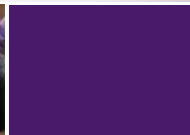# Australian Government
Quality Teacher Programme

Motivation & Engagement of Boys

Evidence–based Teaching Practices

A Report submitted to the Australian Government Department of Education, Science and Training

MAIN REPORT

Motivation and engagement of boys: Evidence-based teaching practices

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(Main report)

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GLOSSARY, ACRONYMS AND ABBREVIATIONS

ACER	Australian Council of Educational Research
ACTAP	ACT Assessment Programme
AET	Aboriginal Education