agree that the 'educational needs of boys have been neglected in the past decade', whilst the average female response neither agrees nor disagrees with this proposition. Indeed female teachers generally do not believe that either gender is disadvantaged in comparison to the other gender. Male teachers generally disagree that girls are disadvantaged compared with boys, but the average response to the question 'are boys disadvantaged compared to girls' is marginally agreeing but very close to the midpoint. However, both male and female teachers tend to agree with the

proposition that boys are responsible for most bullying in the schools. This is consistent with other research (Collins et al. 1996; Duncan 1999; Mills 2001; House of Representatives Standing Committee 1994). Teachers also believe that bullying has negative academic consequences. Both male and female teachers generally feel they have sufficient skills and knowledge to address bullying, but male teachers are slightly more confident than female teachers on this measure. There are also concerns about the behaviour of boys in the classroom. For instance, teachers are more likely to think that boys dominate classroom discussion than do girls. However, generally teachers strongly disagreed that they sometimes find boys threatening (Table 7).

The survey data represented in Table 7 further expand upon the ways in which teachers' perceive gender issues as equity issues.

Table 7: Teachers' perceptions of equity issues¹

| | | Teacher's Gender | |
|---|------|------------------|--------|
| | | Male | Female |
| Boys are disadvantaged compared to girls | Mean | 3.59 | 3.24 |
| | sd. | 1.08 | 1.06 |
| Girls are disadvantaged compared to boys | Mean | 2.94 | 3.17 |
| | sd. | .84 | .88 |
| <i>Educational needs of boys have been neglected in the past decade</i> | Mean | 4.02 | 3.51 |
| | sd. | .99 | 1.01 |
| <i>Many of the problems boys are experiencing at school relate to the lack of male role models</i> | Mean | 4.08 | 3.57 |
| | sd. | .92 | .95 |
| Good school performance requires characteristics such as verbal fluency, social skills, and multi-tasking which are associated with girls | Mean | 4.25 | 4.02 |
| | sd. | .97 | .97 |
| Many of the problems boys experience can be addressed by a more flexible school environment | Mean | 3.49 | 3.59 |
| | sd. | 1.07 | 1.24 |
| Many of the problems boys experience are because they feel pressured. | Mean | 4.08 | 3.95 |
| | sd. | 1.04 | .91 |
| <i>Boys school performance, relative to girls, has deteriorated because curriculum and assessment favours girls</i> | Mean | 3.57 | 3.20 |
| | sd. | .96 | 1.09 |
| Boys spend less time studying than girls | Mean | 3.88 | 3.69 |
| | sd. | 1.04 | 1.04 |
| Boys and girls learn equally well but learn differently | Mean | 4.35 | 4.51 |
| | sd. | .91 | 1.01 |
| Boys are more spatial and girls more social | Mean | 4.00 | 4.01 |
| | sd. | .71 | .93 |
| I structure my lessons to appeal to the interests of both genders | Mean | 4.34 | 4.29 |
| | sd. | 1.04 | .76 |
| I sometimes find it difficult to pay attention to quiet boys and girls | Mean | 3.85 | 3.73 |
| | sd. | .87 | 1.01 |
| Girls dominate classroom discussions | Mean | 3.21 | 3.21 |
| | sd. | .93 | .79 |
| Boys dominate classroom discussions | Mean | 3.55 | 3.53 |
| | sd. | 1.06 | .80 |
| Boys and girls are socialised differently | Mean | 4.15 | 4.23 |
| | sd. | .88 | .73 |
| Differences between boys and girls are learned | Mean | 3.88 | 3.70 |
| | sd. | .88 | 1.02 |
| There are no underlying mental or cognitive differences between boys and girls | Mean | 3.35 | 3.12 |
| | sd. | 1.14 | 1.00 |
| Biological factors account for most differences between boys and girls | Mean | 3.52 | 3.40 |
| | sd. | .98 | .92 |
| Differences between individuals are greater than the differences between genders | Mean | 4.36 | 4.15 |
| | sd. | 1.12 | 1.10 |
| I prefer teaching girls | Mean | 3.26 | 2.91 |
| | sd. | 1.02 | 1.01 |
| I expect more from girls | Mean | 3.10 | 2.87 |
| | sd. | 1.03 | .89 |
| I expect more from boys | Mean | 3.07 | 2.76 |
| | sd. | 1.02 | .88 |
| I sometimes find boys threatening | Mean | 2.88 | 2.89 |
| | sd. | 1.20 | 1.15 |

¹ Note that one of the items is repeated from table 6

These data indicate that whilst there is some disagreement amongst teachers about the social, cultural and biological influences upon boys and girls, teachers agree strongly that boys and girls are socialised differently and mildly agree that differences between boys and girls are learned. However, teachers' responses are around the midpoint in relation to the question 'Biological factors account for most of the differences between boys and girls' and they mildly disagree with the proposition that there 'are no underlying mental or cognitive differences between boys and girls'. Clearly there is a great deal of diversity in teachers' opinions on these issues. However, there are some significant points of agreement.

Teachers generally agree that 'many of the problems boys are experiencing in school relate to the lack of male role models'. It is interesting to note that whilst both male and female teachers agreed that boys' behavioural difficulties could be attributed to a lack of positive male role models, there was no significant difference between male and female teachers' mean level of agreement with this statement. Teachers also tended to agree that good school performance requires characteristics associated with girls, and agreed that many of the problems boys experience is because they feel pressured. There is strong agreement that boys and girls learn equally well but differently; for example, teachers expect boys to be more spatial and girls to be more social. Teachers feel that they structure their lessons to appeal to both boys and girls, but they also say that they sometimes find it difficult to pay attention to quiet students of either gender. The most significant point of agreement is that teachers generally agreed that the 'differences between individuals are greater than the differences between genders'.

Overall teachers do not appear to have a preference for teaching either girls or boys. They do not generally agree that they have higher expectations for either gender. However female teachers disagreed more strongly with the proposition that they expected more from boys, than with the proposition that they expected more from girls. However, some of the case study data provide a different picture.

A key theme emerging from the case studies is the difference in teacher expectations of boys and girls, particularly in terms of learning styles and behaviour. In general, this reflected a view from teachers that stereotypically girls were more organised, better behaved and more mature than their male counterparts. Many teachers across the research schools argued that boys mature later than girls. This was specifically seen to be the case in lower secondary schools. Teacher interviews at School S, a boys' school, for example, suggested the need for tight structuring of classroom approaches for junior secondary boys. This was a common view across the teacher sample. Teachers at School R pointed out how boys changed over their secondary school careers with many boys who had been difficult early on in secondary school maturing to become exemplary upper secondary students. Both male and female students in the research also talked about this phenomenon of many boys disengaging in lower secondary schooling and then changing after they had matured.

Developmental differences between boys and girls have been identified as a factor in differential gender-based engagement with schooling by a range of researchers (e.g. Rowe, 2000; Rowe & Rowe, 2000). This literature suggests that girls on the whole mature earlier than boys. This is an observation borne out in teacher comments in the research schools. Many students, both male and female, also supported this view. Furthermore, some teachers noted

that boys were less likely to hand in all the required assessment than girls and that some boys, particularly the lower achievers, were very reluctant to participate in oral presentations.

At Case Study B there were very strong views about boys' education expressed by the staff that were grounded in beliefs that boys and girls have inherent biological differences and that these differences needed to be catered for in classrooms. (See Gilbert & Gilbert, 1998 for a discussion of many of these biological assumptions of gender based differences seen as relevant to schooling.) It was suggested that: boys learn through doing, while girls are more predisposed to sitting down and passively listening and writing. The view that current school curriculum and pedagogical approaches are 'girl friendly' was also expressed. Some work on gender and schooling has also argued this position (eg Bleach, 1998; Budge, 1994). One staff member at School B describes this approach below:

The way our curriculum has moved to more open-ended, reflective, interpersonal, extended type of things compared to the shorter, structured information, dense, closed things, we're finding that boys who traditionally used to lap school up and loved doing the mathematics and practising the algorithms, now they have to write about and talk about their feelings in English.

This echoes much of the mythopoetic masculinity literature (eg Biddulph, 1995; Bly, 1991) in arguing for more 'boy friendly' approaches to learning, which are clearly more activity based and structured:

Girls learn very well through the written word, through the oral instructions. Men have always tended to learn very well by being shown things. We need to actually physically do something and be shown how to do it...from the work that I've done with anthropologists overseas last year,...they're saying that boys were outside the cave grinding the corn, making the spears and the axes with the dad and mum, being shown how to hunt.

And further,

Boys do better where you've got good teaching/learning, they're much more affected by poor teaching/learning than girls who kind of have a more natural ability to collaborate with each other...But boys who are much simpler creatures need to have that really good quality teaching/learning to do well.

These views are reflected in comments from other members of the school staff. For example, one of the school counsellors commented:

I mean it's common knowledge that girls are much more into sitting still and a formal approach and the system in the past probably met that natural instinct in girls more than it has in boys. Boys by nature don't do that.

Similar views emerged from Case Study D, where one teacher used the phrase 'a different kettle of fish' to describe the differences between boys and girls. This summed up the teacher's

belief that there are natural and innate gender differences, which are played out in the classroom and the playground, where boys are boisterous and girls are quiet and more mature. Other teachers shared the view that girls are more organised, concentrated on their work and take it more seriously right through high school, whereas boys are more relaxed, do not work as hard and do not have the same goals. Teachers tended to draw distinctions between the learning behaviour of boys and girls. For example, teachers at this school made the following comments:

Boys work on correct answers because they want instant gratification.

Girls are more goal-oriented and more inclined to get part-time jobs.

A noticeable feature of boys was their capacity to respond to the teacher's strategy to make learning a challenge.

They [boys] find it very difficult to focus and stay there on something for a long period of time.

There was a general perception at the school that boys needed to be amused and entertained all the time, and that their egos and self-esteem were fragile, which in turn led to a fear of failure and of taking risks.

Many teachers across the research schools spoke of many boys' lack of maturity compared with that of girls, particularly in the lower secondary years. Many indicated a preference for teaching girls and that girls were easier to teach.

More research is required to ascertain the complex interplay here between student behaviours in classrooms and the creation of teacher expectations and the effects of teacher expectations upon student behaviours. There is a probably a two-way interplay of these factors at work here.

In a similar vein, teachers at Case Study C, who were only teaching boys, tended to express idealised visions of teaching girls, in their capacity to learn, emotional and psychological maturity, compliance with rules and general awareness.

One of the difficulties is that [boys] actually work against learning, whereas I feel that very few girls work against the capacity to learn.

I really do believe that boys at a particular year level are less emotionally and psychologically mature than girls at the same level and I think that lasts all the way through life...they don't necessarily take the responsibility for their own learning.

Girls always do a lot better I think because they follow the rules, they do as they're told. Boys tend to be more, I'm saying the word rebellious, but I think that's the wrong word.

Girls from a reasonably early age are pretty much aware.

Comments from two teachers at the school also indicated a tendency for boys to be more physical and spatially oriented, rather than aural and language oriented in terms of their learning. In general, there was a perception that boys were much more active than girls. One teacher from Case Study C detailed the views of a key speaker at the 'Teaching Boys/Developing Fine Men' conference held in Brisbane in 2000 on boys' education:

One of the key speakers...was saying that if the task of the nineties in girls' education has been to get girls to go out, the main task that we're facing with boys is to get boys to go in, is to face the introspection, to face a much more reflective type of education. And like, I couldn't agree more with that.

Teachers at Case Study C defined some of the teaching methods that they thought were most effective for boys. These included hands-on activities, clear outcomes and short sharp directions.

Case Study B had a policy that teachers were not allowed to deliver information for more than fifteen minutes at any one time in class. Structured activities were regarded as being more suited to boys' learning styles than open-ended activities:

The other thing that we've introduced which addresses curriculum is that boys have always loved to do puzzles and fill things in. If you want two pages done by boys, you hand the two pages out and you actually rule it up and put a place for their name then you might say, unscramble this ancient rule of rhyme. Very easy you have like boxes, they think lovely it's a puzzle, they'll fill it in... You can then have six lines with a line ruled underneath and you ask them to do a little bit of reflection, and they'll fill it in. And they're never not going to hand that in because they've got things right, they want to get the feed back. And over the page you might have two big questions, one asking for quite a lot of reflection and the other one for more again, but they'll fill it in and they'll hand it in. That seems very trite and kind of simplistic but it has a huge impact on kids.

The effects of this focus upon pedagogies deemed to be appropriate for boys raises significant questions about the impact upon girls in that school. It also raises questions of the appropriateness of this approach for *all* boys.

A male teacher at School R expressed a preference for teaching girls, suggesting that early adolescent boys are 'full of testosterone'. Specifically, he observed, 'I think it's the nature of the beast. I reckon boys, if you look at horses, well if you compare stallions and mares, I reckon 15 year old boys are just full of testosterone and far more aggressive than girls of the same age'. This view was complemented by a 'boys mature later' discourse. Thus he argued that when boys get to Years 11 and 12 'they become human again'.

The use of biological or taken for granted understandings about gender to explain boys' and girls' academic and social behaviours was not as readily apparent in the other Case Studies or amongst other teachers. Staff involved in the focus group at Case Study A, stated that they had

no preference in regard to teaching males rather than females, but agreed that some junior boys were at risk and were disruptive. This teacher preference situation is possibly due to the whole school approach to change around issues of gender and schooling. At Case Study E, difference appears to be valued and treated with respect. There was very little evidence of the presence of anti-schooling behaviour within this school, and it is well known that such behaviours are not tolerated at the school. The school size ensures that such behaviours do not go unobserved. There are, as mentioned before, boys who were bullied at previous schools who feel quite safe within this school. It would seem that it is intellectually challenging classroom work, within a supportive school environment, that has achieved this outcome at School E. At Case Study F and K, the schools had explicitly chosen not to emphasise differences between boys' and girls' education and had still managed to address literacy issues among boys through the adoption of a whole school approach to literacy. The spin off of this initiative appeared to be an improvement in the behaviour and attendance of students. There is much to be learnt from these schools' approaches to gender issues.

Importance of teacher-student relationships

Teacher-student relationships appeared to play a strong role in terms of determining the subjects students chose and their motivation to do well in those subjects. These relationships emerged as a significant influence in terms of their effect on students' motivation to learn and engagement with schooling (Slade & Trent, 2000; QSRLS, 2001).

The principals at both Case Study A and B regarded student-teacher relationships as vital to the educational attainment of boys. The principal at Case Study A was of the opinion that the development of positive relationships with teachers was the key to addressing at risk behaviour in boys:

We have worked on a few areas, and just positive relationships with teachers has been my area, and giving them some meaning for education for life.

He told the story of a young boy who came to the school in year 10 and who was experiencing considerable difficulties in his home life (his mother was taking the *de facto* father to court for sexual assault). The principal believed that it was through 'the efforts of year advisers and other people just talking to him, working with him, giving him positives' that he was able to overcome his difficulties and to succeed. He felt that there were a further 6 or 7 students with severe problems at the school, who had remained in school through the persistence of the staff.

Case Study B also prioritises the student-teacher relationship in terms of addressing boys' educational attainment and performance. In fact, the principal claimed that 'Boys learn teachers and not subjects'. This, the principal argues, is at the basis of the school's commitment to middle schooling where subject specialisation is not so much the focus, thus ensuring that students have contact with fewer teachers and are in a more supportive environment. With a middle school approach attention is on the teacher having as much contact as possible with the same class or group of students so that a positive relationship based on knowing the students can be developed. This is an argument common within the middle

schooling literature and is one that seeks to ease the transition from primary to secondary schooling for all students.

A number of students interviewed highlighted the importance of a student-teacher relationship in terms of student motivation. According to one student from Case Study D:

You feel like you are letting them [the teachers] down too if you, like, have a good relationship with them, and you kind of owe it to them and that is how you get results in that subject. Other subjects you might be going down the creek because you don't have that relationship.

A student from Case Study C expressed a similar view, albeit in a different way:

You can tell they [teachers] have respect for you and most of them get that back. But then there are others that just sort of treat you like robots and you don't want to give it back.

The emphasis on mutual respect is readily apparent in the pedagogical practices adopted at Case Study E. This appears to permeate student-student interactions as well as student-teacher relationships. This was evident in a philosophy class observed. In the class, students were read a story and then engaged in a discussion about the ethical issues raised by it. There were clear protocols for the ways in which the lesson was conducted. These entailed students waiting to be given a ball before they could speak, disagreeing with each other in polite and supportive ways, and making statements that did not represent definitive answers, but were seen to represent the standpoint of the person speaking. Philosophy across the curriculum provides a unifying set of values within this school. In Louis, Kruse & Marks' (1996) terms, this is the underpinning basis of the teacher professional learning community. All of the teachers receive initial and on-going professional development around this topic and have in effect become experts in this area. All of the teaching and assessment work is intellectually demanding. However, such demandingness is complemented by a strong emphasis upon support for all students and recognising their differences, including different viewpoints. In effect, what we see at work in School E are productive pedagogies (QSRLS, 2001), the creation of a teacher professional learning community (Louis et al., 1996) and leadership practices which support this school culture (Hayes, Mills, Lingard & Christie, 2001; Lingard, et al., 2003). These appear to be the necessary ingredients for ensuring effective and engaging learning for students in schools across all SES locations.

Within the Case Study Schools the attitudes and understandings of teachers about the way boys and girls learn and behave, were significant in determining their approaches to addressing students' educational needs. For example, there was a varying focus upon either behaviour management or academic performance. The data, along with the Literature Review, suggest that a focus on high quality pedagogies can overcome some behaviour management issues (QSRLS, 2001). The emphasis in relation to these two concerns in some schools was with both boys and girls, while in others the focus was specifically upon boys. Some of the boys-only focus was grounded in particular assumptions about the nature of boys and the ways they learn.

The disadvantage of this approach is that it tends to treat all boys as a single category, rather than disaggregating according to a range of other social characteristics.

In some schools, concern about boys has been taken up by women and girls. For example, attempts to help boys in some Case Study Schools were often initiated and supported by women, and occasionally girls pointed to possible discrimination against boys in school in terms of behaviour.

A male parent at School R argued that teachers sometimes treated male misdemeanours more harshly than when the same act was committed by a girl. He stated:

If a boy and a girl do the same offence, not by all teachers, but a lot of teachers, will treat them differently. Like, say, a girls throws some rubbish on the ground, some teachers will go and ask them nicely to pick it up. But if a boy did the same thing, the same teacher might say 'You horrible student', you know, and abuse them.

Some evidence from student data across the research schools supports this view.

Statistical analyses of teacher items by gender and year on the student survey, controlling for variations in self-rated ability, aspirations and liking for school, indicate that there is no significant difference in preference for teacher gender between the sexes. However, there are significant relationships between students' self rated ability level, and their preference for teacher gender. There is a small significant correlation between self-rating of ability and students' preference for a male teacher. When split by gender, it becomes apparent that this relationship is evident only for male students. It is interesting to note that some authors (Biddulph, 1995, 1997; Kindlon & Thompson, 1999) and media stories have speculated that boys require male mentors and teachers. This survey result may be interpreted as indicating that some boys prefer male teachers. As indicated later in this Report (section 2.2.2), the qualitative data suggest that the gender of the teacher appears to be of limited significance to most students, both male and female. However, according to the qualitative data, for some male students, male teachers are important in terms of someone to talk to about personal issues, just as female teachers are for some female students for the same reason. It is interesting that the correlation between self-rating of ability level and preference for a male teacher is positive amongst boys. There are at least four plausible explanations for this effect:

- The result may be a spurious result reflecting some unaccounted for third variable;
- The result may indicate that male students who have high academic self-efficacy feel less efficacious in other domains and seek masculine guidance;
- Alternatively it may reflect male students who over estimate their academic self-efficacy seeking male mentoring as a strategy for performing to the level to which they aspire; or
- It might reflect particular value assumptions of some boys that male teachers are more rigorous and/or demanding.

Students' conceptions of the ideal teacher

From our qualitative and quantitative research, the following themes emerged as important in students' conceptions of the ideal teacher:

- A 'caring' attitude and spending time with students;
- A commitment to teaching;
- A sense of responsibility to students (eg. returning assessments promptly);
- A teacher who makes the work interesting and relevant;
- A relationship of mutual respect;
- Taking an interest in the students' lives beyond the classroom;
- Connecting the curriculum to the world of the student;
- Recognising and supporting difference amongst students;
- Ability to control the classroom balanced with fairness and enjoyment; and
- A broad knowledge base.

Students from all schools described the ideal teacher in similar terms. This teacher was generally described as 'One that cares', 'One that makes it interesting and relevant' (see Martino & Pallotta-Chiarolli, in press; Slade & Trent, 2000; QSRLS, 2001). Students tended to describe a positive student-teacher relationship as one that is characterised by mutual respect.

Our maths teacher is really good because he gets down a level with everyone else instead of up on a pedestal, like everyone else is like looking down on us and saying they're above us and better than us. But he gets down there and he actually walks around and if you have a problem he teaches you, like individually one on one... It's, like, really good that method.

Mr. X is the only teacher that actually stays down on our level and not like other teachers that stand over you and go, 'Ohhh, I'm bigger and you and I can rule you' and that's what I mean but he doesn't, he's not so much like that he's things are...he's like friends with us. He's had a lot of experiences with type of stuff.

The mutual respect appeared to be demonstrated through teachers taking an interest in the students beyond the classroom. Comments included:

Some will ask you 'How did you go with the footy on the weekend? and that'. The ones that take an interest in your life...and they are the teachers you want to learn from.

Other comments, suggested that a good teacher was also one who could banter with the students, for example:

I like Miss X, she's really good, she's our Japanese and Home Economics teacher and yes, she's really cool, she talks to you, she's funny, she insults us which is kind of funny. Say, you insult her she will just say, 'Yes, I know', so on and so forth. She actually talks to you, she interacts, she does stuff with you.

Other students talk of how good teachers let the students into their lives. For instance, one Year seven boy at School K told of how his favourite teacher keeps them informed about her outside life.

The importance of developing a supportive classroom and promoting positive relations between all students and teachers has been well documented in the relevant research literature. However, the focus on developing relationships between male teachers and boys may at times lead to forms of male bonding which may pit boys' interests against those of girls (Roulston & Mills, 2000; Skelton, 2001). This is an area for further investigation. It is, of course, also possible that the reverse effect could happen with female teachers and girls. In addition, whilst positive relationships amongst teachers and students are necessary for improved social and academic outcomes, they are not of themselves sufficient (see QSRLS, 2001). Making the curriculum connected to students' lives and recognising difference through an intellectually challenging pedagogy are also important. Appropriate alignment between such pedagogies and assessment practices is also necessary (QSRLS, 2001; Lingard, Mills & Hayes, 2000).

Students also saw relationships of mutual respect as involving teachers' commitment or responsibility to students. This could involve many things, but for students at School J included returning work on time with useful and constructive comments. Some of the contemporary debate about boys and schooling has suggested that the shortage of male teachers is a contributing factor in boys' school performance (Fletcher, 1995, Biddulph, 1995; 1997). As noted above, the survey data suggest some teacher agreement with this view. The qualitative data from student interviews and focus groups provide some further interesting insights into this debate. At School J, a government secondary school, both boys and girls offered a general description of the ideal teacher. These traits included: care for students and taking time with them, commitment to teaching, a sense of responsibility to students (e.g. returning assignment work promptly and to assist them where necessary in relation to both social and academic matters), the establishment of good, respectful teacher/student relationships, the capacity to control the class balanced against a sense of fairness and enjoyment, and a broad knowledge base. These traits were supported across the Case Study Schools.

Many of the students in the schools talk about the importance of teachers caring about them as people, as well as caring about their academic achievement. As one boy at School G argues: 'Their job is to teach us, but they're also here to care for us'. This care manifests itself in a number of ways. In some instances it involves teachers helping students with their personal problems and issues, sometimes unrelated to their academic work, for instance with issues of violence at home. A boy at School J said the kind of person he wanted as a teacher was: 'Someone who you can talk to, yeah, if you have any problems'. In other instances, this concept of care involves teachers demonstrating a commitment to helping students to achieve what they perceive as their potential. This aspect of care surfaced in a focus group discussion amongst Year 9 girls at School J, where one girl stated when comparing her secondary school with her primary school, that in relation to her primary school, 'Oh the teachers just didn't care if you, like if they were writing something on the board and you didn't understand they didn't care. If you failed, you failed, too bad.' In contrast were her comments about the teachers at her

current high school. She observed, 'The teachers here, they make sure you understand it, and if you don't they offered to like tutor you at lunch time or after school or something.'

This latter aspect of care is closely linked to the perception of teachers' commitment to teaching and a sense of responsibility to students. One male student at School J interpreted teachers' commitment to teaching by the respect they showed to their assignment work in terms of how quickly they returned it marked.

The point made by the student above that a good teacher makes learning enjoyable is a theme running through most of the student interviews in both primary and secondary schools. For instance one Year 5/6 boy at School M says a good teacher is 'One who makes it fun and interesting' or as a girl in the same class said: 'Mr Y was a good teacher. He made our maths fun. He was interesting'. However, students did not want the 'fun' aspect of classrooms to diminish learning within the class. Indeed one girl in School K said that good teachers 'like to have fun every now and again', as opposed to all the time.

A number of students stressed the need for teachers to demonstrate pedagogical and professional skills. For instance, one boy at School K said that what he liked best about his favourite teacher was that '...when I get stuck, like, she tells me to have a try and then I just do a little bit and then I get stuck and then she comes up and helps me'. A girl from the same school says that:

A good teacher would probably – she prepares everything properly, she has it ready, everything's ready for the next day and she's like never behind in any work, she's always got a thing there ready. And that's pretty much what's good about school.

Students in all of the research schools expressed their desire for teachers who were able to control their class and not for instance (particularly in secondary schools) to be scared of students. As a girl in School J said regarding her maths teacher: 'The thing is he can control the class really well, really, really well, so you can sit there and just absolutely learn'. When students expressed their desire for this kind of control, it was usually complemented by a concern that teachers would treat them with respect and dignity. As one male student at School J said:

They've got to be sort of firm, like got to know what they're doing, and got to put their foot down when it needs to be, but they've got to be understanding and know when there's a problem and understand like if something's happened to your assignment or something. They've got to like believe you and trust you.

Another male student felicitously encapsulated this sentiment by suggesting that good teachers have 'a balance of fairness and firmness'. This desire to have a class where the teacher would not allow disruptions seemed to be equally favoured by both boys and girls across all school types and seemed to have little to do with the gender of the teacher. For instance, at Case Study School P, a coeducational government secondary school in a very disadvantaged community, one senior boy commented on how his English class had now improved with a change from a female to male teacher. However, the point seemed to be much more to do with the male

teacher's capacity to control the class and to get the students to work than with the fact he was male. This boy stated: 'Mr X is a tough teacher, which is good.'

There was basically little difference between male and female students as to this listing of ideal teacher characteristics. However, some boys suggested that girls were more interested in having teachers as friends than were most boys. A boy at School J stated: 'I think girls like more of a friend probably and guys think it doesn't really worry them that much'.

Is the gender of the teacher significant in students' views of the ideal teacher?

There was a diversity of views on this point. This diversity was apparent in one focus group at School M, a rural primary school where four boys expressed their preferences in the following ways:

Student 1: I like male teachers, because sometimes they do better stuff than the female teachers...

Student 2: It doesn't really matter as long as they know stuff and they can teach you.

Student 3: I like female teachers as they are easy to talk to, and I like them as teachers.

Student 4: A mixture of both, because sometimes female teachers are more experienced in teaching than male (teachers).

These comments may well reflect not so much the gender of the teacher, but their experiences of good and bad teaching associated with very few teachers. For instance, these students suggest that what is important is teachers who do 'better stuff', know 'stuff', are 'easy to talk to' and are 'more experienced in teaching'.

There is some evidence from one of the all boys' schools, School G, that female teachers are likely to experience more misbehaviour from boys in their classes. Female teachers at School S suggested that initially they had to win the respect of the boys at this all boys' school and had a harder time than new male teachers. However, once respect was won, their experiences were similar to that of the male teachers. In relation to behaviour issues for female teachers at School G: the teachers indicated that the problems with boys for female teachers disappeared as the students get older. For instance, the following discussion occurred with one group of boys in this school:

Student 1: Male teachers are usually, oh, just easier to you have a joke with them a lot easier. Just guys like to muck around. Female teachers don't really like that too much. No, they sort of get up you.

Interviewer: Yeah. So the male teachers are less likely to get up you?

Student 2: Yeah, yeah.

Interviewer: Yeah. And would you all agree with that?

Students (all students respond): Yeah, yeah.

Interviewer: What about behaviour in classes? Do you think that boys behave just as well for the female teachers as they do for ...?

Student 3: Maybe sometimes they try and push the female teachers a bit more, but I've found in Year 12 especially that there's not that much mucking around going on in classes, it's mainly get into it.

Interviewer: Hmm. And is that a change say from Year 10? Like, you know, in terms of ...

Student 3: Used to stuff round more in grade 10 though 'cos nothing like really counts for your future then, like Ops (Year 12 results) and that sort of thing. We mucked around.

These views are also articulated by a group of Year 12 boys at School G, who are part of special group of high achieving boys, the Alpha group, which has been formed by teachers to promote boys' academic achievement as a positive thing.

Student 1: I don't think it matters whether they're male or female. I think by the time you get to Year 11 and 12, it's more friendly with the teacher and being (inaudible) the teacher/student thing, so like, I don't know what makes a good teacher. Someone who teaches well, but also can be like a friend at the same time.

Interviewer: And what do you mean by teaches well?

Student 1: Like actually teaches the work, actually teaches the work, like, so you understand what's happening. So it's not just there it is, just learn it. They actually explain it all, but at the same time, not be like overly strict but just have control of the class.

The general point here is that the school type, that is coeducational or single sex, along with school culture is a mediating factor in some students' preferences for male or female teachers. We would note, however, that a major concern of these high-achieving, senior School G students is the quality of the pedagogies practised by the teacher, irrespective of gender. These boys want a supportive teacher and one who teaches the material well. Whilst the boys in this all-boys' school see the gender of the teacher as important, one boy thought that boys are not as aware of these issues as are girls.

This group of high achieving boys at the Catholic all boys' school, School G, talk about the differences between students' commitment in the junior years of schooling and the senior years:

Student 1: I think mainly in junior, especially in Year 9 and in 10, academic success is almost frowned upon ...

Student 2: ... It's sort of the uncool thing to do. But moving through senior, people seem to be more, um ...

Student 3: Enthusiastic.

Student 2: ... enthusiastic about the whole sort of thing, academic learning thing.

It is perhaps these different views on academic achievement within the senior years which led to boys' varying treatments of female teachers within this all boys' school.

In some cases, some girls and some boys suggested that in relation to some personal, often gender specific problems, that the gender of the teacher was actually important. A primary boy at School M observed in relation to this point, 'If you are a boy, you can talk to them (male teachers) about some of the problems that you've got'. One boy in School J also noted that: 'Male teachers you talk to about certain things you'd be uncomfortable talking to female teachers about, so it just depends'. However, this same boy suggested that female teachers were most often 'more understanding' than male teachers -- 'like males are sort of like macho'. This would thus seem to suggest that it was not just being a male teacher, but the kind of male teacher that is important.

The centrally important finding across the research schools was the fact that all students, both boys and all girls, argued basically that the gender of the teacher was not the central issue. Rather, what mattered most was the extent to which teachers and their practices matched their articulated ideal teacher model. The quality of pedagogies was what mattered most. The students' construction of the ideal teacher practices were very much akin to the productive pedagogies model (QSRLS, 2001, Lingard, Mills & Hayes, 2000) with a lesser stress upon intellectual demandingness. This perception was that the pedagogies rather than the gender of the teacher ultimately counted, with exceptions, such as issues dealing with personal concerns. The nature of the school and its culture were also relevant here.

In relation to teaching across different subjects in the secondary curriculum, it was interesting that one girl in School J stated: 'I don't think there is a boring subject, there is just boring teachers.' This again reinforces the centrality of the quality of the pedagogies. Whilst students choose different subjects in secondary schools for different reasons, the quality of the pedagogy is again a factor in these choices, as well as being a contributing factor in students' enjoyment of these subjects.

A connected curriculum

Some of the important observations that emerged from the study regarding curriculum are as follows

- Curriculum needs to be connected with students' lives and have meaning beyond the classroom, but this must be balanced with maintaining a demanding pedagogy.
- Need to cater for students of varying academic abilities.

- The provision of a combination of relevant subject and teaching approaches is important.
- Need to avoid ‘dumbing down’ the curriculum

The issue of a ‘relevant’ or ‘connected’ curriculum was raised in a number of interviews. The general view was that if the curriculum was not seen to be connected into students’ lives, then the students would become disengaged from the schooling process. For example, the principal of Case Study D was of the opinion that the current school curriculum did not accommodate boys’ interests. He commented:

I think that it is important to ensure as far as possible that the curriculum that they are exposed to is relevant because if there is no relevance to the curriculum then there is no interest in it and you get kids turning off.

As did the principal at Case Study B:

So much of what they’re doing just doesn’t have relevance for them and they don’t know why on earth they’re learning it. So even at the outset if teachers could say well this is what we’re doing, you have an input, this is why we’re doing it, these are some of the goals we are hoping to achieve along the way, and at the end of it this is what you’re going to end up with, this is the sort of portfolio that you’re going to put together and then we’ll sit down together and mark it.

Comments from other interviews included:

To study some of the Chinese, early Chinese civilizations, and the early Indian sort of stuff, it just seems to be nonsensical, and that’s what you do. You immediately disengage the boys from their culture by actually structuring a curriculum that everybody else teaches and it just doesn’t make sense.

[...] they come to a school with curriculum [that] isn’t meeting their needs and I can’t stress that enough you still need me [the student] to shut up and to squiggle and to do all those things for six hours a day and I just can’t do it.

Case Study A had prioritised the area of vocational education to better cater for students of varying academic abilities, thus giving them access to a more ‘relevant’ curriculum. The principal described these work programs in the following fashion:

Things like simple work programs, peer support, life skills programs, vocational education in Years 11 and 12, traineeships...all those things that make education relevant to kids, giving them some satisfaction to be at school.

The effectiveness of this approach was confirmed by one boy at the school who had had discipline issues in the past, but was now more engaged in schooling through his involvement with the ‘School to Work’ program:

Most of the people that are getting in trouble are not, they're not really into writing and all that sort of stuff. Like they are more into hands on stuff... When they are doing work experience, it's not only teaching them that trade, but it's also teaching them to work independently and more responsibility and all that sort of stuff.

In contrast, some of the teachers at School R expressed concern that the substantial uptake in their school of 'voc ed' courses had meant a diminution of academic provision.

Discussions with one boy from Case Study B suggested that drama, a non-traditional subject for boys, was a popular option for boys at the school, particularly among boys from a particular sub-culture within the school. What emerged from the conversation, was that the drama teacher, who was described as really good at teaching drama, had also chosen plays that had relevance for the students. The school was set in a beach suburb, and the play chosen was called the 'Surfer Girl'. Another production that had been done was called 'How to Kill a Babysitter'. The student's comments here would seem to suggest that it is a combination of subject focus and pedagogical approach that is important in achieving student engagement. Connectedness is an important element of productive pedagogies (QSRLS, 2001) and refers to the necessity for curriculum and pedagogy to be connected to the students' lives and worlds and for the work being done to have meaning in the world beyond the classroom (Newmann & Associates, 1996; QSRLS, 2001).

Relevance is important. However, it is not without its dangers. Firstly, it may not provide students with the 'cultural capital' (Bourdieu, 1998) necessary to achieve success in the broader social context. This is a serious equity issue as it is often those students who come from particularly low SES backgrounds who receive a 'dumbed down', yet 'relevant curriculum', along with 'dumbed down' pedagogies (see Hatton & O'Brien, 1998). As the QSRLS (2001) has argued, the quality of pedagogies which students experience is an important social justice issue in contemporary schooling. Furthermore, relevance for boys can often entail reinforcing certain stereotypes (Epstein et al., 1998; Mills, 2002; Martino & Meyenn, 2002).

The philosophy at School S was to provide a broad liberal education for all boys. This was reflected in the fact that all boys had to choose subjects in the post-compulsory years from across the Maths/Sciences and Social Sciences/Humanities divide. The clientele of the school supported such an approach.

Demanding pedagogies

Our major observations on pedagogy can be summarised as follows:

- Students need an intellectually challenging pedagogy;
- It is not so much the subject as the way it is presented which is important;
- Student-centred rather than teacher-centred pedagogies are most effective.

The need for all students to receive an intellectually challenging pedagogy has in recent times become a central concern of research (Newmann & Associates, 1996; QSRLS, 2001; Cuttance, 2001). The evidence from the QSRLS would suggest that there is a close link

between the intellectual demandingness of pedagogical practices and lack of behavioural problems. This appears to be the case in the Case Study Schools.

At Case Study A, the majority of behavioural problems in the school were seen to come from the LOTE classroom [German]. Classroom teachers at the school described this as being a result of 'irrelevant' curriculum. According to one respondent:

All the stuff that we do is to identify these kids with severe learning problems and they make them take German and French and you ask every high school this is where my kids muck up, this is where they lose control and the good kids lose out because if there is half the class acting, going up to the rafters, what are the good kids going to do?

Previous research would suggest, however, that this is not only an issue of irrelevant curriculum, but also an issue of inappropriate pedagogy tied to other contributing school contextual factors (Norris, 2000). This view was reinforced by a teacher at Case Study C who indicated that it was not necessarily the subject itself that made the curriculum irrelevant to students, but the way in which the subject was presented. He argued for example, that Arabic students did not enjoy learning Arabic at the school, but preferred to learn it through community language classes run on the weekends. This was due to the fact that the community language programs were 'very culturally based... Here it's 'Do Arabic and then go into maths and then go into English'.

Class observations at Case Study E revealed productive pedagogies in practice (QSRLS 2001; Lingard, Hayes & Mills, 2001). Throughout the school there is a focused and rigorous approach towards students' learning. Teachers in the school are all versed in the notion of productive pedagogies and seek to ensure that their teaching is intellectually challenging, that school work is connected to students' worlds, that the classroom environment is such that students feel supported to take risks in their learning, and that difference is recognised and valued in the classroom. There has, in recent times, been widespread engagement in Education Queensland's New Basics project, a curriculum reform project which has sought to integrate the concepts of productive pedagogies and rich tasks (based on the concepts of authentic and productive assessment with a curriculum that caters to the demands of 'new times'). (See <http://education.qld.gov.au/corporate/newbasics>.)

This form of learning seeks to provide an educational environment that caters to the complexities of contemporary Australian society. This was evident in the classrooms observed. The engagement of students in these classes was widespread and there were no observable gender differences in this engagement. The emphasis upon quality pedagogy and a supportive classroom and whole school environment, along with the teaching of skills to students to handle conflict and differences of opinion, appeared to be the factors contributing to these commendable outcomes.

The culture of School S was to stress academic performance within a broad liberal education. The instigation of the dimensions of learning across the school, together with approaches to teaching critical thinking skills, along with a vibrant professional learning community, placed

intellectually demanding pedagogy at the core of classroom practices. This was appreciated and expected by both students and parents.

2.1.5 Peer groups

As detailed in section 2.1.2, survey results show significant differences between boys' and girls' extra-curricular activities and peer groups relations. Girls tend to spend more time on 'social' activities, eg. talking or socialising with friends. Boys socialise more in certain contexts, eg. playing sport, using computers and video games. Girls were more likely to receive encouragement for academic pursuits from peers and girls were more likely than boys to study with their peers.

Peer group influences appear to have a strong impact on students in terms of their attitudes to schooling and their behaviour at school (see Walker, 1988; Mac an Ghail, 1994; Martino, 1999; Martino & Pallotta-Chiarolli, 2003). Based on the qualitative research conducted in the nineteen Case Study Schools, it appears that there is strong anti-schooling culture among many boys. This is translated into a high pressure for boys to portray negative behaviours and attitudes towards school, where doing well at school is not 'cool' (see Gilbert & Gilbert, 1998). In some instances, sport was also a key characteristic of their culture, particularly among the students from lower socio-economic status backgrounds.

At Case Study A, staff regarded peer group influences as being key factors putting students 'at risk', particularly in relation to out of school behaviours involving alcohol and drugs. In addition, some teachers commented that there was peer group pressure to portray restrictive masculine behaviours and that this placed susceptible students at risk. These masculine behaviours incorporate a number of values/behaviours including, a view that 'school sucks', a rejection of the labels of 'nerd' or 'swot', emphasis on disruptive and loud behaviour, and an association with drugs and alcohol outside the school context.

This is confirmed by the head teacher of English in Case Study Q, who claims:

... there is a group of boys who want to appear tough and part of that manliness is being tough and does not involve liking school or having a positive attitude school.

It appears that for many students, particularly boys, there is a desire not to be seen to be working hard (see Martino, 1999, Gilbert & Gilbert, 1998). There is research that highlights that some boys publicly reject a commitment to school learning. These attitudes are often linked to what some boys perceive as being 'cool' in an attempt to distance themselves from the 'nerds' (see Epstein et al., 1998; Gilbert & Gilbert, 1998; Martino, 1999). This influence appears to operate across all SES locations, though with differing effects in terms of its capacity to impact detrimentally on boys' educational outcomes and post school options.

For example, the majority of boys at Case Study D seemed to be greatly influenced by a peer culture that dictates their attitudes to school and work. By their own admission, it is the social aspects of school, which are attractive, and they expect schooling and education to be entertaining and fun. The boys generally have a certain attitude to school that is more laid

back, and they do not work as hard, and do not have the same goals as the high achieving boys and girls.

Teachers at Case Study C described how the boys attempted to cover up their fear of failure through bravado (see also Jackson, 1998). In this sense, the boys were seen to be setting themselves up for failure.

I think underlying that they really do care, but they put on this bravado that 'I don't care' but because they think I don't care, it doesn't matter if I fail.

The school chaplain at Case Study B also spoke about the boys' investment in acting cool and how this impacted on their learning and social relationships inside and outside of the school. A focus group conducted with lower achieving boys at Case Study A provided further evidence of an anti-schooling bravado, and comments such as 'school sux' and 'I hate nearly all the teachers' were common.

Teachers from Case Study C described a strong anti-learning culture perpetuated through certain peer groups. According to one:

I think one other thing ... is the impact of the peer group in the classroom on other kids' learning. Quite often, kids stop learning, because that's the thing to do and if I want to be a part of this group, I'm going to have to fly up or I'm going to have to not do my homework ... particularly in some of the junior classes ... I see immense pressure on kids to conform to whatever's happening in that classroom.

The teacher went on to describe how students were bullied for being 'nerds':

We had students that left last year that had been bombarded with papers in class. One boy in Year 10, a very committed student...came running into my office a couple of times in tears ... We've lost students that would help our school too.

The principal at Case Study N indicated that girls' attitudes to school 'were much more positive than the boys' and related this predominantly to the influence of peer pressure:

...peer pressure doesn't seem to be as significant an influence for the girls. There are probably more of them achieving. It makes you wonder doesn't it whether it's an ever evolving circle, you're just going around and around in circles because it's cool for the girls to achieve, it continues because it's not cool for the guys to achieve.

He elaborated to draw a connection to the specifically Australian cultural phenomenon of the 'tall poppy syndrome', which he believes is more broadly linked to the masculinist emphasis on and valorisation of sport. He mentioned that there were students at his school who were almost embarrassed to come up and receive an award and those who did receive awards would then 'cop it'.

The principal also commented that it was this masculinist culture of peer group pressure which he believed accounted for many boys' reluctance to participate in humanities subjects such as drama, because of what he terms a self-consciousness brought on by a fear of being ridiculed by their mates:

[Boys don't perform in drama because they are] probably too self-conscious. Peer pressure again. Self conscious not because they're timid minded people but because they're worried about what their mates are going to say. Look what you were wearing, look what lines you have to say.

Interestingly, he indicated that girls were able to cross the gender divide in relation to participating and performing well in traditional male subject domains, such as woodwork, without being policed by other girls or made to feel self-conscious in any way:

The more literacy oriented humanities, like the histories and the politics and so on would be ones that the boys don't do so well in. I wouldn't say that the girls don't do so well in woodwork because those that do it actually can do some beautiful work.

A female parent in Case Study H confirmed that this anti-academic and masculinist culture was something that pervaded boys' peer group social relationships:

I think it's not quite so 'wussy' for girls to be academic whereas the boys really are affected by their peers.

At Case Study B this anti-academic attitude was associated predominantly with a particular group of 'homie'/'skatie' boys, that is, members of a particular sub-culture, who were identified as embracing the 'not cool to be smart' or 'it's cool to be a fool' philosophy. One male student described the situation succinctly:

If they've passed a few subjects, this applies to the skatie group, and stuff like that, usually they'll get teased for about a day and then it settles down. But it's like you can't pass a subject because of the stereotypical guys that just fail everything and they don't care.

This student, however, while accepted by the 'skatie group', though apparently not aligned exclusively with them, attributed his attitude to wanting to achieve well at school to the influence of his mother. He indicated that his mother encouraged him to do well and also had the financial capital to provide him with a tutor to assist him to improve on areas of weakness in specific subjects where he was not achieving well.

In Case Study D, sport is very much a part of the peer culture. It is often linked to the boys' sense of gender and identity. Schooling and education, on the other hand, are rarely regarded as an integral part of their culture. Positive links to school are made through sport, even in an academic sense. For instance, the boys interviewed, primarily from the lower SES family backgrounds, commented at length about teachers and their relationship with students. One

teacher, in particular, the 'footy head' who runs the rugby league in the school and talks to them about football, also teaches maths and takes extra tuition classes, is their favourite, and they work well for him. Other research has found that male teachers often use football culture to engage male students (Skelton, 2001; see also Roulston & Mills 2000). Furthermore, some research has suggested that this is particularly common male behaviour in primary schools where there is a predominance of female teachers (Skelton, 2001). The downside in such practices is the potential neglect of other types of boys who are not so orientated towards sport (Connolly, 1998; Epstein, 1998; Skelton, 2001; Martino, 1999; Martino & Pallotta-Chiarolli 2003). Further, such practices tend to reinforce rather than challenge dominant practices of masculinity.

What emerged across the Case Study schools was the view that doing well in school does not seem to be 'cool' for many boys. One parent commented on the impact of peer culture on her children's approach to schoolwork and the difference that exists between her son and daughter:

My daughter tries to do more than she has to do so she can get top marks ... He [the son] only has to do what he has to do ... so that is normal for boys.

This parent explained that the difference between the attitudes was due to the boy's preference for play and outdoor activity together with his lack of concern about school. Another parent expressed his concern about boys' lack of respect for anything:

I think that there is a real bad culture now-a-days. I really think there is not a great deal of respect or learning from boys.

His views were markedly different for girls:

They have a bit of respect, like they want to learn, they want to get somewhere, they obviously have some aspirations about where they want to be and that, and they are quite reasonably dressed and....reasonably presented...

Generally, the girls involved in the focus groups were also influenced by a peer culture. However, in contrast to the situation for many boys, this was one that valued school and education as a way of ensuring girls' independent futures. There is probably more similarity between the stereotypical ways of being a girl and the conception of the ideal student, than between the latter and the stereotypical ways of being a boy (Skelton, 2001).

The counsellor at Case Study B commented:

I think one group that we haven't really touched on is those kids who are kind of rejected by their peer group who are at risk very much in a social way. In a smaller school there is less room for some of these kids to be in terms of there's a group of kids that are together be it girls or boys and they don't fit into that group for whatever reason, there's not a lot of room to move. Whereas in a bigger school there will be other kids who maybe don't fit in with the sporty group or the academic group or whatever and they can have enough.

This idea of fitting in linked explicitly to the ‘masculine ideal’ which boys must strive to achieve, according to the school psychologist at Case Study N:

I think for boys a lot of their school life must be lived in fear because the masculine ideal is such a narrow and such an exacting ideal. You have to be tall, you have to be athletic, you have to be cool, you have to say all the right things and you mustn’t do a million things. They must live their lives worrying about doing the wrong thing and being targeted as anything less than masculine and certainly not gay if we can help it ... And what about all the boys that don’t live up to that ideal which is about 99% as far as I can see ... We forget about the boys who don’t fit into this little image that’s supposed to be the image. Most of them don’t measure up to it so therefore their self-esteem and confidence must take a daily battering. Then all you need is a few of the cool guys to add to that, and I think their lives must be a worry every day.

The health and physical education coordinator at Case Study A, however, did argue that peer group influences can have a very positive impact on student performance and achievement:

I feel the peer structure is important. If you’ve got a good cluster of boys going through that are competitive, for example in 1998 the HSC year out of the 6 that got over 90 in the Rural High School in the TER, 5 of those were boys. One of them was a girl. Now they were very competitive, they fed off each other right through from junior years. So I feel your peer structures, your groups have a major impact on boys’ education. All right... and within the year 10 cluster they are dominated by a good group of boys. Very, very strong intellectually, sporting wise and everything and that can have a major impact, I feel.

The ways in which dominant peer group attitudes work to create school cultures which ‘police’ boys’ social and academic behaviours have been a concern of much recent literature on boys (Mills, 2001; Skelton, 2001; Francis, 2000; Collins et al., 2000; Kenway et al., 1997; Epstein, 1998; Martino & Meyenn, 2001; Martino, 1999; Martino & Pallotta-Chiarolli, 2001). Whilst the evidence obtained from the Case Study Schools supports this research, there has been little professional focus on this in the Case Study Schools. The role of sport in developing particular masculine cultures within schools has also been the subject of much research (Fitzclarence, Hickey & Matthews, 1997; Walker, 1988; Mills 2001; Gard, 2001). However, apart from School E which has refused to participate in the local schools’ sporting competitions, there has been little theoretical analysis of the role of sport in reinforcing dominant ways of being a boy within schools and how this relates to boys’ level of academic engagement.

Being cool and the ‘nerd’

A more complex understanding of peer group dynamics around being/acting cool is required as the following boys’ and girls’ experiences illustrate. The attribution of being a ‘nerd’ can be avoided if boys’ have the appropriate social skills and cool demeanour to avoid being positioned as someone who studies hard. As the high achieving middle SES boys in Martino’s (1999) study illustrated, they had to negotiate being a party animal and a ‘squid’ or ‘nerd’ in

order to gain acceptance from their peers. Many boys and girls across the Case Study Schools also commented on the stigma attached to being labelled a 'nerd' or a 'geek'. At Case Study School N, the boys talk about the need to avoid being identified as a 'geek', and hence, as investing too much in school work and high achievement, but equally they do not want to be positioned as 'dumb':

Student 1: You don't want to look like a geek or always trying to study, or you try and get everything right. You just look like a bit of a tool or something like that.

Student 2: You still do work but you don't try your hardest.

Student 3: Most boys are happy with like 65% on tests.

Interestingly, at Case Study School K being a geek was not so much associated with being smart, but with trying hard. So it appears it is okay to do well academically, but it must be apparently the result of 'effortless achievement', not from studying hard. What is also apparent in these two primary schools, situated on opposite sides of the country, is that the terms 'geek' and 'nerd' are linked with smartness.

The boys who were able to negotiate the divide between 'geek' and 'sped' (reference to special education) at School N were those who were socially capable of projecting a cool demeanour and had the skills or social capital to do so. Thus the issue for those boys in negotiating the distance between a 'geek' and a 'sped' is tied to a particular peer group social dynamic which involves acting or being cool.

The girls at Case Study N also highlighted the power and influence of the peer group for boys when they made the comment that boys were a lot nicer when they were by themselves. They indicate that boys feel the need to impress their friends, but when they are not under the influence of other boys, the girls perceived them to be more mature. Girls at School K also identified boys' group behaviours which were contrary to their individual ones, and which had negative consequences for girls in the class.

Hence, being cool – and perhaps more importantly, not being a nerd or a geek - is sometimes about acting tough and tormenting girls. This social dynamic amongst the boys is also explicitly linked to macho sporting cultures and to the imperative to avoid the attribution of being labelled a 'sissy' or, as Jackson (1998) indicates, 'gay'. In fact, the girls at School N say that some 'nice' boys are the ones who are also targeted by other boys:

Student 1: Like two boys in my class they're really, really nice and they're like really nice to all the girls, they're not mean, they're respected and everything. But then there's some of the guys that maybe if they're doing something nice then they just go like, oh you sissy, don't be such a girl. It's really mean but they're really nice because they're being nice.

The girls at Case Study school N also thought that the boys were more prone to be disruptive in class to impress their mates. Contrary to the view that girls are a distraction for boys and,

hence, would benefit from being in single sex classes, these girls are saying that boys are more concerned about playing up for other boys, not necessarily for girls:

Student 1: I find that they have a tendency to think they have to impress someone. So they show off. ...they're trying to look good in front of their friends and that.

Interviewer: And girls don't?

Student 2: We don't do it so we disrupt the whole class and then jeer at the teacher...

Student 3: Yes they like the attention when they get in trouble everything, they think it's cool. It's just annoying.

Interviewer: So they get attention from their mates?

Student 1: Yes because the other boys they laugh at it so it encourages them and they keep going.

However, at this low SES school doing well appears to be more acceptable for girls. The girls encourage one another when they do well and boys apparently do not:

Student 1: When the guys do well, they get like a good mark or something the other guys will be like oh you study and everything, you nerd, you squib.

Student 3: If girls get good marks we just congratulate each other.

However, whilst the girls might help each other out, boys can be a problem for high achieving girls. It is not only the boys labelled as 'nerds' and 'geeks' that are bullied by other boys, but also some girls. One girl at another low SES school, School K, complained about being teased by the boys for trying hard:

When I done good in maths they called me a maths freak and everything. It's just like they tease S, she's my friend, she's in grade 6, they tease her because she's good at maths and that.

The peer group influence, in terms of 'being cool' is an issue for girls at Case Study N, but does not appear to impact on them in the sense that they feel compelled to develop an anti-school and anti-academic attitude.

What makes a girl cool or popular is more to do with body image and fashion. For example, the above girls identify the popular girls as the ones who have 'looks and boyfriends', who 'smoke' and who have the latest 'clothes'. However, they recognise that being cool involves a significant amount of work. For instance, they acknowledge that: 'You have to keep up your image', that you have 'to always fix your hair nice and everything' and that you always have 'to know the latest trends'. One girl, who used to be part of the cool group, stated that: '...it just wasn't fun. Just wasn't fun at all'.

So there is a social skilling required around behaviour and projecting a particular image that enables a girl or a boy to acquire a particular social capital. Like boys, being good at sport is another means by which girls can avoid the attribution and stigmatisation of being identified or read as a 'nerd'. They can get away with being smart and maintain their cool status in the peer group if they are also good at sport:

Well certain people they're good at everything, like they're good at school and that and so it doesn't really matter if they're good at it. But if someone else who is not so good at sport or something but they're good at school, then they're a nerd. With some people sport is more important than doing well at school.

The girls at Case Study School I also highlighted important issues about being cool and how gender impacted on their social relationships and quality of school life. They talked about how the boys who have girlfriends and, hence, who are considered or consider themselves to be cool, are the ones who tend to be mean and 'put you down': 'There's a group of ones, they have like their girlfriends and if you're not part of the girlfriend's group they tease you and call names, and they're just idiots.' Interestingly, those girls who have boyfriends also tend to behave in similar ways and put other people down: 'Same with the girls, they've got boyfriends they're not as nice to you, it's like different groups.' This idea of having a boyfriend/girlfriend is related explicitly to the notion of being cool.

Interestingly, the boys who have the girlfriends are also identified as being more aggressive. The 'cool girls' were believed to be a problem – they apparently tease others and those boys who are considered to be not cool: 'Usually a certain group they go mainly, they go for the people like the not so cool boys, they usually tease them and the cool boys just sort of joke around them and be fun with them'. And even at primary school these popular girls sexualise themselves in order to fit in with the boys: 'Like on free dress days they always have to wear skimpy little dresses' and 'They have to wear something skimpy and expensive'.

Being accepted into the cool group of girls often involves conforming to particular behaviours. Furthermore, being a member of this group is often perceived to involve changing oneself to fit a particular ideal. This policing mechanism is also seen to have some negatives for the popular girls. For instance:

Sometimes people like when they're just being themselves are quite nice but when they're doing what they have to do to be in that group they're really nasty.

And

You have to do things that they want, like you're going to have to get a boyfriend, you're going to have to go kissing. You're going to have to do what they say.

Importantly this behaviour, according to the girls, is about trying to act older and more mature as opposed to trying to be a rebel.

The behaviours of both boys and girls in the above data raises some important issues in relation to differences in the gendered nature of girls' and boys' bullying, and gives credence to the comment made by Collins et al. (1996: 164) that:

The harassers of boys are largely other boys. Further, except in the case of a few girls (particularly at Year 6 level when girls are physically larger than boys), our qualitative data suggests that harassing behaviour by girls is often a way of taking part in a game against 'outsiders' controlled by dominant boys.

The quantitative survey data of this Report showed girls to be equally worried about being harassed by both girls and boys. Thus, whilst the data would seem to indicate that the power dynamic pervading the peer group social dynamic for both boys and girls is more about being cool than about gender *per se*, there are clearly gendered dimensions to acting cool for both boys and girls. In many instances this can have costs for those not deemed 'cool'. However, it can also have costs (besides the obvious academic costs) for the cool people themselves. The boys at Case Study School I also made some significant comments about the peer group social dynamic involving the harassment of other students. They draw attention to a pecking order and social hierarchy which has the capacity to impact in significant and detrimental ways on the quality of their school life and in turn on their educational outcomes:

Student 1: Girls normally tease girls, like in our class girls normally tease girls and guys normally tease guys, but then like if some guy says something it just breaks out into a huge fight.

Student 2: Like one group fights with another group of people. It's just like that, it's not one person on one person but with a difference, it's a whole group that doesn't like the other group.

Also the boys indicate that there is mainly a tension among the cool groups that could be related to vying for a position at the top of the social ladder. Part of establishing this hierarchy, however, is the need to establish who is at the bottom. This requires certain groups of boys to be designated as the 'wusses', so that they can be 'looked down on' by the cool boys:

Bullying and peer group cultures

The research showed that

- Bullying was identified as a problem at most of the schools
- Both boys and girls have issues with bullying
- Homophobic bullying was a particular issue for some boys

Bullying was identified as a problem at most of the schools, including two single-sex schools. In the co-educational schools, it was usually identified as a male-specific issue, although the survey data did seem to indicate that some females engage in bullying as well. For example, a male teacher, at Case Study D, described boys as being more physically active and more involved in incidents of harassment and violence than girls:

If there is a student less capable, or able or has some physical difference, then they are harassed by boys. Girls would never harass for that sort of thing and I have never seen girls do that. Boys will pick on physical disabilities very much so and publicise those disabilities and make life difficult...

Another teacher commented that homophobic bullying was a particular issue for boys:

The boys are very homophobic in this school, as most boys are everywhere. So very threatened by that. So if some poor boy sounds or looks as if he might tend to be homosexual ... they write everything on walls and desks and things like that.

The issue of homophobia is one that schools have often not been enthusiastic about taking up (Mills, 1996; Epstein, 1994; Martino & Pallotta-Chiarolli, 2003). Very few schools in the study appeared to be willing to overtly tackle the issue of homophobic bullying. However, it is an issue within boys' education which is in dire need of being addressed, both for the well being of those students currently being victimised and because of its powerful policing of the current gender order (Mac an Ghaill, 1994; Mac an Ghaill, 2000; Epstein, 1994; Letts & Sears, 1999; Martino, 2000; Martino & Pallotta-Chiarolli, 2003; Mills, 2001). It also needs to be stressed that homophobic put-downs are used to control certain boys who are identified as not conforming to dominant and stereotyped ways of being male, including in some schools those boys with pro-academic attitudes. The usage of such put-downs, we would argue, is not necessarily linked to issues of sexuality. This tells us that gender non-conformity, and the role that sexuality plays in the policing of what is perceived to be suitable male behaviour, affects all boys and not just those boys who identify as non-heterosexual. Moreover, the research shows that such harassing behaviour by boys contributes to particular 'macho' cultures (Jackson, 1998). This contributes to boys' resistance to schooling and may contribute to particular mental health issues (see Goldflam et al., 1999). Jackson (1998), in addition, claims that 'for some boys, academic achievement is associated with fears and anxieties about effeminacy' and that this is linked to the values of 'traditional macho cultures' in schools (p. 90). The link between the peer group, gender concepts and boys' social relationships also emerges as a significant factor contributing to the creation of particular learning and school cultures. The need to 'act cool' and to be a particular kind of boy are significant features of this culture (see Gilbert & Gilbert, 1998).

At Case Study Q, a single-sex boys' school, due to the prevalence of homophobia, a definite attempt has been made to address this form of bullying. The head teacher of English stated:

There is a definite homophobic attitude here, which we are working very hard against in educating the boys, and having programs developed and run through the Personal Development course, and in our drama, now English and sometimes our text deals with those problems. So we look at those issues, those themes.

Interestingly, in the only other School, School J, where attempts to challenge homophobia occurred, it was as a result of the Year 11 English curriculum taking up the issue. This appeared to give some students a language and concepts for dealing with homophobia and related issues.

A teacher at Case Study C, a single sex boys' school, was of the opinion that boys' only schools were more susceptible to bullying and violence and to the creation of these kinds of macho cultures. In his words, 'a boys' only school is much more prone to that sort of [violent] situation than a co-ed high school'. This might be related to the fact as observed by Epstein (1997) that boys in all boys' schools are sometimes encouraged to be 'hard' and 'macho', but the culture of the school is a significant factor here rather than SES composition, as indicated by the study with middle SES boys conducted by Martino (1999). The pastoral care program at School S, an all boys' academic school, and other strategies within the school, attempted to establish a school culture that was accepting of multiple ways of being a boy and which rejected bullying. This school structure/bullying relationship requires further research and analysis, especially in the light of claims about boys' only schools and classes, which have led to funding commitments towards the construction of boys' only schools in some places (Martino & Meyenn, 2002).

Another teacher at Case Study School C claimed that whilst boys at the school related to each other in very physical ways, that this was not necessarily a bad thing:

They just run around and jump on top of each other ... They're not deliberately going out to do that, it's just the way they express their friendship and you're my friend, let's muck around ... It's a way of communicating for some of them.

Francis (2000) also observed similar behaviours in her research. However, we would suggest that this 'boys will be boys' type of attitude towards such behaviours is not always of a harmless nature (Mills, 2001; Nayak & Kehily, 1998; Milligan et al., 1992). In some instances, 'boys will be boys' type humour is used as a means to commit homophobic bullying and sexual harassment. It is important that schools address the extent to which such behaviours are implicated in the maintenance and policing of the existing gender order (see Kessler et al., 1985; Walker, 1988; Jackson, 1998).

Observations conducted during lunchtime at Case Study D showed gendered patterns of interaction. The boys 'rough handled' each other. Some boys were moving and fighting, pushing and punching. The girls tended to sit around in groups, talking quietly. In the same way, while boys at Case Study A were seen by teachers to be prone to violence, verbal 'bitching' and 'cattiness' were attributed by the teachers to girls at the school. There are also issues to do with the occupation of space within school grounds (Westwood, 1990; Hornby, 1992; Miedzian, 1992).

At Case Study D, for example, the problem boys were identified as low academic boys, ethnic boys and boys with big egos – 'They lead to disruption and less academic results...the girls would be the physically attractive girls, and the girls with lower ability [who] are often

discipline problems'. There are a number of issues that need to be considered further in relation to this finding. The literature would suggest that poverty, ethnicity, gender, lack of academic success and 'bad' behaviour in school are not unrelated (Gardiner, 1997; Sewell, 1997; 1998; Cannan, 1996).

However, it would be a mistake to assume that girls did not ever engage in bullying their peers. In the student survey the majority of both boys and girls disagreed with the proposition that they bully other students. While slightly more boys were likely to agree than girls, 29.9% of boys compared with 22.4% of girls, clearly there were still quite a lot of girls who admitted to bullying. At Case Study O a number of the girls admitted to engaging in such behaviours. As with much homophobic abuse, these girls' bullying was about policing particular versions of 'normality'. The following conversation occurred with a group of grade seven girls at School O:

Student 1: ... I was like (inaudible) like a big bully last year, like we used to go, well, if someone said something to you, you know, we wouldn't get off their backs straight away, we'd be on their back and (inaudible). Like, we'll just keep teasing them and like we'd tease J and T, like they're twins 'cos they hang around each other all the time, and R this other girl who was here last year and (inaudible – all talking together) they used to wear polka dot dresses and we used to tease them.

Student 2: Yeah.

Student 1: But now they're like normal as us.

Interviewer: And what have they done to change it?

Student 1: They changed.

Student 2: They fit in the dress now, like, they've probably gone out of their way to buy clothes and everything just to be like us.

2.1.6 Influence of gender concepts on attitudes and behaviour

There is a need to address the impact of gender concepts for all boys and all girls as an element of programs geared to achieving certain social and educational goals from schooling (Gender Equity Taskforce, 1997). From the research schools it seems that dominant ways of being a boy frame many boys' relationships to the curriculum, their subject choices and their behaviour. Mills (2001), for example, has shown how certain school-based programs dealing with the social construction of masculinities can have some positive impact for boys in behavioural terms in respect of violence and relationships with other boys and with girls. He also shows how homophobia is often used as a weapon against boys who do not conform to dominant ways of being masculine, which in turn can affect their enjoyment and academic performance in schools (see Jackson, 1998; Epstein, 1998; Martino & Pallota-Chiarolli, 2003). Students in the Case Study Schools recognised the use of homophobic put-downs as a controlling practice within peer cultures. This was related to student constructed hierarchies of

masculinity, which often continued to have effects despite school attempts to create more supportive school environments for all students.

Martino (1998; 2001) has also argued that teachers can use texts strategically in the English classroom with positive effects to assist boys to interrogate the impact and effect of gender concepts on their attitudes and behaviour, particularly with regard to subject choice, schoolwork, and classroom behaviour. This kind of work is considered important given the research that highlights that some boys attempt to distance themselves from schoolwork because it is perceived to be non-masculine or feminised (see Jackson, 1998; Epstein, 1998). This is particularly the case in relation to some school subjects such as English (Martino, 1998). Furthermore, dealing with some cultural gender values would appear to be necessary to potentially open up subject choices for boys and girls and to improve some boys' engagement with schools (Epstein et al., 1998; Kenway et al., 1997; Lingard & Douglas, 1999; Martino, 1997). The English program in upper secondary at School J dealt with these issues, as well as issues of homophobia and difference.

The enhancement of teacher knowledge about gender and schooling appears to be an important focus for teacher professional development. While there had been some professional development focus in the Case Study Schools on these matters, at times there was an absence of awareness of the most current research and theory about the topic. The most effective approaches appear to be those that combine such a focus with a stress upon enhancing teachers' pedagogical repertoires.

The section on peer influences in this Report also demonstrates the significance of teacher knowledge of the construction of gender for understanding and remedying anti-school behaviours. This is necessary to ensure that teacher practices do not reinforce particular practices of masculinities and femininities that were the source of the original problem.

2.1.7 The various inter-relationships between a range of factors

The research has highlighted the important role that gender concepts play in their impact on boys' and girls' attitudes to schooling and behaviour at school. The Case Study analysis also highlights the need to examine the various inter-relationships between a range of factors such as SES composition, school culture, gender, family background, peer group, teacher expectations, and how these affect attitudes to school learning (Epstein, 1998; Martino, 2000; Collins et al, 2000; Gilbert & Gilbert, 1998; Millard, 1997; Francis, 2000; Murphy & Elwood, 1998). While it remains important to consider gender strategies for enhancing the academic performance of both boys and girls, there is also a need to disaggregate the categories of boys and girls (Teese et al., 1995; Allen and Bell, 1996; Lingard and Douglas, 1999). A more complex analysis is generated when there is an attempt to move away from a 'competing victims syndrome' (Cox, 1997) to a 'gender jigsaw' approach (Collins et al., 2000). That is, an approach that focuses on the needs of both boys and girls, but in a differentiated, disaggregated manner, as opposed to one which places the interests of boys against those of girls. Here the complex ways in which SES and ethnic identities intersect with gender need to be considered and accounted for. We then come to recognise the diverse ways groups of boys and girls from different backgrounds relate to schooling and how these affect their educational outcomes.

There is also the need for systemic and school-based data collection and analysis across time (Allen and Bell, 1996). Understanding the complexities of the gendered patterns of performance over time at system and school levels would be useful in terms of thinking through appropriate policy responses and system and school initiatives in reflective and effective ways. Understanding the gendered patterns of subject choices and behaviour is also necessary to successful system and school interventions. While the Case Study schools were starting to utilise data analysis for professional development and intervention, at times the data collected was not disaggregated and thus not as useful for these purposes as it might have been.

Some of the Case Study Schools appear to see all boys as having identical educational needs. There is a need to disaggregate this data, but at the same time to not neglect gender issues. At times, disaggregation can move the understanding of differential outcomes from schooling to simply that of SES background, rather than the intersection of SES background with gender. Thus, disaggregation needs to take account of the ways in which other social characteristics of boys intersect with gender, including SES background, ethnicity and Indigeneity. There was a suggestion, for example, that an increase in the numbers of Asian-Australian boys at School S had broadened the practices of masculinity within the school. Furthermore, there is a pressing need to recognise the multiple ways of being a boy in school and to ensure that these practices do not disadvantage any particular groups of boys in any ways. The same, of course, applies to girls in schools.

Socio-economic factors

Given the sample size, it is difficult to draw out any sweeping conclusions about the impact of socio-economic status on student performance. There is, however, a huge amount of educational research that demonstrates the strong relationships between SES background and school performance (e.g. Connell et al., 1982; Thomson, 2002). Some general impressions from the Case Study Schools are described below, along with some findings from the survey data.

It does appear that students from lower SES families are more likely to be considered at risk. However, the issue may be more related to family priorities and the capacity to support the education of their children (Lareau, 1987), rather than socio-economic status on its own. The best evidence would suggest that this is often more the case of not being able to support the demands of schooling rather than not being supportive of their children's schooling *per se* (Lareau, 1987; Connell et al., 1982). Students from lower SES backgrounds seem to have lower aspirations in terms of what they will do after school. The Careers Adviser at Case Study A, for example, was of the opinion that the SES of the local community was influential in moulding the students' post-school expectations and aspirations and that this in turn impacted on their commitment and achievement at school:

But also there is a negative attitude towards education in this town. I think one of the big problems has been that you leave school and go and get a job in a mine and everything is okay. You don't need that certificate at the end of your schooling to succeed in life. I think if we had a big closure of the mine ... then

kids might have a different attitude but at this stage it is, 'I'll get a job at the mine or I'll go to the abattoirs'. They [the mine] are just putting on another 250 so the idea of school is not important for some.

It would appear that students from lower SES backgrounds are often less clear about their post-schooling goals than their higher SES counterparts. One teacher from Case Study C felt that the socio-economic composition of the school did play a strong role in determining students' attitudes and expectations of school, and their aspirations beyond schooling:

A friend of mine once said ... what happens is that when you get boys who are coming from one social class, or one socio-economic area, ... they feed off each other and because they don't move out of that they haven't got the opportunity to learn and move. Like, why ... our kids who are able to get to Uni find it pretty scary.

It should be noted, however, that many students (both boys and girls) were succeeding educationally despite being from low SES families.

The survey data also provide some useful insights on issues relating to socio-economic status. An occupational status measure was constructed from the survey instrument² and as a proxy for SES. The measure reflects both parents' occupations rather than the influence of one parent. This is a more precise measure than the school postcode data that was also collected. We have evidence of quite disparate catchments for the schools in the sample (the postcode for one school represents collection from 24 localities, whereas the other schools represent as few as 2 localities). Table 8 below shows the correlations between joint occupational status and secondary student attitudes, as well as correlations between individual parent's occupations and student attitudes.

² A measure of parents' joint occupational status was created from the survey data by coding both parents' occupation according to standard ABS occupational classifications (9 point ordinal ranking). These were multiplied to produce a joint index of occupational status. To correct for skew, and allow ease of interpretation the resultant scale was reflected, log₁₀ transformed and scaled to produce a normally distributed index of parents' occupational status positions. Values approaching zero indicate both parents hold low status positions. The resultant measure was available for 464 students (89.5%) of students who provided occupational status data for at least one parent (n=518). The correlation between both parents' occupational status was moderate (Spearman $\rho = .288, p < .001$).²

Table 8: Correlations between occupational status measures and secondary student attitudes.

| Attitude scale | Joint occupational status | Father's occupational status | Mother's occupational status |
|--|----------------------------------|-------------------------------------|-------------------------------------|
| Liking for school | .035 | -.006 | -.008 |
| Self rating of ability | .102* | .071 | .058 |
| Students' aspirations | .189** | .174** | .135** |
| Disrupt class for attention | -.101* | -.034 | -.048 |
| Disrupt class when I don't understand. | -.152** | -.072 | -.080 |
| Attention to Homework | -.061 | -.005 | -.111* |
| Rating of School Culture | -.169** | -.152** | -.155** |
| Rating of Academic Orientation of the school | -.038 | .009 | -.090* |
| Peer influence (Ingroup) | .017 | -.005 | .040 |
| Mean Bullying score | -.083 | -.016 | -.087 |
| Family Support | .065 | .068 | .015 |
| Teaching style | .045 | .059 | -.038 |
| Relevance of English | -.093* | .045 | -.081 |
| Influence of computers | .002 | .012 | -.038 |

NB: Pearson's *r* is reported for joint occupational status and Spearman's *rho* for the individual parent status scores.* $p < .05$ ** $p < .01$

Some of the significant relationships on the table above are that students whose parents score highly on the joint SES scale tend to have higher aspirations and self-rating of ability, than students with parents who score lower on the SES scale. The relationship is particularly strong for aspiration. Students from lower SES backgrounds are also more likely to report disrupting class for attention, or when they don't understand the material being taught. Moreover they are more likely to report that they feel English lacks relevance. The negative correlation between school culture and SES status probably reflects dissatisfaction in the High SES children with a school culture which emphasises sport over academic or artistic pursuits. Note that the school culture variable simply indicates the presence of a strong sense of identity as a school, rather than having a culture based around sport or drama. The first two items in the culture scale are closely weighted and reflect either sporting or dramatic cultures (refer to Appendix 2) indicating that it is not the type of culture but rather the presence of a clearly defined school culture of some sort or school identity that is indicated by this measure.

School resources

The socio-economic environment in which the school is situated, also plays a role in terms of the amount of resources that the school has available to invest in student learning. At Case

Study C, one teacher felt that the physical geography of the school, and the classroom set-up, including desk size, were inappropriate for the male students: 'They take up more space, and should be given more space'. The school is, however, limited by resources in terms of its capacity to address this issue. Another teacher from the same school explained how he had tried to make the accounting curriculum relevant to the students by getting them to do this accounting process on 'Skeggs Surf Hire Equipment', but was unable to take them on an excursion to the surf hire equipment place because of lack of resources.

Teachers at School R, a co-educational government school serving a low SES community, suggested that the disadvantages experienced by many of their students contributed to their relationships to school and academic performance. This concentration of disadvantage was seen to have resulted in the spread of vocational education and training subjects in the school and the lessening of academic approaches. One effect was many boys' disengagement from vocational subjects in lower secondary because of their view that this would not any longer ensure employment. Teachers argued that this disadvantage affected both boys and girls.

The all boys' School S demonstrated close alignment between the middle class parental expectations and the demanding academic approach of the school. This alignment between the cultural capital of the parents and that of the school appears to be one contributing factor to the outstanding academic record of the school. The school's own professional learning community was another contributing factor here to this outstanding academic record. However, there were some tensions between this academic focus and the need for support for some students experiencing learning difficulties.

2.2 Implications for schools

2.2.1 General approaches to address the educational needs of boys

Whole school approaches

On the basis of evidence from the Case Study Schools, the most effective programs appear to be those that have adopted whole school approaches to either boys' educational issues or to pursuing educational excellence for all students. This whole school approach is concerned with effective pedagogies and school structures and cultures that support those pedagogies. All Case Study Schools appear to acknowledge this necessity. Case Study Schools A, E, F, K, O, R and S appear to have implemented effective pedagogies complemented by whole school reform most effectively. School A has focused its changes around boys, as has School B. In contrast, Schools E, F, K, and O have reformed around issues of good pedagogies and effective whole school changes, while School F and K have also provided professional development for teachers around a 'which girls and which boys?' approach to gender and schooling. School I, a co-educational primary school, and School H, a rural co-educational high school had both implemented single sex classes for boys and girls in an attempt to address their educational and social needs. The English department at School J, a coeducational government secondary school, has adopted an approach that has focused on utilising productive pedagogies, but also been concerned to enhance teacher threshold knowledges about the construction of masculinity

and the effects that has in subject English. School S has created a strong teacher professional learning community with an emphasis upon intellectually demanding pedagogies and critical thinking skills.

School R, the co-educational government secondary schooling in a provincial city and serving a low SES community, is an extremely interesting case in that in 1997 it developed a boys' strategy, then moved to a competency based approach and has subsequently taken up a reform approach focused on productive pedagogies, outcomes based assessment (in lower secondary), and the creation of a teacher professional learning community. The boys' strategy was developed by a female Deputy Principal who has subsequently left the school because of promotion to a principalship. With her departure, this project seemed to wane somewhat, demonstrating the need to embed change within the culture of a school, rather than having it focused around a specific individual. The boys' strategy included a number of programs: student surveys, boys and books, a boys' mentoring program, a boys in education newsletter, teacher professional development, critical literacy and so on. The boys' strategy had generated much publicity for the school and political attention.

The principal's view was that the transition from a boys' strategy to a whole school pedagogy approach was a developmental one. Further, his opinion was that the current strategy - whole school focused and concentrated on classrooms - was more effective in educational terms than the specific boys' strategy. Most teachers agreed with this, expressing a view that effective school reform needed to be concentrated on classrooms rather than upon structural reforms. A head of department in the school stated that he strongly supported the current approach because it focused on teaching and learning. He stated:

...my support for the process comes from the fact that, you know, I've seen lots of reviews done that concentrate on procedural and structural things, you know, like rearranging district offices and budgeting systems and whoever knows what, and this is the first time that the system... seems to be behind getting a debate going, getting processes going or getting at least onto the agenda things about our basic craft, and that's teaching and learning, because I don't think... the Department of Education has addressed what is fundamentally happening in classrooms for a heck of a long time.... There's been no one driving pedagogy at all. Plenty of people driving other things.

However, it should be noted that some teachers believed that the optimum approach would be one that conjoined the former boys' strategy with the current pedagogy focused reform. This is a further demonstration of the fact that boys and schooling is a professional issue for teachers about which opinions are divided.

School R also structured formal time into the school week for teacher professional conversations. The Year 11 and 12s leave school at lunch time on Thursdays and volunteers and paid personnel take school support for the rest of the student body at this time, thus freeing up teachers for professional development.

Single sex classes and mixed sex arrangements

The research evidence revealed that the single sex context in and of itself does not necessarily ensure that school and classroom environments conducive to learning will be created. For instance, there are also important considerations as to the impact upon boys of all boys' classes. Thus, in evaluating the success of single sex classes it is important to consider questions of pedagogy and classroom dynamics and culture. Case Study data show that teachers had mixed views of single and mixed class arrangements. Interestingly, those mixed views amongst the teachers reflect the findings of the relevant research literature (Mael, 1998; Education Review Office, 1999; Martino & Meyenn, 2002). While there was a perception that mixed classes were beneficial since the girls were able to positively influence the behaviours of the boys, others felt the particular needs of boys and girls were best served by single-sex classes.

A teacher from a single-sex boys' school, who had taught in co-educational environments before, argued that girls are a moderating influence on boys whether that was intentional or not. He indicates that co-educational classrooms were 'probably less chaotic and probably not as loud and fractious'.

In another school, however, some teachers expressed a preference for single sex classes, particularly in the junior years of secondary school. This was attributed to, according to one teacher, the boys and girls 'trying to impress the other' with the boys 'spending a lot of time trying to show off to the girls, and the girls kind of trying to beautify themselves for the boys'. In addition, some teachers appear to have a preference for single-sex classes because girls were easier to teach. Some teachers also felt that single-sex classes provided the opportunity for activities targeted at the particular needs of boys and girls.

The literature would suggest that it is not only the structural feature of single sex classes that is relevant here. There are the related factors to do with student backgrounds such as SES and other factors to do with the relevance of curriculum and the quality of pedagogies within a school. As noted in the Literature Review, the point is that the single sex context in and of itself does not necessarily ensure that a better school and classroom environment conducive to learning will be created. Furthermore, there are important considerations as to the impact upon boys of all boys' classes. The evidence here is also equivocal as to whether the effects are positive or not (Education Review Office, 1999; Hulse, 1997). In relation to single sex as opposed to coeducational schools, Arnot (1984, p.52) has argued that:

... the problem of boys and for boys of existing definitions of masculinity cannot really be solved by arguing either for single sex or for mixed schools. The content of what is taught, school ideologies about the relations between the sexes (irrespective of whether they are both present or one sex is absent), the structure of classroom life and the sex of the teacher, all play a part in either contributing or challenging boys' assumptions about sex differences and their own sexual identities.

This is a similar argument about structural reform in relation to single-sex or mixed classes.

In Case Study H, single sex classes were implemented in the junior secondary English and Maths and PE. Both students and staff argued that single sex classes had beneficial effects for both boys and girls in terms of improved social and educational outcomes.

There do appear to be benefits for both boys and girls in terms of single sex classes providing a safe space for talking about specific issues without feeling embarrassed and intimidated by the surveillance of the opposite sex.

Analysis of the data, however, tended to support our view and that of the research (Sukhnandan et al., 2000; Martino & Meyenn, 2002) which stresses that single sex classes in and of themselves do not necessarily provide better educational or social outcomes for boys. Structural reform in the absence of productive pedagogies and requisite teacher threshold knowledges about gender runs the risk of maintaining and even reinforcing particular orientations to learning considered to be the domain of either boys or girls. Moreover, there is the danger that certain gender stereotypes or beliefs about boys'/girls' behaviour, as a homogenous group, can be reinforced (see Martino & Meyenn, 2002). This was reflected in a comment made by a staff member at School I who indicated that the issue of gender did not appear to be addressed in the gender based class:

... I don't know, even in the gender based classes I don't think gender is pushed as a big issue, it probably sounds contradictory but I don't think it is...

This comment was made within the context of reflecting on boys calling other boys a girl as an insult, while the inverse did not appear to be the case with girls. This highlights the need for further analysis both in terms of the nature of the pedagogies executed in gender-based classes and in terms of their capacity to impact on the educational and social outcomes of students. Sukhnandan et al. (2000) found that in the actual implementation of the single-sex classes, many teachers talked about how they modified their teaching methods to accommodate the single-sex grouping of students. In addition, they claim that one of the main reasons for favouring this approach was related to the belief that boys and girls interact differently with curriculum content and prefer different learning styles and approaches to teaching (p 25). This is confirmed by the Case Study research undertaken for this study and by the female teacher of the gender-based class for girls at School I who stated that 'it would be very easy to go into boys' classes and do cars and continue to build and feed a macho image'.

A specific case study

School I had made a particular commitment to gender based classes in Years 6 and 7 over a period of time and both students and staff provided some significant insights into this strategy. Gender-based classes were set up to cater for the 'problem boys'. The principal believed that while the school could not take responsibility for the potential drug use and assaults of these 'seriously naughty' boys, it was necessary to implement a behaviour management strategy. By removing these twenty-five 'naughty boys' from mainstream classes, it was thought that some of their specific behavioural problems could be contained and addressed without necessarily impacting on other students. So the reason for implementing the strategy was related to

addressing a behavioural management issue in the school at the time and was not, according to the principal based on anything 'more scientific than that'.

Initially a male teacher and female teacher each took a gender-based class and they worked together, with the female teacher taking the girls' class and the male taking the boys' class. In the afternoon the classes would be brought back together and for one to three hours 'We'd bring them back and let them socialise together and stuff and do collaborative projects and things' (Principal). This arrangement no longer exists and the two-gender based classes remain as such. There is some interaction and collaboration on certain projects with boys and girls from the single sex classes working together.

The principal claims that currently 'We are more scientific about how we do [gender-based classes]'. This approach is marketed to parents as a strategy that caters for what are considered to be innate or essential differences between boys' and girls' approaches to learning, while still allowing collaborative work between the genders:

And that's what the parents were really hooked on, we tried to sell it to parents, it was just brilliant, it was like we acknowledge that boys and girls have got differences and it would be great for them to work but we don't want them to be totally disconnected from each other. (Principal)

The male teacher attended some professional development in NSW, which according to the principal gave the program some credibility. Also, professional development delivered locally by one of the Education Centres, provided a knowledge base for driving the kind of gender-based work at the school. The kind of professional development provided by this Centre included speakers like Ian Lillico and Freerk Ykema, who has developed the Rock and Water program for boys. Staff at the school also mentioned the work of Steve Biddulph and Richard Fletcher as informing their work with boys.

The male teacher who took the twenty-five 'naughtiest' boys in the school was considered to be a brilliant teacher and admitted that at first it was difficult dealing with the boys. What was a turning point and what made the class work, according to the principal, was the kind of relationship that was fostered by the teacher with the students. This was an intensely emotional one, accentuated by a particular set of circumstances that had arisen in this teacher's life that year – the death of his brother-in-law. And it was the sharing of this intensely emotional experience with the boys, which culminated in the teacher crying in class, that apparently had a major impact on the boys. This was a major turning point in the school lives of these 'naughty' boys and resulted, according to the principal, in a major transformation in their behaviour. This had spin-offs or effects in creating a particular kind of bonding between students and teacher and also among the students in that class. This lesson apparently had taught the boys something about emotional literacy – what had been modelled was an emotional response to an intense situation. Some months later, the principal reports, one boy's father died and he links the boys' behaviour and responses to that event to what had happened earlier in the year. One of the students in the class bought a teddy bear for the boy and organised for all boys to write a message on it; others organised a collection of money and put a death notice in the paper. The

principal attributes the boys' sensitive and empathic responses to the emotional impact that the teacher had on these boys and the kind of modelling that he had provided for them.

The positive effects of developing such a relationship were measured by staff at School I in terms of the reduction in behavioural management problems directly attributable to these boys. This, the principal argues, had a whole school effect 'because we didn't have those twenty-five leaders modelling poor behaviour to the rest of the school, and pushing kids over when they ran past them and little kids too scared to go into that area [and as a result] the whole school changed'. It is important to note that, while there were clearly whole school benefits, the principal adds that 'some of them were still difficult and their learning problems still existed'. What needs to be noted, is that it may not be so much the strategy *per se* that is effective, as the pedagogical practices of the teacher involved, and the relational and emotional dimensions of that pedagogy. However, what appears to be suggested by the principal is that it is the gender-based strategy that creates the conditions to enable boys to develop and to embrace a particular kind of emotional literacy. However, clearly it is difficult to distinguish the effect one individual teacher has and the effectiveness of the strategy overall.

There were also social benefits for the girls, the principal argued, in that girls who were overweight or felt ill at ease also benefited from being separated from the boys. However, while there were gains for the girls both socially and academically, this strategy did not result in improved academic outcomes for boys. This is supported by the interview data from the principal, teachers who taught gender-based classes at the school and the students themselves. However, one of the major benefits of this strategy was that it did lead to the boys adopting more positive attitudes to school and to learning.

They certainly didn't slip back so we said we didn't lose anything by it, but what happened socially was those boys discovered that there's lots of different ways to be males, as the girls did ...And for the girls it was a lot of stuff like, okay well you haven't started menstruating yet does that matter, and who feels stressed about it.
(Principal)

What are the gains from single sex classes?

Gender-based classes can be of some benefit to both girls and boys. While teachers teaching the boys' classes did indicate that they spent a lot of time modelling and teaching 'emotional literacy', there did not appear to be a lot of evidence of critical literacy work, for example, around why some girls might feel uneasy about being in a class with boys. However, the principal did indicate that teacher x had done this kind of work with the boys when the gender-based strategy was first implemented at the school.

For the boys, according to the principal, the male teacher provided them with a model of a different kind of masculinity – a sensitive male who was not afraid to express his emotions:

I think what all of us sat back and saw was the relationship stuff and the understanding that it's okay to be different and it's okay to be some kind of male that doesn't fit the normal stereotype.

However, the interview data from both teachers and students at the school, while showing evidence of attempts to promote emotional literacy for boys, did not reveal a critical pedagogy explicitly committed to promoting a critical reflection on the fact that there are ‘lots of different ways to be male’.

It is important to emphasise that the success in this case is attributed to the significant impact of the teacher and not the strategy *per se*. In other words, it is the pedagogy that requires close attention. Moreover, the principal of School I does not agree with a gender-based strategy as a panacea for improving the social and educational outcomes for all boys. This is why he argues for the need to have mixed gender classes operating. However, he does still adhere to the belief that there are innate differences between boys and girls that can be catered for effectively in adopting this strategy. He does stress, however, that just adopting this as a strategy across the board in all classes is problematic. He also makes the point that the gender of the teacher is not necessarily a factor in contributing to the success of the gender-based classes. In fact at School I there are two female teachers taking the boys’ gender-based classes in Year 6. The principal acknowledges that the greatest problem with the gender-based strategy is the risk of seeing all boys as the same, as opposed to celebrating their differences, but believed that the gender-based strategy was one way that this could be achieved.

However, the principal does indicate that certain kinds of boys and girls would benefit from being in a single sex class, such as those who ‘don’t have a significant male in their family’ and those ‘who need to be active’. Only certain kinds of boys it appears are suited to this class, which supports the notion of a particular kind of tailored curriculum and pedagogy to address their specific needs. For example, the principal argues that boys who are ‘sensitive, quiet and reserved’, as well as those who are more ‘creative’ and ‘would like to sit down and write an essay for two hours and just get lost in their own world’, are not suited to a boys only class in a co-educational school. This raises crucial questions about the assumptions driving the gender-based strategy and its capacity to be of benefit only to certain kinds of boys exhibiting particular behaviours. In fact, Year 5 teachers as a team meet and decide who should go into a gender-based class. The selection process for choosing which boys and which girls would be suited to gender-based classes is based on what the principal terms is an ‘intangible thing’ or some form of ‘gut feeling’ or knowing that appears to be informed by a ‘personal’ knowledge of the student, according to gender marked behaviours.

Most professional development around gender-based classes at School I had been accessed through an Education Centre which had organised many conferences and seminars related to boys’ educational issues. The staff involved in teaching the gender-based classes had attended these conferences on boys’. Some teachers at the school had become recognised as experts and had presented a lot of professional development to other people. The principal also indicated that teachers at the school had the time to talk through their ideas and approaches with each other, which enabled them to clarify their own opinions. This was considered to be a very important aspect of professional development for staff – ‘listening to other people but the other part is listening to yourself’. This is an element of a teacher professional learning community. In fact, a very specific kind of knowledge base informed the approach taken to gender-based strategies at the school, along with localised knowledge and discussion amongst the teachers

taking the gender-based classes regarding what works. In fact, when asked what kind of knowledge would be needed to teach boys in a gender-based class, the principal emphasised the pastoral dimensions of the pedagogy as a key aspect. In fact, it was not so much a specific body of knowledge, but about being 'prepared to give of yourself personally,' which was identified as a key to the success of the gender-based strategy.

Girls on single-sex classes

In School I, a large co-educational government primary school, the girls indicated that the single-sex class was different and better because the negative influences of boys were removed. They talked about boys in co-educational classes 'mucking around' all the time and about how self-conscious they felt about speaking up in class for fear of being teased by the boys. But they also indicated that a group of girls also tended to 'muck up' when there were boys in the class or in mixed sex classes in that they would 'act silly' or 'go all giggly'.

Girls in the focus group were unanimous in their preference for the single-sex class. The reasons they gave related to the fact that they felt more comfortable. One girl indicated that the boys' overt teasing was just one way of masking their vulnerability of not knowing and of therefore not being able to position themselves as powerful. She read this as an example of defensive behaviour on behalf of the boys who have to assert their power and, hence, their masculinity, in the face of being confronted with their lack of knowledge and power. But one of the girls also indicated that the boys might also be embarrassed in front of the girls and may also feel afraid to answer questions.

The girls did highlight the degree of self-censure and self-regulation that operates as a result of how the opposite sex might be judging and evaluating their behaviour and this works both ways, it seems. One girl in the focus group thought that in mixed classes the 'bitchiness' could be more intensified. The teacher of the Year 7 girls' class, however, did comment that it was much easier to address issues like 'bitchiness' in single sex class arrangements and that these specific matters were discussed at length with the girls. She indicated that this was more possible and effective, given the absence of the boys, which enabled a comfortable space to be created to address such an issue. So it would appear from School I that single-sex classes can have some beneficial effects for both sexes.

Another benefit, from the girls' point of view was that they got to do more 'girl things' like 'more drama' and in Art they were able to make jewellery 'which girls can enjoy more than boys would'. It appears that one of the inevitable effects of the single-sex classroom strategy is the modification of the pedagogy to reinforce or reinstate certain gendered practices and approaches to learning. But another girl did indicate that there were opportunities provided for them to do woodwork and to use electric equipment 'just like the boys do'. There did not appear to be similar crossovers in the boys' single-sex class, where the boys tended to be encouraged to do a lot more physical and manual work. However, the boys did do cooking and appeared to enjoy it. What needs to be questioned is the extent to which the boys are being encouraged to do the reflective, analytical work required of them in a post-industrial labour market (Mac an Ghail, 2001, McWilliam & Brannock, 2000).

Another difference of being in a single-sex class was that, according to the girls, it was 'less rough' and there were less disturbances and less physical fighting without the boys, which they considered to be a positive. However, the girls make an interesting point that there is a down side to not having the boys in the class, because boys are 'funnier' and make them laugh:

They make us laugh for some reason, like more than we laugh at each other they make us laugh in a different way.

So it seems that the girls become an audience for boys and the girls enjoy being entertained by the boys. This is of course not always the case. For some girls, the ways in which they are treated by boys makes the idea of a school or class without boys quite attractive. The following was provided by a Year 7 girl at School K in response to the ways in which the school could be improved:

Student: I'd have girls, like, just have a girls' school. That would be much better. And then if a boy has to come, like, a boy chose to go into a class, they've got to be good. Hmm, they've got to be really good, they're not allowed to be naughty.

Interviewer: But do you like this school?

Student: It would be nicer if there weren't any boys.

Boys on single-sex classes

On the whole, the boys at School I also spoke positively about their experiences in the single sex class. The focus group consisted of 4 boys from the single sex class and two from the mixed gender class. This class was characterised by a lot more activity and movement than the girls' single-sex class and was punctuated at regular intervals with what the teacher termed 'Testosterone Release Sessions'. These involved groups of boys - one at a time - leaving the class for 3-5 minutes to go on a run down to the oval as a means of dealing with excess energy. This occurred on an hourly basis. One of the boys indicated that there were 'a lot more arguments when you're in an all boy class'. However, the boys did indicate that they enjoyed being in the single-sex class because it was more fun and also because they got to do a lot more activities and sport. They attributed this to their teacher who they indicated was 'major sports freak'. Another boy indicated that the teacher also made learning fun and gave, as an example, a maths lesson where they were using smarties to 'make graphs and stuff'. It is important to note that it is the flexible, though not necessarily demanding, pedagogy here, that the students identify as being a factor impacting on their enhanced engagement with learning in this single-sex class.

However, the two boys in the coed class did indicate that they liked and preferred to be in this class. This was attributed to the female teacher who was younger and joked around and understood them because of her age. But A from the single sex class, who has an older male teacher, disputed this and said that the issue has to do with teacher being 'nice' and 'funny' as opposed to their age. He also added that because he was a male he understood boys better. But other boys tended to reiterate the importance of the pastoral dimension of this teacher's

pedagogy that involved relatedness, care and support which was not necessarily linked to the gender of the teacher.

It is clear that for certain kinds of boys the single-sex strategy had positive effects in terms of behavioural and social outcomes, but once again this appears to be dependent on the teacher and the kind of relationship that he is able to develop and foster with his students, rather than being a direct consequence of the teacher's gender.

For example, students from the boys' class mentioned that they 'really love' Mr A and that they cared for him. The reasons they gave related to the fact that there was a dimension of connectedness to their out of school lives embedded in his pedagogical approach. For instance, two boys commented:

Like he knows how you've got family problems, like he'll know that and he'll give you like a bit slack if you're a bit angry ...

...he just says if you're having problems just tell me in the morning and then I'll give you some slack, something like that.

Because of his care and genuine concern for their well-being, they indicated that they did 'listen to him a lot more than other teachers'.

Built into the curriculum/pedagogy executed by Mr A in the all boys' class was always a direct and practical application to the students' lives. There was also a connectedness to the community informing what the boys did and what they were taught. The boys talked about being involved in a sausage sizzle to raise money for their camp. This reduced the camp costs for every student by twenty dollars. They had also worked on paving an area in the schoolyard.

There did appear to be a very different curriculum and pedagogy operating in the single-sex boys' class. This class has been involved in a lot of manual arts work. They were building chess pieces out of wood. Some boys from the mixed gender class were also involved in this project. When asked why the mixed gender class was not undertaking a similar project, the boys indicated it was probably because the teacher considered that 'it would be boring for girls'. One boy from the single-sex class claimed that it could be made interesting for the girls if they 'could make dolls or something' out of wood. In addition, while some of the boys from the mixed gender class were involved in the woodwork project, the mixed gender class was responsible for painting the pieces. Only the boys in the single-sex class were responsible for actually making the pieces out of wood. The above indicates that these boys do not appear to question, but rather reinforce the gender stereotype that has been built into a gender differentiated curriculum that is operating in the single-sex classroom. There appears to be very little critical reflection on gender concepts and how they inform the boys' social learning practices. A critical question arises of how are these boys' critical and reflective capacities being developed?

However, the boys were also involved in cooking and enjoyed it. They talked about how they made Anzac cookies on Anzac Day and how one boy's father, who is a chef, brought in a

pasta making machine and taught them how to make pasta. However, the boys from the mixed gender class indicated that they did not do cooking, but would like to. This led to some boys from the mixed gender class indicating that they were jealous of the boys in the single-sex class and felt that their teacher could perhaps run a similar program with more hands on activities.

However, the boys themselves indicated that the pedagogy and curriculum in the mixed gender class was more intellectually demanding. While apparently appearing to be less fun, the boys in that class felt that they were being prepared more adequately to cope with the future demands of high school. This emerged as a concern for the boys in the single-sex class who claimed that they were worried because they had not completed as many projects as the students in the mixed gender class. Two boys in the focus group expressed a concern that they might not be adequately prepared for high school and that they could fall behind once they got to high school as a result of the curriculum they had been exposed to. However, the boys from the single-sex class did acknowledge that they had learnt a lot and that their teacher had been very effective in engaging them in tasks and had tried to help them, but they still felt that they had probably learnt 'a little bit less'. The boy from the mixed gender class though did make this comment:

I don't really enjoy the work but I do want to do work because when I'm in high school I don't want to be the person like behind in everything ... I don't want to be like behind and everyone is like excelling in front of me.

On the basis of Case Study I, which had instigated some single-sex classes, it is clear that there are both advantages and disadvantages in adopting such a strategy. However, it appears that the teacher and, moreover, the kind of pedagogies adopted are crucial factors impacting on enhancing the educational and social outcomes for the students in these classes, rather than the single-sex class strategy *per se*. Moreover, there appeared to be a modification of the pedagogy in the single-sex class for boys which, from the boys' point of view, while more engaging, was less intellectually demanding.

Behaviour management

Case Study B has introduced a special focus group approach to the management of students identified as having behaviour management issues. As one teacher explained, 'These students are taken out of a lot of their classes because they've been so disruptive'. Students subject to this discipline regime do a parallel program, where they are under teacher supervision. Each student has a behaviour card, and when the behaviour card says that the student has been doing the right thing they are trialed back in the 'normal' class, but if they are disruptive they are taken out again into the focus class. All the students subject to this form of discipline are boys.

It is interesting to note that some female students from Case Study B described the discipline regime as sexist in that girls were supposedly favoured over their male counterparts. As one young girl commented:

They're just, 'girls can get away with more stuff than boys ... like in a subject like, some boys they came in and then they got kicked out for being late, and I came in late a couple of minutes afterwards and I didn't get kicked out. I just sat down.

Such responses by girls are not uncommon and have been identified in other research (Gilbert & Taylor, 1991; Kenway et al., 1997; Francis, 2000; Skelton, 2001). Interestingly, within this school context, at all levels, there was a tendency to see boys as naturally predisposed to behaving in particular ways. Staff at this school at every level commented on boys' tendency to be more active in their behaviour and learning, while girls were considered to be more passive and willing to sit quietly as opposed to engaging in physical activity (see Francis, 2000). On this basis, an activity-based curriculum was devised to cater for the needs of boys and their particular orientation to learning. However, the staff at this school argued that what worked for boys was also beneficial for girls.

It appears some learning cultures are created and maintained through the particular belief systems of staff at the school and those in authority. It is from such belief systems that the implementation of specific programs designed to improve boys' behaviour, participation and engagement in learning are derived.

School O has introduced a program into its school, 'Peace Builders', which is designed to encourage students to engage in peer mediation. Groups of students are trained to be peer mediators. Many of the teachers are very supportive of the program. However, some of the older students feel that it is more appropriate for younger students rather than for them. This is a feeling shared by some parents. Some students are very negative about the program. For instance, one female student commented that: '...a kid bashed me up and all he had to do was send a message, on the phone saying that he was sorry'. A group of female students saw it as a policing mechanism.

However, the Year 7 teacher was of the opinion that it was working, 'This is the grade 7s, 'Oh Peace Builders is not working.' ... but I feel it is, you know, and I feel it... in the school and we're working towards it'. Interestingly, parents, students and teachers stressed that it was very effective with younger students. The learning support teacher also commented how it had helped to create a more positive learning environment.

School I had also implemented a peer mentoring program which, according to the Year 7 boys involved in the program, had, like School O, been most effective in addressing bullying in the lower primary years. It involved training Year 7 students how to mediate conflicts and tensions between younger students in the school. The students had to sign up for the program and were then required to undertake a two-day mediation course. The boys showed a clear understanding of the rationale behind the program and appeared to have developed important mediation skills:

Student 1: It was like because teachers can't be everywhere like 24 zones, like they can't be in the same spot. Like you have fight peer mediators in different blocks, like block 1, block 2, block 3, playground, oval ... Say there was an argument, not a fight, like there's no contact or if it's going to break out into a fight you leave it alone just go

tell the teacher. But if it's like an argument like yelling well then you tell them ...to come and talk about this and then you take them into a room and then you talk about it and they'll say what really happened.

Student 2: And you fill out this form and it's all confidential and everything and the teachers don't know about it, then as soon as you've written everything down just chuck it in the bin. Chuck the names in the bin because they sign their names on the piece of paper that they agree on talking about. So there's a little line where you cut it off where they've got their names and your signature and everything.

Student 1: And then you give it to the teacher so they can see what happened but they wouldn't know the names.

The students indicated that peer mediation was effective in addressing bullying in the lower grades:

Student 1: [Bullying is] not as much as it used to be I don't think because the peer mediators came on. I think the younger grades were more likely to come up to the peer mediators and ask for help than the higher grades, like our grades.

Student 2: We'd be more like a bunch of, what, no way, you guys can't help out my problem.

Student 3: Yes, bunch of idiots.

Student 4: It's like the bullying would be reduced because if we see two little Year 3s arguing and we know it will end up into a fight we'll just say stop it or something, because it's like we're older and then we just get more responsible and stuff.

Philosophy for children

The approach of Case Study E, a primary school, to behaviour management was almost the converse of that utilised at School O. Rather than changes to the behaviour of students creating a better learning environment, its strategy was to address behaviour management through creating a better learning environment. Absenteeism is not a major problem, as students appear to like coming to the school. The school had no suspensions or exclusions in 2000, and the school's 2000 Annual Report states that there was only one bullying incident that required teacher follow up (this incident did involve boys). There was no evidence of poor behaviour observed in the school. The principal attributes this to a Philosophy for Children program that has been introduced throughout the school. In her view, this program has had great social, as well as academic, rewards. She also noted that a number of boys who were bullied at previous schools for being 'nerdy' have thrived at the school. Indeed, these boys were actually moved to the school by their parents because the parents believed that the educational program and ethos of this school was such that bullying would not occur.

Teachers identified only one boy in School E as being 'naughty'. However, his behaviour, when observed by the researchers, appeared mild in comparison with that of many students in other schools. It is possible, however, to imagine that in another setting he could have been out of control. Another boy, observed in a philosophy class, appeared to lack some social skills. He was the kind of child who, in many classes, is bullied due to being overweight. However, there did not appear to be any evidence of bullying in the classes observed. It was also noticeable that, when doing group work, other boys and girls included the child. The teacher attributes the lack of bullying to practices such as philosophy and the culture of the school where students are taught how to resolve conflict by talking through issues. The philosophy across the curriculum approach seems to have given all students, both boys and girls, a way of talking through issues amongst themselves, rather than resorting to other types of inappropriate behaviour. The pervasive supportive culture of the whole school also is important in this respect.

It would appear that the literacy initiatives introduced at Case Studies F and K have had a positive impact on student behaviour, as well as student achievement, particularly in relation to reducing unexplained absenteeism among students. The school has attributed this to the rigour placed on effective pedagogy in the classroom and professional development in the area of productive pedagogies. In a sense, what this school has done is instigate a teacher professional learning community (Louis, Kruse & Marks, 1996; QSRLS, 2001; Lingard, Mills & Hayes, 2000; Lingard, Hayes, Mills and Christie, 2003). The focus within that learning community has been on productive pedagogies in literacy. The social construction of gender and a 'which girls and which boys?' approach have also been central elements of their internal and external professional development agendas.

So it appears that a targeted focus upon literacy, putting in place demanding pedagogies and enhancing teacher understandings of the construction of gender and its effects in schooling have together had positive impact on student learning. These approaches had positive effects at this low SES school in terms of both student behaviour and achievement. Thus, the issue that emerges in this research analysis is that school culture and the development of particular pedagogical approaches, informed by particular teacher knowledges, are crucial factors in contributing both to enhancing quality learning for students in schools and to minimising anti-social and protest behaviours (QSRLS, 2001).

The principal at School R argued that the move to outcomes based assessment in the lower secondary years at his school, along with a whole school focus on demanding pedagogies, had improved the behaviour of students. He noted: 'I believe that students actually were forced to do some quality work for the first time in their life' Here he was referring to students who were traditionally failing and turned off school.

2.2.2 Specific strategies to address the educational attainment of boys

Case Study data indicated that a number of different strategies are being employed in the schools. At this stage, it is difficult to properly assess their impact on educational attainment of boys, as some programs are in their infancy. Furthermore, these programs often do not work in isolation, and their impact is influenced by particular factors linked to the context in which

they are introduced, such as the particular needs and preferences of individual students, different parental expectations and the community and school environment.

The strategies used by the schools have been outlined under the following headings (see also Sukhnandan et al., 2000):

- Professional development for teachers
- Peer support and mentoring initiatives
- Mentoring
- Boys' education programs
- The 'boy friendly' curriculum
- Whole school approaches

Professional development for teachers

The focus for improving boys' educational outcomes at Case Study C was professional development for teachers. Initially, this professional development appeared to be predominantly awareness-raising for teachers about some of the issues and why boys' education is of concern. The benefits of awareness-raising on its own were seen to be limited:

We have had a lot of PD sessions about boys at risk and we have changed our learning practices, but there's no way; they haven't given us strategies. Like, yes, we know boys are at risk, yes, we know, yes, we have to change some of our learning strategies. What are they? Like, give us the options. Give us examples.

The school has responded by bringing in Raymond Lewis from La Trobe University to discuss strategies to help teachers address specific issues relating to boys and their schooling.

According to a teacher in the school, the professional development approach advocated by Lewis places the teacher-student relationship as the cornerstone of effective boys' education:

And, one of Raymond's bases would be that teachers no longer have any authority in the classroom because they're the teacher, or because they have the knowledge, but in a sense it's much more about relationships now.

The capacity to develop a better relationship with students was seen by one teacher who had been teaching for forty years as easier for younger teachers who in many ways are much more adaptable in the way in which they are able to see the whole focus of education.

Professional development for teachers targeting the educational needs of boys was also being conducted in Case Study D. School administrators attended workshops and seminars specifically addressing the issue of boys' education. Attendance at these functions was followed by reports at staff meetings, sharing of materials, and school-based work, which involved the development of a plan for boys' education targeting the specific needs of the school. The plan focused on two key concerns at the school: relationships and bullying, which

was evident due to problems with social isolation, harassment and abuse. Professional development materials used at this school included the following titles:

- Boys and Relationships South Australia – developed by D. Shores, B. Freidman, and J. Marlu
- Boys in Relationships and Boys Talk– by D. Shores
- Motivating Boys - This consisted of four modules for teachers’ professional development (Understanding Boys, Boys in the Classroom, Working with Boys, and Whole School Approaches) and one module for parents (Supporting Our Sons at School). This material was published by the West Education Centre Inc.

Professional development at Case Study E has been focused on pedagogies and on philosophy. The teachers at this school regard themselves as well as their students as ‘life long learners’ and are continually on the look out for professional development which will help them improve their pedagogical repertoires. In relation to the teachers’ professional development on philosophy, this has often involved bringing well-known children’s philosophy expert Phil Cam to the school. In a number of instances, teachers from the school have been involved in delivering professional development on philosophy to other teachers in other schools. The excellent achievement data available from this school suggests that it is important for both boys and girls to experience high quality pedagogies and curriculum, but within a supportive environment which is demanding of students (QSRLS, 2001).

The English department at School J had been through a targeted professional development program around the issue of masculinities and subject English. This has led to pedagogical and curriculum changes in the school. In the teacher focus group the head of English talked about the challenge that had been given to the teachers in respect of boys and English through the professional development program. Referring to the program and its effects she said:

She took us through and the basic thrust of the in-service was that masculinity was constructed and therefore there are basically two ways that we can approach what we do. One was the overt thing like get boyish books and all this sort of thing or the other thing is to actually challenge the construction of masculinity and provide alternative constructions of masculinity through access to texts.

In response to this program and reflective consideration within the English Department, a unit was also introduced into the Year 11 work program that dealt with marginalised Australians through texts from various media. This unit included engagement with gay sexualities and differing practices of masculinity. The English department at School J also contracted University based researchers to evaluate the school’s literacy program and recommend changes. A focus on pedagogies was an element of this work. Programs have subsequently been developed and modified in the light of on-going research and evaluations. There appears to be teacher professional learning community operating well within this Department. This is indicative of large secondary schools where such developments seem to be department more than whole school based.

As noted earlier in this Report, School R had gone some considerable way to creating a teacher professional learning community focused on pedagogies. The school had structured in time on Thursday afternoons for all teachers to work in faculty groups on pedagogies and issues around outcomes based assessment. This approach was attempting to strengthen the school organisational capacity beyond the impact of good individual teachers. School S also gave considerable emphasis to teacher professional development, which appeared to have very positive effects within the school. The school's committee structure also supported teacher professional development. This was particularly the case in relation to the pastoral care committee.

The Queensland School Reform Longitudinal Study has shown that both internal professional development and that provided externally to the school are linked to good classroom practices. In a sense, focused and planned professional development for teachers is central to the creation of teacher professional learning communities targeted on student learning within schools (Lee & Smith, 2001; Louis, Kruse & Marks, 1996; 2001; Lingard, Hayes, Mills and Christie, 2003). Such professional development for teachers is also a surrogate for the valuing of their work. There is also some evidence to suggest that teachers actually prefer professional development that is school- and student learning-focused (McRae, Ainsworth, Groves, Rowland & Zbar, 2001). Teachers at Case Study F had been involved in professional development concerning literacy, pedagogies and the construction of gender and this appeared to have had positive effects in improved literacy outcomes for all students.

Peer support and mentoring initiatives

- **Role models**

A role model program has been introduced in Case Study A. The intention of the program is to provide students with an opportunity for them to see different ways of behaving. The Deputy Principal supported this strategy and stated:

Now you are never going to be able to overcome that [the sexist community culture], but what you have got to do all the time is provide alternative models for behaviour, so the kids can say 'oh well I don't need to behave like this, so I can behave like that instead'.

The success of this approach is yet to be evaluated by the school.

- **Male teachers**

Interview and survey data from students in the Case Study schools suggest that the gender of the teacher is not of high significance to both male and female students. However, both male and female students say a same sex teacher is important in terms of talking about personal issues. All students indicate it is the type of person the teacher is which is more important than their sex.

The survey data suggest that some teachers see the lack of male role models for boys as an issue for schools.

In the literature there has been considerable debate around the importance or otherwise of boys having male teachers (Biddulph, 1995; 1997; Gurian, 1999; Gilbert & Gilbert, 1998; Lingard & Douglas, 1999; Mills & Lingard, 1997; Mills, 2000b; Roulston & Mills, 2000). Skelton (2001) notes a relationship between the concern for fatherless boys and the lack of male teachers, particularly in the primary schools. Some teachers also suggested the need for more male teachers, particularly in primary schools and in some secondary subject areas.

Some of the female staff at School A expressed their concerns about boys' behaviours. Some even described themselves as 'victims' of the lower SES boys' behavioural problems. Observations conducted at this school indicated that male students did indeed tend to be more disruptive with female teachers. Such behaviours by boys towards female teachers have been documented in other research (Askew & Ross, 1988; Jones, 1985; Walkerdine, 1989; Robison, 1996). These boys' behaviours towards these teachers need to be addressed in ways which do not denigrate female teachers by suggesting that they are not as capable of teaching boys as men (see Bailey, 1996). An approach to boys' problem behaviours in relation to female teachers needs to be cast within a framework that explores the relations of gender and power operating between the teacher and the students.

There is much within the popular texts on boys that emphasises the need for boys to be provided with male mentors and teachers (Biddulph, 1995; 1997; Kindlon & Thomson, 1999; for a discussion of this see Roulston & Mills, 2000; Mills, 2000a b). In some instances, there is even the assumption that any male will do regardless of their pedagogical skills (Gurian, 1999). However a teacher from School E stated, 'boys do not come to school to see men, but rather to experience demanding pedagogy'. This raises questions about the need for educators in school to critically examine the role that particular knowledges, values, expectations and perceptions on the basis of gender, and other social variables such as SES, play in terms of how they teach and relate to students. This has the capacity to influence, in significant ways, the learning and social behaviours of boys and girls in the classroom with the capacity to affect their educational outcomes (see Francis, 2000).

In recent research, Skelton (2001) has shown how some male primary school teachers see it as imperative to locate themselves as 'properly masculine' in a feminised environment. She found that this was done through a number of practices, including quick promotion to leadership positions and through the use of a particular form of humour and attitude to sport that reinforced dominant ways of being male. She argues that this situation in primary schools 'severely limits the forms of masculinity available to young boys to engage with' (p.138). Skelton traverses these issues in a context where some accounts assert that it is the feminised primary school that contributes to the comparatively poorer performance of boys than girls (eg Budge, 1994; Bleach, 1998). These accounts also argue that this feminised environment also explains why more boys than girls are suspended from school. Some other research (eg Slade and Trent, 2000; Skelton, 2001) appears to imply that the ideal student is more in line with dominant ways of being a girl and that dominant ways of being a boy appear to be in contrast to the ideal pupil model (Skelton, 2001). This emphasises the role that teacher attitudes and

values play in the development of a particular school culture and how this in turn impacts on student learning and engagement with schooling.

- **Peer support**

Similar to the role model strategy, another school had introduced a peer support program with perceived success. The program was described by a staff member in the following fashion:

Year 11 students conducted regular meetings and workshops with small groups of Year 7 students. This helped the young secondary students better fit into the secondary school, reduced bullying and gave seniors a leadership role. It appeared to be working very well.

Peer support is also evident at Case Study E, a multi-age school. There is an expectation that older students will contribute to the creation of an environment that nurtures the younger students. Whilst it is an informal practice, there were clear examples of older male and female students helping younger students with their work.

- **Cross-tutoring**

Teachers at Case Study C described how they used better students to cross-tutor students of lesser 'ability' in multi-level classes:

Like in maths I used to put the tables together and put four students and make sure I had a weaker student, and one good one and, you know, three average students and they had to ask the other students on the table before they asked me.

The multi-age nature of the class at Case Study E also lent itself to promoting this form of student support.

- **Mentoring**

Mentoring is another supportive strategy being used in several Case Study schools. In Case Study A the mentoring by a number of teachers was also seen as a very positive way of assisting 'students at risk'. In Case Study H the mentoring program was explained by the Deputy Principal in the following terms:

We use a variety of strategies including peer mentoring, not peer mentoring so much but a teachers' support mechanism whereby a mentor would be appointed for a student at risk. That teacher voluntarily meets with those students on a regular basis and tries to sort out what problems they are likely to be facing.

The program was considered to be highly successful by both staff and students. For example a Year 8 boy commented:

I've got my mentor and I talk to him when I am in trouble and stuff. Talk it over with him, Mr P Sort of like a counsellor. He has helped me a lot. I used to be in a lot of trouble before that.

The mentor talks about this Year 8 boy:

He was very explosive and had really really bad language and wouldn't listen, all this sort of stuff but I think that the fact that he has got a very supportive situation ... he has started to come around ... I'd say I made about two referrals to incidents he has been involved in within the last month and that would be probably 80% down from where he was when he started.

- **Buddy reading program**

The buddy reading program was implemented at School I and involved pairing Year 7 boys with Year 2 students to assist the latter with their reading. The Year 7 students would listen to the Year 2 student read and help them with any pronunciation or identification with words etc. They would do this for 15 minutes three times a week in the morning before lessons began. They were given a number of training sessions with the Year 7 and Year 2 teachers modelling the reading practice for the students. One of the problems with the program, from the students' point of view, had to do with the ways in which they were paired. They had no choice in the allocation of their buddies so compatibility was a problem and was a significant factor in determining the success of the program for individual students:

Student 1: We got allocated buddies instead of just people that we knew. Okay you have to go with that person whether you like it or not.

Student 2: Some people in our class hate buddy reading. Mr. A is like I don't care, we made a commitment to do with our buddies and we're going to do it. I don't care that you don't like it, you show that you're interested, work hard and then you'll get a reward.

Student 3: It's okay but it's not real good that we got given a body and we didn't get to choose or anything.

Student 1: If it doesn't work out with them. If it doesn't work you then you can ask to go on a different. Maybe you could have a couple of weeks' trial or something like that just to get to know them. If you're not working well with them it's not fair on them or you.

There also appeared to be a need for closer monitoring of students involved in the program because some boys indicated that they tended to neglect their buddies and were inclined to talk to their friends rather than attend to their buddies.

Educational programs for boys

Boys' education programs

At Case Study A, the school has introduced a special Boys' Education Program. The deputy principal explained how the program was intended to integrate with other activities in the school. He also outlined some of the difficulties in maintaining the momentum of this program:

... the second thing is you've got your system of programs, in terms of learning. ... Like literacy programs, life skills and things. The other thing that we are doing at the moment is running a boys' education program which addresses the inability of a lot of the kids to relate to female teachers, to relate to females in general, to relate to each other and to address their disengagement.

There was a follow up but it was basically if I mean nothing else happened after that there needed to be more follow up. There needed to be some sort of research done into how effective it was, where we fell down and that sort of thing. The program itself was probably going to work if that sort of thing happened but like everything in a school situation you have the best intention, you implement it but you run out of time to follow it up.

This was in its infancy when the researcher visited the school and was just in its initial implementation stage. Therefore, it is somewhat difficult to evaluate its effectiveness at this time.

Case Study G has introduced a number of boys' programs at the school. However, as it is an all boys' school, these could be considered to be simply student centred programs. There are two particular initiatives focused on the gender of the students at the school. The first is the construction of the 'Alpha group'. This group of boys was formed by teachers to challenge the notion of 'cool to be a fool' attitudes evidenced by some boys in the school. The group is made up of high achieving senior boys. One of the boys from the group described their role:

OK, the Alpha Group is a supervising group that endorses active learning at G College. We do this in a number of ways. Our main way is Alpha nominations for every week where class teachers nominate people who are either working consistently well or if you put in a good effort for a \$5 tuckshop voucher every week. There's also the Alpha ... weekly quiz where clues are given, 5 clues each week, one every day given on (class) notices ... and the first correct answer is the winner at the end of the week.

In response to a question about the impact of this group on other students, the difference in the ways different aged boys respond to academic issues was again raised. For instance, another boy commented:

I think that Year 8 you can clearly see a difference, but it's hard to see with Year 9s and 10s 'cause generally Year 9s and 10s are apathetic towards any kind of work. Every year as people go through just Year 9 and 10, are just trouble years kind of thing, so.

As with many programs of this type, it is difficult to evaluate its effectiveness. However, whilst observing a class when the afternoon notices were read out students did take an interest in the 'Alpha quiz'.

School G also had a designated boys' committee. This committee was formed in response to the debates about boys' achievement levels in comparison to those of girls. One male teacher explained that its aims included: 'Improving the academic qualifier for the boys too was perceived to be a big one ... to create an environment where boys do achieve'. And another male teacher explained how it had developed at a time:

When the research was showing that boys were not scoring as well as girls and in decline as in comparison with girls, so obviously there was some problem, so I think it was '97 or so I went to a seminar in Melbourne which was run by (Catholic) schools. It was one of those early things looking at the lack of achievement for boys. So it had been building up for some time, so it was our duty to do something about it since we've got boys.

Most of the activities have centred on developing relationships between the boys and their families, and in particular their fathers. For instance, fathers were invited to spend an evening at one of the school camps with their sons, at the time of the research the school was organising a 'dads and lads' night, and they had recently held a trivia night for parents. The purpose of this latter event was for the students to set the questions for the parents in order that the parents could find out how much they knew about their children.

The school is also running a life skills and interaction program. This program has been designed for boys with social, behavioural and academic problems. The teacher responsible for this program describes it as follows:

[This] programme has gathered a reputation as being a bad boys' sort of thing and I'm not keen on that idea, and so we try to target kids with different needs so, you know, one of the guys you spoke to this morning, J, he would be one of the guys that you might consider to label as a bad boy, whereas K, he's obviously on the programme for a very different reason. He's got issues with, you know, self-confidence and, you know, lacking friends and all those sorts of things. So, up until recently, it has been basically bad boy sort of stuff and the programme that's running at the moment, we did actually ask a good student to take part with us as well, and he did originally want to do it but came to us and said that he just couldn't cope with the time off, you know, because it's a good handful of periods during the week – 2 or 3 periods twice a week plus, you know, we do a full-day excursion, rock-climbing, and this weekend we're going away Friday, Saturday and Sunday to the national park to camp and do a bit more climbing and caving and all those sorts of things.

Rock and Water program

School G is also running the 'Rock and Water' program. The teacher outlined this program in the following manner:

It's a programme that's been developed in Holland... And to give it a bit of a background, it was developed out of... I might get some of this wrong – I think originally the programme was called Action/Reaction. It was done as a result of increasing incidences of physical assault, basically perpetrated by males against females, and they found that, you know, they looked at, that the many boys looked at it as that they were the bad guys and that this course, Action/Reaction, was just about trying to turn them around from being bad guys and good guys, and so they thought what about all the good things that guys are doing and how they should concentrate on those sorts of issues. And so Rock and Water was developed out of that, so they learn lots of things. It's based – a typical thing about Rock and Water is it's very hard to explain

When asked what the program was about one boy thought, 'It's supposed to help us with things like rocks like something that stays still and doesn't compromise, but water's something that compromises and chooses its way'.

It is difficult to evaluate the extent to which this project can be deemed as successful. However, there is a general feeling that these projects do contribute to boys feeling better about academic success.

Case Study P has also introduced a special program, the *Boys' Own* project for boys mostly at risk of suspension and expulsion. The categories of boys selected by year advisers to participate in the program are boys with low self-esteem, boys who lack direction or purpose, over or under assertive boys, and boys who demonstrate attention seeking behaviour, as well as boys who have demonstrated leadership potential. After the boys are identified, they are assigned in small groups to teachers who act as mentors. The boys are required to work on a year-long project from one of four areas: mechanical, computing, creative arts or outdoor activities. After the successful completion of their project, they attend a wilderness adventure camp. The project has been further developed by the state education department, through a tied grant, to support a focus on the social construction of masculinity.

In one Case Study School that has a strong focus on boys' programs, a senior member of the teaching staff expressed some concern that the focus on boys was not having a major impact. He felt that whilst a lot of talk about boys was happening at the school, that this was doing nothing about the pedagogy:

I don't think the rhetoric's actually got down into the classroom... I mean, the simple fact of the matter is that what happens between teachers and kids in classrooms are really what's important...

The research reported here would strongly confirm the observation that classroom practices are more important than structural reform. School R, as pointed out earlier, has moved away from

a specific boys' focus to emphasising good pedagogy through substantive conversations in their teacher professional learning community. This appeared to be having positive effects.

Pastoral care coordinator plan

In Case Study D, the school developed a plan for boys' education based on four principal elements: communication, self-acceptance and understanding, relationship values, and self-expression. A three-year time frame was suggested to introduce programs and activities designed to help boys achieve more of their potential in every aspect of their school life. The plan involved:

Stage 1, 1999

- Raising awareness of the needs of boys among the school community
Involving parents and students in activities that will help boys appreciate the principal elements of communication, self-acceptance, and understanding, relationship values, and self-exploration

Stage 2, 2000

- Increasing recognition of boys' achievements and promoting the idea that success is a valuable outcome for effort while at the same time working to reduce the negative impact of peer pressure
- Involving boys in non-stereotypical roles at school, including areas such as Performing Arts and Hospitality

Stage 3, 2001

- Expanding the program to develop abilities to relate, and helping prepare boys to make a significant contribution to their relationships with others
- Use of role modelling to help boys better appreciate the impact they can have individually on other boys and at the same time use them as mentors for younger boys.

Activities introduced to date included:

- Fathers' Day Breakfast for fathers and grandfathers of year seven students
- Year 11 students beginning Year 12 participating in a forum with some of last year's 'success stories'
- Fathers as Role Models (FARM) night for year 9 boys and their fathers to participate in activities to increase communication and understanding
- Trialing 'combo' teachers, mostly male teachers working across the Key Learning Areas (KLAs) in Year 7

Posters targeting boys are also used throughout the school, and boys are actively encouraged into non-traditional subject areas like art, drama, and music.

Based on the research conducted to date in the school, it appears that not much has changed because the strategies seem to be 'add-on solutions', like the Father's Day Breakfast.

The 'boy friendly' curriculum

Case Study B had introduced a 'boy friendly' curriculum to the school. Key elements of this approach included:

- The introduction of an activities-based curriculum, in which the first 30 minutes of every day was devoted to undertaking some type of physical activity.
- A policy that teachers were not allowed to stand and deliver information for more than 15 minutes in any class
- A focus on structured activities, with more reflective exercises following at the end
- A flat discipline structure which emphasises student self-responsibility rather than rule enforcement

Other recommendations that emerged through interviews with the principal and staff at the school included:

- The establishment of a definite link between the family and the school
- The introduction of activities that will enable boys to 'open up' especially when they have a problem. The view was that this was best done through physical activities
- The creation of a 'home' at school for boys. This is based on the assumption that boys have territory as their primary need and have to feel that there is somewhere within the school that is theirs
- The introduction of activities that will encourage boys to do more thinking and girls to be more active
- Getting teachers to act more as facilitators than as deliverers of knowledge
- Less emphasis on homework
- Encouraging boys to talk things through before they write as their writings skills are perceived to be less developed
- Introduction of programs in the school that deal with gender construction
- The need to communicate with the real boys behind these masks through subjects such as drama

School staff were of the view that this program was highly effective in dealing with boys. However, there is a related need to consider the impact upon girls and the differential impact on different types of boys of the school's approach.

Whole school approaches

School to Work program

At Case Study A, the school had introduced a 'School to Work' program to make the curriculum more relevant to students who were not intending to proceed to higher education. One year 10 boy described how he had had problems adjusting to school life, and had been suspended from school in Year 9. However, as a result of entering the 'School to Work' program he had now found meaning and relevance to his school life, and his behaviour and

attitude had improved markedly in the preceding six months. He was also of the opinion that many of his peers were happy with the program and were now fitting more easily into school life.

Approximately 29 students [90% were boys] from Years 9-10 were involved in this program and teachers said that it had made dramatic improvements in student self esteem, attendance, behaviour and motivation. One day a week, students attended work experience under the guidance of the Careers Adviser. It gave many of the students a purpose and had positive flow-on effects into other classes.

Vocational education and traineeships

At Case Study A, the school had determined that many students returning to Years 11 and 12 found little relevance with much of the academic curriculum and this was made worse for many when the old Category 'B' [less academically demanding] subjects were eliminated from the HSC. The introduction of Vocational Education courses such as 'Hospitality', 'Welding', 'Auto-mechanic' and others helped to bridge this gap. The traineeships allowed students to do work experience in their chosen occupations. The results in the senior school had been very positive.

Whole school literacy program

Case Study A had a welfare and literacy period four days a week. This appeared to be no longer effective. The Support Teacher (Learning) did however work with a number of targeted students and suggested professional development strategies for staff to assist them with students with low literacy levels. The evidence would suggest that whole school literacy programs might be effective they need to include specific strategies to meet the differing literacy needs of students.

The focus on pedagogy approach

At Case Study E, the school does not have any programs specifically targeting boys. However, there is a clear focus on pedagogies which are appropriate for both boys and girls and which do not adopt a deficit model of underachieving students. The pedagogical practices at this school manifested the characteristics of what the QSRLS (2001) has called 'productive pedagogies', that is, pedagogical practices that were intellectually demanding, connected to the world beyond the classroom, socially supportive and cognisant of and engaged with difference. These pedagogical practices were aligned with similarly demanding assessment practices and curriculum. The school also has two clear curriculum foci around environmental education and philosophy. The emphasis upon philosophy develops in students the capacities to debate issues and to see the standpoint of others. The culture of the school is clearly supportive of all students and teachers. The school is also clearly a learning community for both students and teachers. There is a coherent and shared curriculum entailing multi-aging, philosophy and environmental education, which is sustained through ongoing collaboration and support for professional development. There is a clear rejection of violence and much evidence of a significant level of care and respect for all members of the school community, including both

children and adults. The school and classroom environments provide significant social support for students to strive to obtain high quality intellectual and social outcomes from their school experiences.

The focus on pedagogy and the creation of a safe environment for all students has had significant benefits for boys at this school in relation to academic achievements and the development of positive social behaviours, as does the philosophy program. Some boys who had behaviour problems at other schools were well behaved after shifting to School E. The principal says this reflects the demanding pedagogies and their connectedness and the whole school supportive environment. A similar approach has now been adopted at School R to good effect.

At School S, a focus on demanding academic curriculum and a broad liberal education was complementary to demanding pedagogies. The broad liberal education approach resulted in large numbers of boys doing social sciences/humanities subjects in the upper secondary years and doing very well in these subjects. This is an atypical situation for boys in the post-compulsory years, both in terms of subject choices and performance. The situation reflects the school's professional commitments and close alignment with the values of the middle class parental clientele.

The literacy development approach

Case Studies F and N had adopted similar approaches to improving the educational outcomes for boys as that of School E. The schools had very strong focuses on improving literacy throughout the school. To do this, they integrated all students into the classroom, including those with special educational needs and those with learning support needs. At School F they have been able to put most classes into double teaching areas where the Special Education and learning support teachers also operate. These people are seen as extra resources in the room and work with all students. This has had a number of social benefits as well as academic ones. They have also used teacher aides in the room to work with all students. The school engaged with the 'support a reader' program and employed a speech pathologist to help with students' oral skills. They also sought to instigate a concerted approach to developing students' social skills, as behaviour was a problem in relation to student learning. They trained and employed parents as classroom assistants. Through analyses of data, staff also became aware that students were mainly learning by rote. They engaged in significant professional development. As a result, the school has adopted an approach that stresses the importance of focused teaching.

There have also been a number of structural innovations to enable the development of a teacher professional learning community within the school, which can be compared with developments in School R. These innovations appear to have had a powerfully positive effect on student behaviour and learning throughout the school. School N's approach to literacy, combined with the research conducted through their 'Which Boys? Which Girls?' research project, also appeared to have led to significant benefits for all students at the school.

Whole school discipline approach

School J had developed a whole school welfare policy geared to achieving student self-discipline. There are six descriptive behavioural levels within the policy. All students begin at level zero. There are then two positive levels, A and B and three negative levels, 1-3. Students are placed on the various levels with certain requirements for good or bad behaviour. Those with the top positive level are 'entitled to all privileges and offices in the school' and receive a certificate of recognition. The same is the case for level B, but with less praising language on the award. Level zero students are eligible for lower level offices within the school, e.g. form captains, but not school captains. There are then three negative levels of positioning students. These are for different level breaches and misdemeanours, ending beyond level three in suspension. Different administrators within the school are involved in overseeing students as they move through these negative levels, with differing levels of contact with the students' parents/guardians. There is an Initiative Pack, which students on these negative levels can get from the central administration to reduce the period they spend on a negative level (three weeks before level reconsidered). The Initiative Pack requires students to carry out community activities within the school as a way of reducing their time on a negative level. The purpose of this system is to create whole school responsibility for student discipline, to involve parents, and to create student self-discipline within the school community.

3. CONCLUSION

Overall comment

Informed by the Literature Review, this Report, based on case studies of schools and survey data, has provided an analysis of the work of the research schools in addressing the educational needs of boys. The Report has examined how systemic factors such as family, school and community environments, peer culture and student-teacher relationships operate across SES communities and how these factors can be most effectively addressed in the school context.

The Case Study Schools have provided the empirical basis of this research report. These schools have adopted a variety of innovative strategies, which have either explicitly sought to improve the schooling experience of boys or have indirectly served to improve boys' social and academic outcomes. The schools taking the indirect approach have focused on enhancing the quality of classroom learning and the capacity of the school to support those practices. As with School S, this has involved attempts to align demanding classroom pedagogies with curriculum purposes and assessment practices. The schools taking a more explicit approach have begun from considerations of the needs of boys and then put in place school and classroom strategies based on those considerations. In studying and analysing both types of school strategies, the research has been very mindful that any such 'boy focused' approach within co-educational schools should not exacerbate the schooling experiences and outcomes for girls. Those strategies that have focused on improving classroom practices and enhancing school organisational capacity have achieved good outcomes for both boys and girls. However, the research suggests that the most effective approaches probably involve a melding together of those strategies – pedagogy and learning community focused - with deep teacher knowledge and understanding about the impact of gender upon students' schooling.

The picture presented is a complex one. How best to address the educational needs of boys is a professional issue for teachers about which opinions are divided. This also reflects divisions within the literature and the way the issue of boys' schooling has been represented in the media. Gender reform touches on strongly held personal values and as such can provoke acrimonious debate. Such divisions and at times, acrimony, were evident within and across the research schools. For example, School R had moved from a specific boys' focus to developing an across school pedagogies approach within a teacher professional learning community. There was some disagreement in the teaching staff over which was the better approach. Most teachers in the school saw this development in a very positive light in terms of students' classroom behaviour and learning. However, some teachers still believed that a boys' focus was required.

Despite these complexities and debates there are, nonetheless, some general conclusions that can be drawn and lessons that can be learnt from the strategies utilised in the research schools. However, each school has its own history, culture, relationships with its community, professional staff and so on. Schools are also located in different communities that need to be read professionally for schools to maximise their effects. Thus, any lessons drawn from this research have to be recontextualised by those working in other schools to take account of what Pat Thomson (2002) calls the 'thisness' of any given school. What is meant by 'thisness' is

that while schools have much in common, they also have their idiosyncrasies. While the problems they experience often have much in common, the solutions to these problems must be set against the specific context of any given school. Professional practice needs to meld the lessons learnt from elsewhere with a reading of the local context at both whole school and classroom levels. Professional mediation is thus necessary to the implementation of any effective approaches to better address the educational needs of boys. There are no easy solutions. Rather there is a pressing need for schools to continually be trying things out and evaluating their success. This is central to an effective school learning community, which was a feature of all the really successful schools in this research.

With these considerations in mind, we draw the following conclusions and lessons from our research:

- There is very strong evidence from the Case Study Schools that it is the quality of teacher-student relationships and the quality of the classroom pedagogies that are central school-based factors in achieving good educational outcomes for both boys and girls.
- Furthermore, there is additional evidence to demonstrate the need for schools to align those pedagogies with curriculum purposes and assessment practices.
- Teachers and their practices appear to be the core element in good and effective strategies for addressing the educational needs of boys. Indeed, these are the core elements in effective schooling for all students.
- In turn, this would seem to imply teacher professional development within schools and systems as a very important strategy for addressing the educational needs of boys.
- It would also suggest the need to make pedagogy in schools more intellectually demanding, more connected to the students' lives and the world beyond the classroom, more socially supportive, along with greater recognition of differences amongst the student body. These are the characteristics of productive pedagogies. The alignment of such pedagogies with assessment practices and curriculum goals is also central here.

The creation of teacher professional learning communities in schools, focused on enhancing the learning of all students, would seem to be one important aspect of on-going teacher professional development. This could be seen as a form of school organisational capacity building. Such a learning community also needs to be involved in research about, and evaluation of, strategies adopted to address the educational needs of boys and indeed, in co-educational schools, the educational needs of all students. Individual capacity building for teachers through attendance at professional conferences and so on is also a necessary element of teacher professional development. Such professional development needs to be concerned with curriculum, pedagogical and assessment issues and the need for their alignment and also concerned with other necessary teacher threshold knowledges. The latter include knowledge of curriculum areas, student development, gender issues, pedagogical and assessment repertoires, the purposes of schooling, relevant policy development and so on (see Literature Review). This research would suggest that more research is required so that we are able to document the required teacher threshold knowledges about boys, girls and gender, and their linkages to classroom practices.

The research also suggests that it is more difficult to build a culture of a learning community within very large schools. It is much easier to do so in smaller primary schools without the layer of middle management usual in secondary schools. Secondary schools are large and complex organisations. The QSRLS demonstrated that in such large secondary schools a teacher professional learning community was often located within departments rather than across the whole school, with an active Head of Department central to such developments. This research confirms this finding. For example, a large co-educational government secondary school in a provincial city, had a very active Head of English. She had involved outside consultants in professional developments for all the English teachers in the schools around critical literacy, and issues of masculinity and subject English. This professional development program was long-term and effective, leading to changes in pedagogies and curriculum. She had also employed university researchers to evaluate the school's approach to literacy. The researchers were involved in the development and evolution of the school-wide literacy program, including evaluations of pedagogical practices. There was a real vibrancy within this Department; it had a real professional learning community and all of the teachers were concerned to deliver demanding pedagogies and demanding curricula. In evidence as well, was a most effective research/professional partnership between a university and the school. In many ways, this Department was demonstrating the features of a learning organisation and reflective professional practice.

The pastoral care program at School S, an all boys, academic, non-government school, is another example of an across school learning community. This is a formal program timetabled across all years with Year Level coordinators and a pastoral care committee chaired by one of the Deputies. This has developed over time in terms of the program offered and involved teacher professional development and critical professional reflection. This structure is also an important point of contact between the school/teachers and parents.

The common oppositional split in the co-educational Case Study Schools – between a specific focus on boys and a general focus on effective pedagogies – raises important questions as to what is required to improve boys' educational outcomes. Case Study B and Case Study E exemplify these two differing approaches. Case Study B focuses on boys and then from assumptions about boys and schooling, has moved to change pedagogical practices and school culture. The result has been a move away from 'chalk and talk' pedagogies with the use of an activities approach. This approach needs to be researched further, but it appears to have achieved some positive outcomes, particularly in attracting boys to the school. There is also a way in which this school treats all boys as a single category with similar educational needs and learning styles. In contrast, Case Study E began from the assumptions that good, interesting, demanding pedagogies and curriculum were necessary for ensuring the engagement with schooling of all students and their commitment to achieving. This school teaches philosophy across the curriculum and this commitment served to create a unified school culture and philosophy. The school's multi-age approach also contributed to professional conversations within the school and to the creation of an informed and unified professional learning community. According to observations in this school and the research literature, the creation of a unifying culture is a necessary element in the development of teacher professional learning communities. The school's pedagogies had very positive effects with good outcomes achieved

for both boys and girls. In this school, for instance, there was little difference in boys' and girls' literacy and numeracy outcomes.

In relation to behaviour management, there were also a number of divisions between the schools. Some schools focused on behaviour management, others on good classroom practices. There were different levels of focus on boys within these approaches. One school involved an approach to behaviour management that looked at the expression of feelings, models of behaviour and conflict resolution for boys. Thus in this school behaviour management was dealt with through a boys' focus. In contrast, in School E behaviour management was dealt with through the focus on good pedagogy, a multi-age structure and the teaching of philosophy across the school. Both formalised and informal pastoral care was a further way by which schools approached behaviour management. Many teachers also articulated a position that clearly defined structures in all aspects of classroom practices were important for lower secondary boys as a behaviour strategy, particularly given the view expressed in many schools that a lot of boys matured late.

This means that whole school approaches to dealing with these issues are required and must involve professional development and skills training, which draw attention to the role that gender and other influences such as SES, Indigeneity, cultural and family background play in influencing behaviour and peer group social relations. Creating safe spaces within schools and the curriculum is necessary to open discussion about these issues and to engage students in productive and reflective ways on how gender issues impact on the way they relate, behave and engage in learning at school.

The analysis of the data from the Case Study Schools thus confirms what the literature suggests, that is, that boys and schooling is an issue around which opinion and practice are divided. These divisions have been clearly evident in the policies, programs and practices of most of the Case Study Schools. There have also at times been divisions within schools as well as between schools, and sometime between schools and some parents. The research from the Case Study Schools indicates that these divisions can be seen to set up a number of unhelpful either/or approaches. This was reflected in a number of the Case Study Schools where there was evidence of an either/or approach or logic to addressing the educational needs of boys. Strategies for improving the social and educational outcomes of boys were often understood in terms of the following unhelpful binaries. In most instances there is a clear need to reconcile both sides of the binary. For example:

1. a general focus on reforming pedagogy *as opposed to* directly addressing boys' educational needs;
2. a focus on student welfare and discipline *as opposed to* a focus on student academic outcomes;
3. an emphasis on socio economic effects *as opposed to* gender effects in schooling;
4. an emphasis on commonalities *as opposed to* differences amongst boys;
5. an emphasis on boys *as opposed to* an emphasis on girls;
6. an emphasis on teacher effects *as opposed to* whole school effects;
7. an emphasis on out of school effects *as opposed to* within school effects;
8. single sex classes/schools *as opposed to* co-educational classes/schools;
9. male teachers *as opposed to* female teachers;

10. an emphasis on targeted reform projects for boys *as opposed to* the creation of a school learning community;
11. an emphasis on developing teachers' pedagogical repertoires or teaching skills *as opposed to* developing teacher knowledges of subject areas, individual student differences, the construction of gender, community research, policy and the purposes of schooling;
12. an emphasis on boys' biology, maturity and developmental stage *as opposed to* an emphasis on the social dimensions of masculinities;
13. an emphasis on academic *as opposed to* social outcomes.

This research project would suggest that effective teachers and school strategies to meet the educational needs of boys and girls ought to move beyond these either/or approaches. This stance is mirrored in the emerging literature from around the world (e.g. Francis 2000; Skelton 2001). The reconciliation of these binaries is a complex task that requires the development of considered strategies grounded in sound educational research and gender studies. Systemic and school policies, along with appropriate teacher professional development, including the creation of teacher professional learning communities in schools, are necessary to move us beyond these binaries and the current impasse in boys' education. Support for teachers is also necessary, as is further research that seeks answers as to how to best meet the educational needs of boys.

The absence of appropriate policy on boys' education at all levels would also appear to have led to some binary divisions in the Case Study Schools. The national *Gender Equity: A Framework for Australian Schools* (Ministerial Council, 1997) document does not appear to have much salience or impact at either systemic or school levels. Apart from the New South Wales government system, which has a specific gender policy, there appears to be a policy vacuum in relation to boys. Sometimes this vacuum is filled with debates in schools about the right approach to take and also encourages a zero-sum account, that is, that schools and teachers are not able simultaneously to deal with and address both boys' and girls' educational needs. This has been evident in some of the research schools. As an alternative, School K worked with a 'Which Girls? Which Boys?' approach that recognised that differing boys and girls have varying problems at schools. Some schools have felt pressure to be seen to at least doing 'something' for boys. However, while the strategies arising from these pushes are always well intentioned, at times they are not well-informed.

Interviews with boys, both individually and in focus groups in the research schools, also suggested that some boys find the media representations of them as 'the' problem and as failures a little disconcerting. These media reports also appear to have created concern over boys' schooling amongst a lot of parents.

The Case Study research has shown how SES location can affect school-community relationships, school expectations and students' relationships with school and curriculum. We must also consider how gender intersects with SES background. School S, for example, demonstrated strong alignment between the school's academic, intellectually demanding pedagogies and curricula and their middle class parents' expectations. Doing well was highly valued within the academic and broader culture of this school. Indeed, the principal had

worked to get a balance across and within academic curricula, extra-curricular activities and pastoral care. In contrast, teachers at School R talked about the disjunction that sometimes existed between family and school expectations in their low SES community.

While anti-school behaviour amongst boys was common across the Case Study Schools, this was also inflected by the culture and SES location of the school. Furthermore, there seems to be support from across the Case Study Schools that (most) boys mature later than (most) girls and that this requires particular classroom strategies in the lower secondary years. The teachers at School S, for example, stressed the need for clear structure in pedagogies for lower secondary boys and clear demarcation about behavioural expectations.

Some schools in the Case Studies had used a ‘which girls and which boys?’ approach to good effects. The collection of longitudinal data in schools and systems regarding the academic and social achievement of both boys and girls and the disaggregation of this data would seem to be necessary to the take-up of a ‘Which girls? Which boys?’ approach and to effective professional interventions at system and school levels. It would seem from the research that schools and teachers need support in the handling and analysis of useful data. Gendered patterns of subject choice also need to be factored into considerations of performance. It should also be noted that, because of their commitment to a broad liberal education for all boys, that School S ensured broad subject choices in the post-compulsory years by implementing a policy forcing boys to choose across the Maths/Sciences and Social Sciences/Humanities divide.

Consideration of structural reforms within school around single-sex classes presents a complex picture. Structural reforms in and of themselves without accompanying reforms to classroom practices will not achieve improved learning outcomes. The quality of the teacher-student relationship remains of central importance in single-sex classes, as in all classrooms, to getting good results for both boys and girls. It is also necessary to point out that many girls enjoyed single-sex classrooms because boys’ disruptive behaviour was absent. The research also indicated the potential dangers in all boys’ classes of stereotyping boys as all being the same with identical educational needs. The point that must be made about such reforms is the need to ensure demanding curricula and demanding pedagogies.

Bullying and harassment by some boys and some girls was often a result of students enforcing pecking orders. However, schools can address this issue through pedagogies and curriculum, school culture and pastoral care and other related programs. Homophobia was a central element of bullying and not necessarily linked to the sexual orientation of the recipients. Schools were not very adept in addressing issues of homophobia.

Specific themes

From the analysis of the Case Study Schools seven specific themes have emerged as being of particular significance in relation to the attitudes and experiences of boys at school:

- (i) The influence of school environment and the peer group;
- (ii) The influence of teachers and their pedagogies;
- (iii) The impact and effect of masculinity or specific gender concepts;

- (iv) The need for professional development;
- (v) Moving beyond a narrow focus on boys' educational strategies to a broader focus on pedagogies and critical reflective practice;
- (vi) The need for systemic and school based gender policies;
- (vii) The need for longitudinal data collection regarding differential gender-based subject choices, and academic and social performance at system and school levels.

Each of these themes is dealt with below. Each has implications for strategies for reform geared to meeting the educational needs of boys.

- **The influence of school environment and the peer group**

The behaviour of boys and how it was perceived and dealt with in various schools was often informed by particular understandings staff had about boys' behaviour that contributed in significant ways to the development of particular school cultures and learning environments. Boys in most of the Case Study Schools were perceived as presenting more difficulties for schools in terms of their behaviours than girls. Across all Case Study Schools there was evidence of boys' disruptive behaviour being associated with 'acting cool' and a protest against school values and school work. In the highly academic and middle class all boys' school, School S, the situation was somewhat different, with good academic performance highly valued by the boys. However, even in this school the students themselves had created hierarchies of value amongst the extra-curricular offerings, despite the school administration's attempts to ensure balance and equal valuing.

The peer group was a contributing factor in influencing many boys to adopt a strong anti-school culture. For many boys across the Case Study Schools it was not cool to be seen to be working hard and this was related to peer group pressures and constructions of masculinity. There were also SES aspects to this and maturity questions. Many boys were conscious of distancing themselves from the 'nerds', but were also wary of not wanting to be seen as too 'dumb'. Boys' peer group pressure seemed to be very strong in limiting the possibilities for many boys in relation to subject choices, academic performance and behaviour. Commitment to a broad liberal education at School S required boys to choose a wide range of subjects in the post-compulsory years. Negative effects of peer group pressure did not appear to be so much the case for girls, who valued school and tended to support one another in their learning. There appeared to be more similarity between the stereotypical ways of being a girl and the conception of the ideal student than between the latter and a stereotypical boy. The research also seemed to lend some credence to the view that some teachers taught girls, but sought to control boys.

Boys also appeared to have less peer support for studying than girls. Boys were more likely than girls to report playing sport or computers with friends. Girls were more likely to study with their friends, or at least or receive academic encouragement from their peers. Bullying and the issue of homophobia also emerged as problems across many of the Case Study Schools. Homophobia was often used by some male students to control those boys who were identified as not conforming to the mainstream male culture of the school, including in

some schools those boys with pro-academic attitudes. The usage of homophobic put downs did not appear to be necessarily linked to issues of sexuality, but was rather about gender non-conformity. This highlights that homophobia is often about the 'policing' of what is perceived to be acceptable or suitable male behaviour. In this way such policing affects all boys and not just those who might identify as non-heterosexual. School culture appeared to be an important factor in potentially mediating the negative effects of this kind of bullying.

- **The influence of teachers**

Teachers and their practices are central to good outcomes for students. Those teachers who were firm, friendly, made learning fun, related well to their students, made the work interesting and had a sound knowledge of their subject were celebrated by students. Such teachers appeared to feel a real sense of responsibility for their students' learning and also a sense of efficacy in achieving desirable outcomes. Good schools seemed to evidence similar senses of responsibility and efficacy within their cultures.

According to the Case Study research, the gender of the teacher was not a significant factor in determining positive learning outcomes for students, although the survey data suggested that some boys who self-classified as of high ability preferred male teachers. Students in their articulation of the ideal teacher also did not place any great emphasis upon the gender of the teacher, but rather stressed the significance of the type of person the teacher was and their pedagogical practices. Students saw the gender of the teacher as only significant in relation to being able to talk to them about personal problems, with some boys and some girls saying that they would prefer to talk to a teacher of the same sex about personal matters.

Productive Pedagogies

The ideal pedagogies were akin to those described as productive pedagogies, defined as those that are intellectually demanding, connected to students' lives and worlds with purchase beyond the classroom, socially supportive and encouraging of risk-taking (in the positive sense) and which value difference. The enhancement of productive pedagogies also requires the enrichment of teacher threshold or appropriate knowledges about their subjects, assessment practices, students, contexts, philosophies and policies. More research is required to enable us to link appropriate threshold knowledges with appropriate pedagogies. The research also revealed that productive pedagogies, based in effective and broad teacher threshold knowledges, proved to be an informed and effective approach that had a positive impact on improving educational outcomes for all students. Strategies or approaches based on insufficiently thought out assumptions about the way boys are or learn have the disadvantage that they tended to treat boys and girls as homogeneous groups.

Within this pedagogical model there is an emphasis on providing students with opportunities to engage in work of a high intellectual quality; conducted within an environment of high social support; that is connected with the world beyond the classroom; and, importantly, which values difference. Such a pedagogy is also informed by a threshold knowledge about the social construction of gender

Intellectual quality

There is a tendency in many classrooms with underachieving students to provide them with work which requires very little intellectual engagement. They are often expected to take notes down from the black/whiteboard, overhead transparencies, or occasionally data projectors, to fill in worksheets or complete textbook activities, or to perform simple acts of rote learning. However, research has demonstrated that such students benefit enormously from being provided with activities which require them to be actively engaged in the construction of knowledge (Newmann and Associates, 1996; Lingard et al., 2001). This means students need to be engaged in higher order thinking where they have to hypothesise, generalise, synthesise, evaluate and so on; they need to learn important concepts and processes in depth, rather than be engaged in superficial learning, and be provided with opportunities to demonstrate a deep understanding of such concepts and processes; they need to be provided with opportunities to use discussion as a means of learning; they need to see that knowledge is a social construction, that is it is made by people and as such can change; and be exposed to critical literacy perspectives which enable them to see how language is used to construct particular kinds of realities.

This 'Addressing the Educational Needs of Boys' project found some good examples of this kind of intellectual work, mainly in primary classrooms and in some very low socioeconomic areas. The boys in these classes were clearly engaged with the schooling process, and indeed often excited by learning. The teachers we saw providing such classes to students did not work with deficit models of students. They believed that those students, including disruptive boys, were capable of achieving good outcomes. They thus worked to construct lessons with outcomes that were achievable for students but required them to engage intellectually with the subject matter of the class. This of course did not mean providing students with work that was well beyond their grasp or expect them to achieve high level outcomes without the appropriate scaffolding.

Connectedness

Many students complained of the lack of relevance of the curriculum to their needs. This is clearly a problem within many classrooms. Connectedness, as with the other dimensions of productive pedagogies, is important for all students, but especially important for those from traditionally underachieving backgrounds. Many students have disengaged from the schooling process because of a lack of perceived meaning in their lessons and schoolwork generally. The productive pedagogies model seeks to ensure that meaning is introduced into the classroom. This is possible by ensuring that new knowledge is built upon students' existing knowledge; that connections are made between different bodies of knowledge rather than compartmentalising the curriculum; that what the students are learning has purchase in their world beyond the classroom; and that students' knowledge and skills are developed in the context of solving a real life issue or problem.

The need for underachieving students to be provided with relevant activities and content is something that has been picked up by many advocating the educational needs of boys. They

have argued for the introduction of more ‘boy friendly’ curriculum content into classrooms. It is quite imaginable that such a curriculum could become dominated with studies of Holden cars, Linkin Park and the World Wrestling Federation. Whilst this is not necessarily a bad thing it is unlikely to be of long term benefit for the students, unless it is done in ways which ensure that the curriculum also promotes students’ intellectual engagement with the subject matter, rather than just catering to the current interests of boys. Furthermore, there is a danger that in providing relevance by simply working with students’ interests, stereotypic representations of masculinity will be treated as unproblematic. This is where making connections between students’ cultures and aspects of the dominant culture become important. The making of such connections clearly requires substantial intellectual engagement on the part of the students.

While the connectedness of the curriculum to the students is undoubtedly a key factor in maintaining the interest and motivation to learn and achieve, appropriate pedagogy is also an issue that needs to be taken into consideration. An example of this may be allowing students the option of integrating ICT skills they have developed with other assignments. Class observations across all schools indicated that students were less interested and less engaged when teacher-centred pedagogy was being used, as opposed to student-centred pedagogy. For example, at one school, the researchers observed a Year 8 class that contained a large number of rowdy boys and, on the surface, unmotivated girls. Calling out, throwing paper and talking were common amongst the students. The young male that was teaching the class was using very much a ‘chalk and talk’ approach with little discussion and a great deal of note taking from the board. A similar pattern of behaviour was observed at another school when an older male teacher demonstrated a limited repertoire of pedagogical skills. By contrast, a Year 10 English class at School A appeared to have a highly motivated group of students. The male teacher allowed free discussion and the class was ‘on task’ for the majority of the lesson. Students talked quietly among themselves about matters pertaining to the lesson. The student task-centred approach of School B also seemed to work well to engage students.

Supportive environment

Of the four dimensions of productive pedagogies it is the need for social support that is most often identified by students as an important aspect of a good classroom. The opportunity to learn in a socially supportive environment is critical for all students. It is also something of which most students and teachers consider to be a part of an effective classroom. Although a supportive environment is obviously important for all students, it can be particularly useful for disengaged boys because it addresses negative peer interaction in the classroom.

Some of the core elements of this recognised within the productive pedagogies model are: giving students some say in what they do in the classroom; being explicit about what is expected from students; and encouraging students to take risks without fear of ‘put-downs’ from the teacher or other students. Socially supportive classrooms were also characterised by students being on task without the teacher having to refer to their behaviours. Within classrooms where there is a substantial evidence of this kind of social support, boys are willing to take risks with their learning as there are few insults delivered to boys by others when they try hard. Furthermore, the guidelines about what is expected from students are clear so that those boys who struggle with knowing how to ‘do’ school have their learning scaffolded in

ways in which enable them to achieve. Thus supportiveness is more than care; rather, it is about providing students with an environment which supports intellectually challenging work.

Engaging with and Valuing of difference

An important aspect of pedagogical practice which enabled boys to perform in ways that transcended 'normal' ways of being a boy was a set of practices that valued difference. Such practices involved providing students with knowledge about non-dominant ways of being in terms of gender, ethnicity/race, sexualities and so on; explicitly valuing diversity; ensuring that all students were included within classroom activities through active participation; employing a range of teaching styles, for example, including the use of narrative in order to explain abstract concepts; and presenting students with opportunities to take an active role in making a difference to their classroom, school or broader community. The acceptance of difference was important in those school cultures where boys were encouraged to engage with the academic curriculum, whilst at the same time also being able to perform a range of non-traditional masculine activities, for example, drama and music.

This dimension of productive pedagogies is crucial in terms of improving the educational, academic and social outcomes of underachieving boys. The research evidence collected during this project indicates that anti-learning cultures amongst boys are often supported by homophobic and anti-female sentiments. For example, a number of boys suggested to us that they or other boys would not want to work hard or to appear to like school, and especially subjects such as the humanities or English, in case they were to be perceived to be gay or called a girl. In addition, many acts of misbehaviour in classrooms and playgrounds and sexual harassment by boys of girls and other boys involved boys seeking to demonstrate their heterosexuality and manliness. Those classrooms where difference was valued enabled boys, and girls, to act outside of what is often considered as 'normal' gendered behaviours in ways which had positive effects for them and others in their classrooms.

- **The impact and effect of masculinity or specific gender concepts**

Subject choice, participation in class and attitudes to academic performance were often circumscribed by what boys considered to be desirable masculine behaviours. This phenomenon worked across SES categories, but policies and the culture in middle class schools could ameliorate such effects. There was a way in which boys' conception of what it is to be a boy circumscribes their subject choices, perhaps more so than conceptions of what it is to be a girl circumscribes girls' subject choices. Evidence from many of the Case Study Schools indicated that acceptable masculine behaviours were a central factor in boys' selections of subjects.

The whole idea of being 'cool' also had particular gender effects that were linked to exhibiting desirable ways of being a boy or a girl. This social dynamic of gender was tied to gaining a particular status and position at the top of the social ladder. This in turn had consequences for all students in terms of their experiences of schooling. While this led to the 'cool' students having a particular kind of power base and engaging in harassing behaviours directed at the 'nerds', the research revealed a more nuanced analysis of the social dynamic operating within

peer groups. Some students were able to negotiate being 'cool', while maintaining a commitment to achieving well at school. The ability to do this related to the kinds of activities that they engaged in at school such as sport, as well as to their social skills in terms of relating to their peers. The culture of the school was also significant here, as probably was the SES location of the student body.

- **The need for professional development**

The research also points to the need for the provision of professional development forums for teachers, which would entail teachers engaging with good accounts of the influences impacting on the educational outcomes of both boys and girls. This would involve ensuring that teachers are provided with the requisite knowledges about the impact of gender concepts on boys' and girls' educational participation, engagement and outcomes. Across Case Study Schools there were staff who tended to draw on very specific knowledges about gender and boys' education to advocate the kinds of approaches taken up in the school to address the educational needs of boys. This knowledge was often based on 'gut feelings' and common sense understandings about boys. It is important for valid research knowledge to be made available to and accessed by schools, as they reflect on how best to address the educational needs of both boys and girls. Effective whole school reform leading to improved educational and social outcomes for boys and girls must begin with the reform of pedagogies and attempt to spread good pedagogies throughout the school.

The research found that the development of a teacher professional learning community, which in a collaborative fashion focuses on enhancing student learning, is vital to the spread of good pedagogies across a school. The development of such a professional learning community is linked to creating a school culture and structure that enhance the spread of good pedagogies and critical reflection on practice in light of informed research and knowledge of educational policy. This leads to the alignment of high quality curriculum with pedagogies and assessment practices in classrooms. This was found to be the case in a number of the Case Study Schools in this research project and to be effective.

The professional development requirements are to build individual teacher capacity, as well as school organisational capacity. The former is important, because as with much other research, this project has confirmed the overwhelming significance of individual teachers in addressing effectively the educational needs of all students. School organisational capacity building would see professional development geared to considerations of issues within specific schools and the implementation and evaluation of strategies established to address these issues. Schools need to become learning organisations.

- **Moving beyond a narrow focus on boys' educational strategies to a broader focus on pedagogies and critical reflective practice.**

The research has also demonstrated the need to combine such research-based knowledges with productive pedagogies. This is imperative. Many of the Case Study Schools tended to focus on the implementation of particular strategies to address the educational needs of boys without the requisite critical reflection on the nature of the pedagogies operating and their potential effects.

For example, gender based classes or single sex approaches to schooling do not necessarily lead to enhanced educational outcomes for boys. There is a lot of research now to confirm that structural change in and of itself does not necessarily affect classroom practices. What matters more is the quality of the classroom practices. There is also the danger that certain gender stereotypes or beliefs about boys' or girls' behaviour can be reinforced, as can be the view that girls and boys are homogeneous groups. Hence, the perceived similarities amongst boys as a group and amongst girls as a group are often what drive the curriculum and the pedagogies.

Schools through their learning communities need to be able to evaluate the strategies they put in place to address gender-based issues, including single-sex classes. There needs to be a culture of criticality and openness within schools with the capacity to jettison strategies that do not work.

- **The need for systemic *and* school based gender policies**

The research has indicated that, possibly apart from New South Wales, formal systemic policy in respect of gender no longer has much salience. It seems that the last national statement from the Ministerial Council, *Gender Equity: A Framework for Australian Schools* (1997) has not impacted upon systems or schools in any substantial manner. It certainly has had less impact than its precursor, *The National Policy for the Education of Girls in Australian Schools* (1987). While *The National Policy* had reporting frameworks and other accountabilities and implementation considerations built in, the same was not the case with *Gender Equity*. Some teachers and principals argued that *Gender Equity* was also not a school and teacher friendly document. Thus, in respect of gender issues, schools appear to be operating in a thinned out policy environment. This often means schools are seeking to implement strategies around boys' education without informed systemic policy and support.

The research shows that it could be time for a reconsideration of gender policy at national, state and school levels. It was very clear from the research that teachers and schools are concerned to address the educational needs of boys (and girls). They were also calling out for help in terms of policy and support. It appears that it is a good time to move beyond the acrimony that has characterised much of the debate about boys' education. The new gender policy would need to deal with what gender equity might mean in schools today, possibly complemented by statements about boys and girls. The *National Action Plan* (1993) might provide a design model for an accompanying document that offered questions for schools and teachers to consider when developing their own policies and strategies. It seemed apparent from the research that schools also needed to develop their own gender equity policies, as part of their own strategies and professional development. The need for individual school policies reflects the fact that while all schools have much in common, each school also has its own idiosyncrasies – what has been called the 'thisness' of any given school. Professional understandings need to mediate policy borrowings from one school to another.

Some of the most effective schools in the research were those that had a strong commitment to both girls and boys. This usually meant that there had been a thoughtfully developed gender policy within the context of a professional development community. Such a policy usually was framed up within a commitment to gender equity that treated both the education of girls and

boys as important. It avoided treating the education of boys as a competition between girls and boys: that is it avoided a competing victim syndrome. However, it recognised that there were issues particular to boys.

Thoughtful well researched changes are the most long lasting and effective; that issues of difference amongst boys and girls as well as between girls require complex responses to issues of boys' education; that a focus of pedagogical and assessment reforms are crucial to improving the academic and social outcomes of boys *and* girls; and that a whole school policy taking these findings into account ensures that meaningful and widespread change within a 'win-win' context may occur.

- **The need for longitudinal data collection regarding differential gender-based subject choices, and academic and social performance at system and school levels**

The research emphasises the usefulness of a 'which boys?/which girls?' stance to addressing the educational needs of both boys and girls. Such an approach is necessary to overcoming those that treat all boys and all girls as homogeneous in relation to their educational needs. Systematic longitudinal data collection is necessary to developing relevant and effective policies and strategies over time. The same is the case for individual schools. This is necessary to create a situation of policy learning. The data also need to be disaggregated to present the complexity of the picture. Such disaggregation is central to the adoption of a 'which girls?/which boys?' approach. While schools are now replete with data, systematic longitudinal data sets do not appear to be common. Schools often do not seem to have the capacity to disaggregate and analyse these data in ways which would be propitious for the development of effective strategies to address the educational needs of both boys and girls. Analysis and discussion of such data is a central element of an effective teacher professional learning community. Such data collection and analysis at both system and school levels need to be linked to policy at both levels.

Strategies

This research is in support of moving beyond a 'tips for teachers' approach or model of educational reform in relation to addressing the educational needs of boys. What is required is the bringing together of sophisticated research-based knowledge - about the ways gender issues affect schooling for both boys and girls - with deep knowledge of the best pedagogical practices and most effective whole school reform strategies. While strategies such as peer support and mentoring initiatives - as well as cross-age tutoring and 'buddy' reading programs - have the potential to lead to improved educational outcomes for both boys and girls, these strategies need to be developed within the context of a professional learning community in the school. Such a community needs to be committed to a focus on pedagogy as the linchpin to educational reform, upon critical reflective practice, enhancing specific teacher knowledge about gender concepts and subject specific curriculum, and the development of school based gender equity policies. Whole school culture and school level policies can also contribute to ameliorating the negative effects of peer group

influences, as can pastoral care and other curricula dealings with the gender issues and their effects.

Final Words

Overall, the research report stresses the need for a focus in schools on productive pedagogies in an attempt to address the educational and social needs of both boys and girls. The quality of teacher-student relationships is a very important adjunct to the quality of the pedagogies and their alignment with assessment practices and curriculum purposes. Furthermore, the research shows how school culture can work to militate against some of the negative effects of peer groups within schools and how SES is an important mediating factor here. Specific curricula concerns around these issues can also have positive effects. School leadership is also important for emphasising productive pedagogies, aligning curriculum, pedagogies and assessment and creating a supportive school culture and structure (see Lingard et al, 2003).

While the research revealed that boys were experiencing and creating certain problems at school, particularly with regards to the influence of the peer group, bullying and anti-school attitudes, there were dimensions to their behaviour which cannot be reduced to some innate capacity for being a certain type of boy. The way forward for schools is to create professional learning communities for staff which are committed to the provision of enhancing teacher threshold knowledges and broader understandings about the impact and effects of gender concepts, family, school and community environment, peer culture, student-teacher relationships on both boys' and girls' attitudes, expectations and engagement with schooling. These threshold knowledges then need to underpin productive pedagogies and their alignment with demanding curriculum and assessment practices. System and school policies about gender equity would appear to be necessary at this particular policy moment in education. Such policies would help to counter unhelpful representations of the issues which often precipitate conflict and one-dimensional solutions, rather than contributing to enhanced professional understandings and practices.

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Appendix One: Description of the Case Study Schools

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|-------------------|---|---|
| Case Study A | <ul style="list-style-type: none"> ▪ NSW Government Rural High School ▪ Co-educational ▪ Low to middle socio-economic status ▪ Predominantly Anglo-Saxon-Celtic population ▪ School population of approximately 350 students | <ul style="list-style-type: none"> ▪ School has commenced an investigation into boys' education ▪ The instigation of a boys' education program is set as a school priority for 2001 ▪ The Boys' Education Management Plan is based on mentoring and the concept of 'success stories' to provide positive role models for boys ▪ A Boys' Education coordinator released 1 day a week to coordinate and present boys' education programs ▪ An ISTB [special behaviour modification teacher] is employed for 3 days a week ▪ Individual Education plans have been developed for targeted students ▪ Whole School Literacy programs are in place supported by the Support Teacher Learning and Literacy team ▪ Tracking and managing student behaviour by the Learning Support Team and Executive. ▪ A wilderness experience program is in place targeting boys ▪ The school has several generic programs designed to make the curriculum more relevant and accessible to both girls and boys. These include VET, Life Skills and School to Work programs |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|--------------|--|--|
| | | <ul style="list-style-type: none"> ▪ The school gives high status to boys who achieved in academic and cultural pursuits ▪ Professional development is provided for all staff on boys' education ▪ Introduction of workshops for parents/carers on boys' education ▪ Introduction of a boys program from WA which explored changing roles; feelings; expressing feelings; models of behaviour; conflict resolution |
| Case Study B | <ul style="list-style-type: none"> ▪ Western Australian government Metropolitan Junior High School ▪ Co-educational ▪ High socio-economic status ▪ Predominantly Anglo-Saxon population ▪ School has a population of approximately 350 students | <ul style="list-style-type: none"> ▪ Boys' education has a very high profile in school ▪ Activities based curriculum introduced with a focus on fitness across the curriculum ▪ There is a focus on middle schooling ▪ School culture stresses the importance of developing positive student-teacher relationships ▪ It is school policy that teachers must not stand up and talk at the students for more than 15 minutes ▪ Focus on structured activities (fill in blanks and tick a box) for boys ▪ Flat discipline structure introduced with a focus on self-responsibility |
| Case Study C | <ul style="list-style-type: none"> ▪ Victorian Catholic Metropolitan High School ▪ Single Sex (Boys) ▪ Low to middle socio-economic | <ul style="list-style-type: none"> ▪ The principal described the school as having a prophetic and imaginative approach to boys' education. |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|--------------|---|---|
| | <p>status</p> <ul style="list-style-type: none"> ▪ Large mix of different ethnic groups ▪ School population of approximately 750 students | <ul style="list-style-type: none"> ▪ Professional development programs are run for teachers to address cultures of violence ▪ An evening was run for parents, teachers, students and academics to look at the development of a whole school approach to change in boys' education |
| Case Study D | <ul style="list-style-type: none"> ▪ NSW Catholic outer metropolitan high school ▪ Co-educational ▪ Students from mixed socio-economic groupings ▪ Mix of different ethnic groups | <ul style="list-style-type: none"> ▪ Boys' education has high profile in school ▪ Principal has a specific interests in boys' education and his commitment ensures an ongoing focus on the educational outcomes for boys ▪ School has a gender equity policy which acknowledges gender shaped by cultural background, media influences, socio-economic status and societal beliefs. ▪ Pastoral Care Coordinator has specific responsibility for gender and reports to the school's Gender equity Committee ▪ Boys' education identified as a consideration in the school literacy plan, the new HSC, review of assessment policy and schedules and an evaluation of the compulsory sport program ▪ Professional development days on boys' education ▪ Plan developed for boys' education ▪ Surveys of parents and teachers to identify areas of concern in boys' education ▪ Posters in school targeting |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|--------------|--|---|
| | | boys <ul style="list-style-type: none"> ▪ Boys actively encouraged into non-traditional subjects |
| Case Study E | <ul style="list-style-type: none"> ▪ Qld government inner city primary school ▪ Co-educational ▪ Students from mixed SES groupings ▪ Predominantly Anglo-Saxon population ▪ A New Basics trial school ▪ No differences in literacy scores between boys and girls ▪ High literacy scores on national and state tests for both boys and girls ▪ Student population capped at 150 students | <ul style="list-style-type: none"> ▪ The school focuses strongly on pedagogy and the creation of a safe environment for all students ▪ Multi-age classes ▪ Co-operative learning ▪ Curriculum foci – environmental education and philosophy ▪ Collaborative decision-making in school ▪ Strong focus on professional development for teachers ▪ Children are taught how to resolve conflict by talking through issues ▪ There are no programs in place specifically for boys |
| Case Study F | <ul style="list-style-type: none"> ▪ Qld government metropolitan primary school ▪ Co-educational ▪ Low socio-economic status ▪ There are approximately 720 students in the school ▪ 6% of the school population is Aboriginal or Torres Strait Islander ▪ 5% are from non-Anglo or non-Indigenous backgrounds ▪ 35 students have an Intellectual impairment Level 5 or 6 ▪ 110 students have significant learning difficulties | <ul style="list-style-type: none"> ▪ The school focuses on productive pedagogies ▪ Has a well developed professional learning community ▪ The 2000 Annual Operational Plan identifies the need for the implementation of effective teaching programs to improve the performance of boys and Indigenous students with low levels of attainment ▪ School has a very successful literacy program in place which has shown a significant decline in the number of boys in Phase A and B and a marked increase in the number of boys in Phase C on state wide literacy tests |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|--------------|--|--|
| | | <ul style="list-style-type: none"> ▪ Part of an educational alliance with School K |
| Case Study G | <ul style="list-style-type: none"> ▪ Qld catholic secondary school ▪ Boys' only ▪ Low - mid SES ▪ Strong emphasis on pastoral care ▪ Stated commitment to social justice issues ▪ Catholic philosophy underpins programs at school | <ul style="list-style-type: none"> ▪ Boys' Education Committee organises such things as 'dads and lads' nights. ▪ High achieving student group to promote boys' academic achievement ▪ Life skills program for boys with social, academic and behavioural difficulties (SLIP) ▪ Incorporates 'Rock and water' into life skills |
| Case Study H | <ul style="list-style-type: none"> ▪ NSW government 7-12 high school ▪ Co-educational ▪ 350 students ▪ very few Indigenous/NESB students ▪ small rural town ▪ mixed SES ▪ employment in rural industries and a large factory | <ul style="list-style-type: none"> ▪ Life Skills program targeting students with learning difficulties ▪ Mentoring program involving identified students at risk being paired with teachers ▪ Literacy programs targeting boys across the school ▪ Single sex classes in Years 7-9 for Maths, English and PE |
| Case Study I | <ul style="list-style-type: none"> ▪ WA government primary School ▪ Co-Educational ▪ Low to middle SES ▪ Predominantly Anglo-Celtic Population ▪ School Population of approximately 1050 students ▪ Creation of sub-schools (Pre-Primary/ Yr 1; Yrs 2,3 & 4; Yrs 5,6 & 7) with Deputy Principals taking leadership roles in each ▪ Appointment of Student Services Manager ▪ Strong Emphasis on pastoral care of staff and students ▪ Time allocation of 1 hr/week (within school hrs) for all Year | <ul style="list-style-type: none"> ▪ Gender based classes in Years 6 & 7 ▪ Managing Student Behaviour policy which has reduced student suspension rate from 40-3 in 2001 ▪ Emphasis on outside of school PD on boys' education ▪ Buddy Reading program |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|--------------|---|---|
| | <p>level teachers to meet to discuss their pedagogy</p> | |
| Case Study J | <ul style="list-style-type: none"> ▪ Qld government secondary school ▪ Located in a large provincial city ▪ Traditionally low SES clientele, but now through program reforms also attracting more middle class clientele ▪ Small Indigenous student population ▪ Approximately 1400 students ▪ Approximately 140 teachers | <ul style="list-style-type: none"> ▪ Strong English Department which has built a teacher professional learning community ▪ English staff have been through professional development on the construction of masculinity and subject English ▪ Year 11 English program runs a Unit on marginalised Australians, including a focus on gay sexualities ▪ English Department has involved university researchers in evaluation of school literacy programs and pedagogies and implemented change on this basis ▪ School welfare policy attempting to develop student self-discipline, community spirit, and whole school responsibility for behaviour ▪ A strong culture of care across the school ▪ Some data collection in the social science subjects in terms of gender and used for professional reflection ▪ School of soccer excellence ▪ Jobs Pathways programs ▪ Outstanding sporting facilities ▪ Reformist principal |
| Case Study K | <ul style="list-style-type: none"> ▪ Qld government metropolitan primary school ▪ Co-educational ▪ Low socio-economic status ▪ Approximately 700 students in the school | <ul style="list-style-type: none"> ▪ Whole school literacy program ▪ Which boys? Which Girls? Committee ▪ Engaged in school based research |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|--------------|---|--|
| | <ul style="list-style-type: none"> ▪ Multiethnic student population | <ul style="list-style-type: none"> ▪ Strong teacher professional learning community ▪ Part of an educational alliance with School F ▪ Significantly improved literacy scores across the school. |
| Case Study L | <ul style="list-style-type: none"> ▪ VIC government K-6 ▪ Co-educational ▪ Inner city ▪ 180 students ▪ low to middle SES ▪ multicultural student population ▪ multi-age classes | <ul style="list-style-type: none"> ▪ no specific gender based programs ▪ particular emphasis on PD for staff and on creating professional learning teacher community ▪ emphasis on engendering respect for teachers as professionals, democratising classrooms, collaborative learning and relevant curriculum ▪ focus on environmental programs |
| Case Study M | <ul style="list-style-type: none"> ▪ NSW government K-12 ▪ Co-educational ▪ 230 students ▪ very few Indigenous/NESB students ▪ small rural town ▪ mixed SES ▪ service town for farming community | <ul style="list-style-type: none"> ▪ Reading Recovery program for Year 1 students (90% boys) ▪ Vertical English classes (Years 3-8) ▪ Professional Development programs for staff related to mediation and conflict resolution |
| Case Study N | <ul style="list-style-type: none"> ▪ WA Catholic metropolitan high school ▪ Co-educational, ▪ Low to middle SES ▪ 780 students ▪ Multicultural population including Portuguese, Italian, Croatian, Serbian and Indonesian students | <ul style="list-style-type: none"> ▪ No specific programs targeting boys only ▪ Newly appointed deputy has an interest in gender issues/boys' education ▪ School Psychologist actively involved in implementing a new bullying program ▪ Strong pastoral care policy |
| Case Study O | <ul style="list-style-type: none"> ▪ Government primary school ▪ Co-educational ▪ High Indigenous population | <ul style="list-style-type: none"> ▪ Strong focus on Indigenous issues in education ▪ Strong support network for |

| Case Study | Key Characteristics of School | Summary of Initiatives in Boys' Education |
|------------|---|--|
| | (55 Indigenous students out of a population of 150) <ul style="list-style-type: none"> ▪ Regional centre | students <ul style="list-style-type: none"> ▪ Peace Builders Program ▪ Focus on improving pedagogy |

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| Case Study P | <ul style="list-style-type: none"> • NSW government school • South-western city high school • Co-educational • Approx. 600 students • Low SES • 42 cultural groups represented • small population of ATSI, with an Aboriginal Education Assistant • predominant population of Pacific Islanders, with a Pacific Islander Community Liaison Officer (2 days per week) • attendance an issue, with a school appointed Community Liaison Officer (3 days per week) • School Certificate and HSC performances below state average • The Support Unit offers a specialised curriculum and consists of one IO class, and three combined IO/IM classes | <ul style="list-style-type: none"> • Strong focus on professional development and professional learning community • School won the Australian College of Education's 2001 district Reddall award for professional development • School won the NSW Director General's 2001 award for professional development • Strong focus on welfare and behaviour management (especially strategies to halve suspensions and improve attendance) • Strong focus on improving academic performance, productive pedagogy, and teacher mentors • Some single-sex classes and single sex roll-call (extended once a week for workshops on gender specific welfare issues) |
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| | <ul style="list-style-type: none"> • New principal, with a strength in school focussed training and development | <ul style="list-style-type: none"> • Boys' Own project, combined with a targeted grant from the Department's Gender Equity Unit • New student reward system |
| Case Study Q | <ul style="list-style-type: none"> ▪ NSW government school ▪ Northern suburbs city high school ▪ Single-sex boys' school ▪ Approx. 640 students ▪ Mixed SES ▪ Predominantly Anglo, with approx 12 different cultural groups? ▪ Community Liaison? ▪ School Certificate and HSC performances below, within, and above state average ▪ Former principal well know in the field boys' education ▪ New principal, with a strength in school focussed training and development ▪ New School Management Plan with broadened contribution by staff, students and parents | <ul style="list-style-type: none"> ▪ Strong focus on boys' education (eg. school research on literacy linked to University of Newcastle boys' literacy project; fathers' program) ▪ Strong focus on welfare system, following a school initiated welfare review (includes operation of the withdrawal room) ▪ Strong focus on behaviour management (especially strategies to reduce suspensions, improve conduct) ▪ Strong focus on anti-bullying, following the new Principal's appointment of an anti-bullying Taskforce ▪ Strong focus on attendance , following the new Principal's Attendance Review ▪ 55 participants in the Australian School English Competition (7 certificates of Distinction, 11 Credit, 37 for participation) ▪ new teacher committee working on school focussed training and development program (on raising boys' |

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| | | <p>achievement)</p> <ul style="list-style-type: none"> ▪ school noted for wide variety of sporting and cultural activities, particularly Visual Arts ▪ History Head Teacher awarded a national 'Excellence in Teaching' Award |
| Case Study R | <ul style="list-style-type: none"> ▪ Queensland government secondary school, co-educational, located in a mid-size provincial city ▪ The school population is approximately 1000 with a decline since the early nineties, matched by an increase in the numbers of students in Years 11 and 12 by nearby Catholic secondary school ▪ The community served by the school has higher than average levels of unemployment and low SES status ▪ In 2000 48 % of Year 12 students were in receipt of Youth Allowance ▪ The school was reconstituted as a coeducational high school in 1974 by amalgamation of separate boys' and girls ' high schools which were established in 1881. | <ul style="list-style-type: none"> ▪ In 1997 the School began a 'What's working with our Boys?' project under the directorship of a female Deputy principal at the school ▪ This was developed in response to poor retention rates for boys to Year 12 and poor average academic performance amongst boys and decline in the number of boys in the school seeking formal leadership positions in Year 12 ▪ The project involved a range of strategies, including: Boys and Books, a Big Brother mentoring program, mentoring boys and leadership, on-going data collection and analysis, surveying students needs etc ▪ With the promotion of the sponsor of the program to another school as principal, the project waned, with a new emergent focus on competency based approaches with a subsequent move to a |

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| | | <p>focus on development a teacher professional learning community focussed upon productive pedagogies and a school-wide pedagogical vision, aligned with outcomes-based approach to assessment</p> <ul style="list-style-type: none"> ▪ Broad professional agreement within the school that the new approach more successful than the early specific boys' focus, but some expression of the view amongst teachers of the need to amalgamate the two approaches. |
| <p>Case Study S</p> | <ul style="list-style-type: none"> ▪ Non-government, all boys' secondary school with a history back to the 1860s ▪ The school's student population is approx 1200 ▪ The school has a long tradition of academic excellence ▪ The student population is largely middle class, drawing its student body from across a large city ▪ Since the early 1990s increased numbers of Asian-Australian boys have attended the school | <ul style="list-style-type: none"> ▪ The school has an academic curriculum throughout the school and a philosophy of providing a broad liberal education to all boys ▪ The school's philosophy also emphasises balance across the academic curriculum, extra-curricular activities, and pastoral care ▪ In Years 11 and 12 boys are not allowed to choose an all Maths/Science suite of subjects, they are 'forced' to choose across maths/sciences and social sciences/humanities divide, ensuring they receive a broad liberal education |

| | | |
|--|--|---|
| | | <ul style="list-style-type: none">▪ Pastoral care is formally structured into the school's curriculum and organisational structure with Year Level Coordinators and a Pastoral care committee▪ A specific attempt has been made to broaden the range of extra-curricular activities provided and to value them equally▪ Good academic performance is highly valued within the school's culture and amongst the school's clientele |
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Appendix 2: Psychometric properties of the survey and incidental findings

Analysis of the survey instrument

In total, 641 secondary students completed the questionnaire. The sample was comprised of 471 boys and 170 girls. The following is a brief review of the psychometric properties of the instrument based on the data from the total sample. The quantitative aspects of the instrument are primarily reported here.

The sample size is adequate for conducting a range of investigations, including exploratory factor analysis to assess construct validity, correlation, discriminant analysis, and simple comparison of means. The uneven sampling of boys and girls is a potential difficulty for analysis, so special attention has been paid to the issue of heterogeneity of samples. Separate analyses have been conducted of instrument subscales to identify any artefacts arising from the differential response rate, and potential differences in response patterns are noted. Whilst there are indications of different latent structures of boys' and girls' response patterns for a number of the instrument sub-scales (School Environment sub-scale, Teacher sub-scale, and the Peer sub-scale), these differences appear to be minimal and are suggestive of higher order factor structure being revealed in some scales, rather than fundamentally different response patterns between the genders. Moreover, discriminant function analysis reveals that the constituent items of these scales poorly discriminate between boys and girls. Internal consistency of scales is evaluated throughout with Cronbach's alpha unless otherwise indicated.

Psychometric properties of the scales revisited

School Environment Sub-scale

School environment seems to be a multidimensional scale. Two and three factor Maximum Likelihood (ML) factor analysis demonstrates better scale fit than a unidimensional solution (Table 1). The Maximum Likelihood χ^2 represents a test of model goodness of fit. Significant outcomes represent significant divergence of the data from the model or in other words poor model fit. It is clear from Table 1 that a multidimensional structure is required to capture students' responses to the School Environment Sub-scale. The two dimensional solution adequately captures the majority of sample variance, but does not well represent items relating to the school's focus on academic pursuits. Therefore a three factor solution has been adopted for the main analysis. To investigate the potential heterogeneity of the sample, separate factor analyses were conducted for both boys' and girls' responses. As might be inferred from Table 1, there was no substantive difference in the factor structures of boys' and girls' responses to the school environment scale.

Table 1: Maximum Likelihood statistics for Factor analysis with 1 to 3 factors

| | Unidimensional Solution | Two Factor solution | Three Factor solution |
|---------------------------|---------------------------------|-------------------------------|-------------------------------|
| χ^2_{overall} | $\chi^2(44)= 115.63$ p <.001 | $\chi^2(34)= 46.54$ p >.05 | $\chi^2(25)= 18.02$ p >.05 |
| χ^2_{boys} | $\chi^2(44)= 92.30$ p <.001 | $\chi^2(34)= 47.09$ p >.05 | $\chi^2(25)= 19.75$ p >.05 |
| χ^2_{girls} | $\chi^2(44)= 138.16$ p <.001 | $\chi^2(34)= 44.87$ p >.05 | $\chi^2(25)= 24.59$ p >.05 |

Table 2: Latent structure of the School Environment Scale.

| | Factor | | |
|--|---------|---------|----------|
| | Culture | Ingroup | Academic |
| My school has more drama than other activities | .852 | | |
| School is sports rather than arts oriented | .825 | | |
| Pressured to play sport | .672 | | |
| My school has more sporting activities than other activities | | | |
| Girls get special treatment | | .733 | |
| Need to belong to an ingroup to have friends | | .704 | |
| Ingroup pressure | | .564 | |
| Boys get special treatment | | .354 | |
| Am encouraged to accept individual differences | | | .693 |
| Rewarded for academic excellence | | | .637 |
| Students rewarded for academic excellence rather than sports | | | .581 |

The three factors derived from analysis of the sub-scale items are a Culture component which is measured by 4 items relating to the school's focus on sporting or other cultural activities ($\alpha = .70$ after excluding the last item). A girls' issues scale that relates to the perception that girls are treated specially in the school, the need to belong to an ingroup, and the extent to which ingroups influence behaviour ($\alpha = .44$). The final factor relates to a school culture that focuses on academic excellence and tolerates individual differences ($\alpha = .38$). Mean scores on the first

and last of these factors suggest that in general schools in the sample are seen as having a greater focus on academic than sporting or other cultural pursuits ($M= 3.72$, and $M=2.76$ respectively $t(632)=19.47$, $p < .001$). To examine the issue of the perception of differential treatment of boys and girls, a direct comparison of students' responses to the two items relating to special treatment was conducted. Students typically disagreed with the proposition that either gender received special treatment (M_{girls} get special treatment = 2.96 , and M_{boys} get special treatment = 2.90 respectively $t(492)=.594$, n.s.).

To further investigate the potential heterogeneity of the two sub-samples, discriminant function analysis was conducted to investigate the ability of scale items to discriminate between boys and girls. Whilst a significant discriminant function could be derived from the scale items which significantly discriminated between the genders, examination of the Wilk's lambda coefficient, and classification table results indicated that the discrimination was marginal and unlikely to be of any real value for further analysis ($\lambda = .88$, $\chi^2(11)=57.87$, $p < .001$). Only items 1, 4, 7, 10, and 11 discriminate between male and female respondents, and in each case the lambda coefficient is undesirably high. In general, girls report being encouraged to accept individual differences more than boys ($M= 4.25$, and $M=4.10$ respectively). Discriminant Function Analysis also tends to suggest that boys are more likely to feel peer group pressure to perform at sports than girls. It should be noted, however, that the mean for both groups falls between agreement and disagreement. There is no strong difference in position taken by either group.

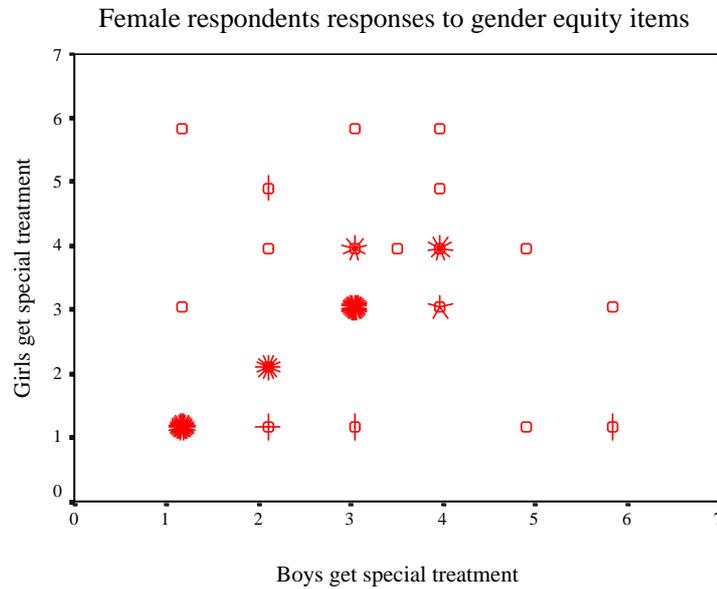
Table 3: Discriminant Function Analysis of items by gender.

| Item | Wilks' λ | Girls | Boys |
|--|------------------|-------------|-------------|
| I am encouraged to accept individual differences * | .990 | 4.25 | 4.10 |
| My school has more sporting activities than other activities | .999 | 3.52 | 4.68 |
| My school has more drama than other activities | 1.000 | 2.90 | 2.71 |
| My school has more debating activities than other activities* | .986 | 2.95 | 2.50 |
| My school has more art activities than other activities | 1.000 | 3.00 | 2.87 |
| My school has more emphasis on academic than other activities. | 1.000 | 3.59 | 3.56 |
| I feel pressured to play sport even though I don't want to. | .985 | 3.34 | 3.55 |
| Students rewarded for academic excellence rather than sports | .993 | 3.72 | 3.06 |
| Need to belong to an ingroup to have friends | .999 | 3.40 | 3.55 |
| Girls get special treatment *** | .963 | 2.54 | 3.19 |
| Boys get special treatment *** | .969 | 2.53 | 3.19 |

NB: * $p < .05$, *** $p < .001$

Whilst examination of the means suggest boys are more likely to assert that one or other gender group is treated specially (refer to table 3), there is no clear correlation amongst boys between the two special treatment items ($r = -.047$). This is quite distinct from the response patterns amongst girls, where there is a moderate correlation between the two items ($r = .63$, $p < .01$). This is best explained in terms of the differences in heterogeneity of the response patterns of the two groups.

a)



b)

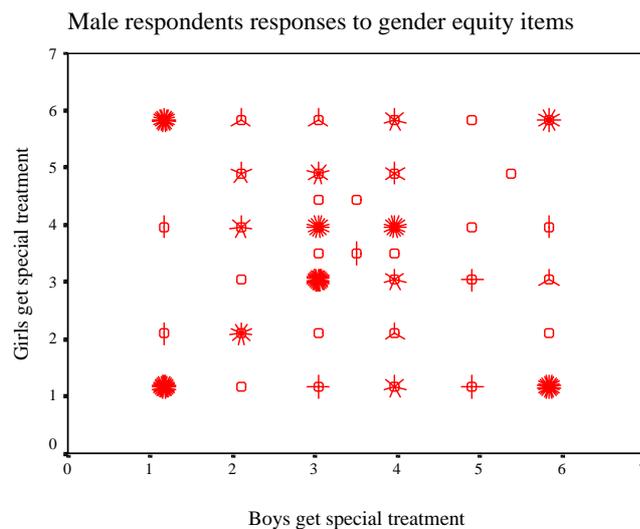


Figure 1: Scatterplot of belief in special treatment split by gender.

Examination of the means and scatter diagrams reveals that typically girls do not believe either boys or girls receive special treatment (refer to Figure 1a). Boys on the other-hand tend to have a more heterogeneous response pattern. There seem to be five contradictory belief clusters revealed in a scatterplot of boys' responses (refer to Figure 1b).

It is apparent from the above Figure that boys are not a homogeneous sample in regard to their beliefs. They do not uniformly believe that they are treated better or worse than their female peers. Particular subsets of boys hold views that girls receive special treatment, whereas others believe the opposite is true.

Teachers' scale

Exploratory factor analysis suggests that the teachers' scale is also multidimensional. A four factor solution is interpretable and broadly replicates the structure of the pilot instrument ($\chi^2(32)=46.56, p<.05$). Whilst the four factors identified in the pilot study are evident for the sample as a whole, a three factor solution has better interpretability and maintains the sense of the initial investigation (refer to Table 4). For the overall 3 factor solution, the first factor, namely gender expectations, consists of five items, and easily achieves acceptable scale reliability ($\alpha = .79$), pro teacher orientation did not achieve acceptable scale reliability ($\alpha = .54$, removal of the last item would improve the scale marginally), alienation (3 items, $\alpha = .42$). The last scale is probably best construed as consisting of 2 items, and treating the issue of girls' noisiness separately. Alternatively, a bi-dimensional instrument can be devised which assesses gender equity issues ($\alpha = .73$), and desire to impress the teacher ($\alpha = .58$).

Table 4: Three factor orthogonal principal components solution for teacher scale.

| | Component | | |
|---|-----------|---------|------------|
| | Gender | Impress | Alienation |
| Spend more time with girls | .841 | | |
| Favour girls | .835 | | |
| Teachers more likely to punish boys | .722 | | |
| Teachers expect boys to study harder than girls | .665 | | |
| Favour quiet students | .440 | | .435 |
| Want to impress | | .719 | |
| I like my teachers | | .695 | |
| Treated like adult | | .595 | |
| I prefer male teachers | | .481 | |
| I prefer female teachers | | .386 | |
| Don't care what teachers think of me | | | .727 |
| Girls less noisy | | | .669 |
| I switch off | .326 | | .483 |

However, there is some evidence of gender differences in response patterns. Whilst a 4 factor structure best describes the responses of female respondents ($\chi^2(32)=46.56, p<.05$, refer to Table 5), males' response patterns are better captured by a 5 factor solution ($\chi^2(23)=29.04, p>.05$, refer to Table 6). Although this may suggest the need for a separate analysis for boys and girls and the treatment of these subsamples as heterogeneous, the similarity of structure

of the two solutions, suggests rather that these may represent nested models. However, a difference χ^2 shows the difference between the models to be non-significant ($\chi^2(9)=17.52$, $p>.05$). This being so the common 4 factor solution has been adopted for initial analysis.

Table 5: Factor structure of secondary girls' responses to the teacher scale

| | Factor | | | |
|---|---------------------|------------|-------------|-------|
| | Gender expectations | Alienation | Pro-teacher | Adult |
| Favour girls | .806 | | | |
| Spend more time with girls | .780 | | | |
| Teachers expect boys to study harder than girls | .601 | | | |
| Teachers more likely to punish boys | .555 | .383 | | |
| Don't care what teachers think of me | | .616 | | |
| I switch off | | .534 | | |
| Favour quiet students | .382 | .530 | | |
| Girls less noisy | | .384 | | |
| I like my teachers | | | .599 | |
| I prefer female teachers | | | .592 | |
| I prefer male teachers | | | .553 | |
| Want to impress | | | .498 | |
| Treated like adult | | | | .986 |

Further argument for not pursuing the separate analysis of male and female respondents is the failure of Discriminant Analysis to usefully discriminate between the genders on the items of the teacher scale ($\lambda = .92$, $\chi^2(12)=37.80$, $p<.05$). Examination of the classification statistics suggests that the resultant discriminant function fails to meet minimum acceptable criteria to correctly classify respondents (67.8% correctly classified, falling to 66.2% on cross-validation).

Table 6: Factor structure of secondary boys' responses to the teacher scale

| | Factor | | | | |
|---|----------------------------|--------------------------|-------------------|--------|------------|
| | Female Gender Expectations | Male Gender Expectations | Desire to Impress | Liking | Alienation |
| Favour girls | .946 | | | | |
| Spend more time with girls | .653 | .452 | | | |
| Teachers more likely to punish boys | | .623 | | | |
| Teachers expect boys to study harder than girls | | .600 | | | |
| I prefer female teachers | | .304 | | | |
| I switch off | | | | | |
| Want to impress | | | .884 | | |
| Treated like adult | | | | .801 | |
| I like my teachers | | | | .397 | |
| I prefer male teachers | | | | | |
| Don't care what teachers think of me | | | | | .587 |
| Girls less noisy | | | | | .420 |
| Favour quiet students | .357 | | | | .359 |

Teaching scale

Exploratory Factor analysis using ML extraction suggests that the teaching scale is also best construed as being multidimensional. Adequate model fit is obtained with 3 factors, but better interpretability is obtained with higher dimensionality. Of course this results in subscales having inadequate length to assess reliability (as it is meaningless to compute reliability scores on two or fewer items). However, if one is willing to treat the scale as a unidimensional index of teaching, the scale is more or less unidimensional, if one excludes the two items relating to relative skill in computing items 14 and 15 from the scale, and the odd item 5 about preferring facts to fiction. The remaining 13 items form a scale with a reliability of .67.

Table 7: Four Factor orthogonal solution for the teaching scale.

| | Factor | | | |
|---|-------------|----------------------|------------|-----------|
| | Preferences | Relevance of English | Disruptive | Computers |
| Like to listen | .697 | | | |
| Teachers explain clearly | .610 | | | |
| Like short exercise/answer questions | .500 | | | |
| Prefer facts to fiction | .417 | | | |
| Reading books discussing them | .416 | | | |
| Loner | .325 | | | |
| English not relevant | | .731 | | |
| English difficult | | .565 | | |
| English for girls | | .552 | | |
| Maths easier less writing | | .366 | | |
| Teachers' explanations differ by gender | | .317 | | |
| Disrupt class for attention | | | .906 | |
| Disrupt class don't understand | | | .677 | |
| Work harder for computers | | | | .703 |
| I know more about computers than my teachers. | | | | .526 |
| Like small groups | | | | |

Boys report English to be significantly less relevant than girls ($F(1,401)=22.39, p<.01$), are more likely to report engagement in disruptive behaviour than girls ($F(1,401)=3.97, p<.05$) and are more likely to value computers in the classroom than girls ($F(1,401)=18.80, p<.001$). There was no significant overall difference in students' preferences for a particular overall teaching style between the genders. Refer to Table 8 for individual mean comparisons.

Table 8: Mean item scores for teacher scale.

| | Gender | |
|--|-------------|-------------|
| | Male | Female |
| I feel best working in small groups | 4.03 | 3.98 |
| I prefer to work alone | 3.23 | 3.27 |
| I like answering questions and doing short exercises in class | 3.30 | 3.36 |
| I like reading books and discussing them in class * ^a | 2.78 | 3.07 |
| I prefer facts rather than fiction | 3.23 | 3.06 |
| I tend to disrupt the class to get attention | 2.73 | 2.54 |
| I tend to disrupt the class when I don't understand. | 3.00 | 2.86 |
| I like listening to teachers in class. | 3.40 | 3.24 |
| My teachers explain things clearly in class | 3.40 | 3.21 |
| My teachers explain things differently to boys and girls. ** | 3.12 | 2.79 |
| Maths is made easier because there is less writing than other subjects.* | 2.59 | 2.28 |
| English is a difficult subject * | 3.37 | 3.01 |
| English is a better subject for girls. *** | 3.32 | 2.75 |
| I don't see the relevance of the subject English ** | 3.06 | 2.68 |
| I would work harder if I could use computers more. *** | 3.71 | 3.19 |
| I know more about computers than my teachers. *** | 3.73 | 3.09 |

a. * p < .05, ** p<.01, *** p<.001

Discriminant Analysis reveals that the teaching scale discriminates between the genders ($\lambda = .879$, $\chi^2(15)=50.74$, $p>.001$). Examination of the classification statistics suggests the items correctly classify 73.9% of respondents. As with the teacher scale, this is largely a reflection of over classification of respondents into the largest group (boys). However, there does appear to be some differences in teaching style preferences between boys and girls (Table 9). The patterns of differences which emerge are essentially the same as those revealed by independent groups t-test of the factors for the scale as a whole, shown in Table 8 above. It is, however, clear from the high values of Wilk's Lambda, in each instance, that the items are not strong discriminators of gender. That is to say, whilst it is possible on the basis of this data to argue for an overall difference between boys and girls on some items of the scale, even for the best of these items (for example, the item relating to relevance of English), the variation within each gender is large.

Table 9: Item analysis of gender differences from the teacher scale of the secondary boys' data.

| | Wilks' Lambda | F | df1 | df2 | Sig. |
|--|---------------|--------|-----|-----|------|
| I feel best working in small groups. | 1.000 | .040 | 1 | 461 | .842 |
| I prefer to work alone. | .994 | 2.726 | 1 | 461 | .099 |
| I like answering questions and doing short exercises in class. | .999 | .403 | 1 | 461 | .526 |
| I like reading books and discussing them in class. | .989 | 5.221 | 1 | 461 | .023 |
| I prefer facts to fiction. | 1.000 | .154 | 1 | 461 | .695 |
| I tend to disrupt class for attention. | .996 | 1.687 | 1 | 461 | .195 |
| I tend to disrupt class if I don't understand. | .997 | 1.527 | 1 | 461 | .217 |
| I like to listen. | .999 | .659 | 1 | 461 | .417 |
| Teachers explain clearly. | .997 | 1.526 | 1 | 461 | .217 |
| Teachers' explanations differ by gender. | .984 | 7.323 | 1 | 461 | .007 |
| Maths is made easier as there is less writing than other subjects. | .987 | 6.258 | 1 | 461 | .013 |
| English is a difficult subject. | .978 | 10.312 | 1 | 461 | .001 |
| English is a better subject for girls. | .959 | 19.756 | 1 | 461 | .000 |
| I don't see the relevance of the subject English. | .966 | 16.319 | 1 | 461 | .000 |
| I would work harder if I could use computers more. | .965 | 16.628 | 1 | 461 | .000 |
| I know more about computers than my teachers | .946 | 26.128 | 1 | 461 | .000 |

Attitude Scale

As was noted in the pilot study, the attitude items do not constitute a scale in the traditional psychometric sense, as the items lack any coherent structure and rather represent a loose set of attitudinal variables which were believed might discriminate between the genders. Overall scale reliability is low ($\alpha = .38$).

Whilst Discriminant Analysis initially suggests the items do indeed discriminate between the genders ($\lambda = .934$, $\chi^2(8)=31.13$, $p<.001$), the result is probably best described as spurious as the classification table reveals that the resultant discriminant function overclassifies respondents as male. Once again the high lambda value indicates that the items as a set and individually poorly discriminate between genders and that the variation between individuals is large

compared to the variation between genders. Response means for each item are shown in Table 10 below.

Table 10: Gender differences in attitudes.

| | Student's Gender | |
|---|------------------|-------------|
| | Male | Female |
| I would prefer single sex classrooms | 1.85 | 1.95 |
| <i>School is a place where I feel safe.</i> * ^a | 3.55 | 3.64 |
| I sometimes feel depressed | 3.46 | 3.72 |
| My attitude is subject dependent. | 4.32 | 4.19 |
| I would like school better if I got more rewards for my efforts. | 4.04 | 3.88 |
| <i>I only need to be serious about yr11 & yr12.</i> ** ^b | 3.22 | 2.70 |
| <i>I always do my homework.</i> *** ^c | 3.01 | 3.55 |
| Capable of doing anything | 4.35 | 4.49 |

a. * $p < .05$

b. ** $p < .01$

c. *** $p < .001$

It is clear from Table 10 that gender differences in attitude to school were apparent for only four items. Girls reported significantly higher agreement with the statement that they felt safe at school ($t(538)=1.97$, $p<.05$). They also had higher mean agreement scores on the homework item ($t(538)=3.62$, $p<.001$), and the statement that they feel capable of doing anything ($t(538)=2.01$, $p<.05$). Note that in each instance here that both boys' and girls' mean scores exceed the mean and thus the result should not be read as indicating that, for example, boys generally feel that they are not safe at school, or not capable. This may indicate that girls feel safer, or it may indicate for example that boys do not consider the issue of safety at school as much as girls.

Boys had significantly higher agreement with the statement that they only needed to be serious about school in Years 11 and 12 ($t(538)=2.65$, $p<.01$). Note that the mean score for boys on this item is above 3.0, whilst the mean response for girls is below 3.0. This is consistent with the notion that boys may be more performance than mastery oriented, whilst the opposite is true of girls. This finding is also consistent with the qualitative data, where many boys suggested they would get serious about school in Years 11 and 12. Many teachers also reflected upon boys overall maturing later than girls.

Bullying scale

The scale can be treated as unidimensional. Scale reliability is adequate without modification ($\alpha = .77$). There is no overall difference between genders on overall concern with bullying ($t(540) = -.947, p > .05$). Differences on individual items are shown in Table 11.

Table 11: Mean differences between boys' and girls' responses on bullying items.

| | Student's Gender | |
|--|------------------|-------------|
| | Male | Female |
| I am bullied because I study hard | 2.33 | 2.41 |
| I am bullied because I am not good at sport | 2.24 | 2.37 |
| I am bullied because I look different | 2.75 | 2.65 |
| I worry more about being bullied by boys | 2.85 | 2.83 |
| <i>I worry more about being bullied by girls. **^a</i> | 2.31 | 2.84 |
| I would study harder if I wasn't bullied | 2.67 | 2.60 |
| <i>I bully other students. *^b</i> | 2.80 | 2.52 |
| Boys & girls disciplined equally for bullying. ** | 2.96 | 3.49 |
| Girls responsible for more bullying | 2.47 | 2.85 |
| I wish my teachers would be tougher with bullies | 3.89 | 4.14 |

a. ** $p < .01$

b. * $p < .05$

Note that the with the exception of the 8th and 10th items all scores reflect disagreement with the bullying statements. The only differences between genders are evident for the four marked items. Girls report being more worried about being bullied by girls ($t(478) = 3.218, p < .01$), and that girls are more responsible for bullying ($t(433) = 2.56, p < .05$). They are also more likely to claim that boys and girls are disciplined equally for bullying ($t(445) = 3.48, p < .01$). Of course this result may reflect some boys' perception of inequity in treatment.

Boys report significantly higher levels of agreement with the statement that they bully other students ($t(526) = 2.17, p < .05$). The mean score, however, indicates that in general boys deny participation in bullying.

Family influence

The family influence scale achieves adequate reliability ($\alpha = .82$). There are no overall gender differences. The only notable difference is that girls are more likely to report that their parents are interested in the arts ($t(522)=2.35, p <.05$). Mean agreement scores are shown in Table 12 below.

| | Student's Gender | |
|--|------------------|-------------|
| | Male | Female |
| My parents are interested in my academic performance | 4.81 | 4.71 |
| My parents are interested in my sports performance | 4.19 | 3.84 |
| <i>My parents interested in my arts performance. *^a</i> | 3.26 | 3.71 |
| My siblings are interested in my performance. | 3.26 | 3.49 |
| My parents say I should do math. | 4.63 | 4.43 |
| My parents say I should do science. | 3.87 | 3.96 |
| My parents say subject help employment. | 4.70 | 4.75 |
| My parents encourage reading. | 4.04 | 4.03 |
| My father read to me. | 3.42 | 3.71 |
| My mother read to me. | 4.00 | 4.10 |
| I feel pressure to perform. | 3.68 | 3.22 |
| My parents check on my homework. | 3.41 | 3.70 |

a. * P < .05

Table 12: Gender differences in family influence.

Peer influence

The peer influence scale can be largely treated as unidimensional. The overall scale has a Cronbach's alpha of .67. Exploratory Factor analysis using Maximum Likelihood extraction indicates that the latent structure of the peer scale is best accounted for by a four factor structure. The four factors identified as: negative impact of peers on study, teasing, peer encouragement, and social life. These are consistent with the factor structure identified in the pilot phase of the study.

Table 13: Factor structure of the peer influence sub-scale.

| | Factor | | | |
|-----------------------------------|---------|----------|-----------|--------|
| | Teasing | Positive | Computers | Social |
| Play down work habits | .882 | | | |
| Peers tease if work | .690 | | | |
| Study less to avoid labels | .633 | | | |
| Dont really have any true friends | .339 | | | |
| Peers encourage academic pursuits | | .998 | | |
| Peers study together | | .526 | | |
| Play video games with peers | | | .795 | |
| Use computers with peers | | | .584 | |
| Spend most time with peers | | | | .613 |
| Learn more from peers | | | | .525 |
| Friends don't value school work | | | | .371 |
| Plays sport with peers | | | | .362 |
| Peers talk/socialise | | | | |

To examine the issue of sample heterogeneity, separate factor analyses were conducted for boys and girls. Interpretable three and four factor solutions could be derived for both boys and girls that essentially reproduced the common four factor solution given in Table 13 above. However, the order of extraction of factors varied between genders. This is explored in more detail in Section 2.1.2 above. Initial examination suggested social factors were more influential for girls, whilst common sporting and technological interests were more influential for boys.

SES

To investigate the relative impact of SES and gender on students' attitudes towards school an exploratory MANOVA was conducted (a method for comparing means or multiple related measures across multiple influencing factors). This investigated differences in liking for school, students' self-rating of academic ability and their academic aspirations by gender, joint parental occupational status and postcode. A significant three way interaction between gender, joint occupational status and postcode was detected ($F(12,353) = 1.945, p < .05, \eta^2 = .02$). There were also significant main effects for joint occupational status ($F(69,353) = 1.539, p < .01$), and postcode ($F(21,353) = 2.343, p < .001$). There was no significant main effect for gender ($F(3,353) = 1.946, n.s$). Whilst the main effect for gender was not significant, the significant

interaction does suggest gender contributes to overall attitudes towards schooling. Comparison of the relative effect sizes of the three main effects give us some idea of the relative influence of the three demographic influences (refer to Table 14). The values shown in the table below represent effect sizes for each of the above main effects. Note that all effects are small and indicate relatively low levels of impact of the individual variables on the measures of students' attitudes towards school. Parental occupational status accounts for 5.69 times as much of the observed variation in attitudes towards school as gender. Likewise postcode (a surrogate measure for socio-economic status) accounts for 2.75 times as much variance as gender.

Table 14: Effect size comparisons of gender, occupational status, and postcode on liking for school.

| <i>Effect size measure</i> (η^2) | Demographic Characteristic | | |
|--|----------------------------|---------------------------|----------|
| | Gender | Joint Occupational Status | Postcode |
| | .016 | .091 | .044 |

Examination of univariate analyses indicates that the gender, occupational status and postcode all impact on different aspects of attitude towards school. These variables interact with regard to self rating of ability and students' academic aspirations, but not liking for school ($F(4,353)=2.78, p <.05$; $F(4,353)=2.98, p <.05$; and $F(4,353)=1.89, n.s.$ respectively). Moreover, a significant interaction was found between gender and occupational status, indicating that these jointly influence student self rating of ability ($F(9,353)=2.10, p <.05$). There are also significant main effects of occupational status and postcode on liking for school ($F(23,353)=1.732, p <.05$; $F(7,353)=2.55, p <.001$). Clearly the interactions between gender and other demographic factors indicate that simple interpretations of the data considering gender in isolation will lead to misinterpretations. This is consistent with perspectives provided by the case studies, that is, significant effects result from the intersection of gender and SES factors. This is the 'Which girls?' and 'Which boys?' approach supported by a range of other research (eg Collins et al., 2000).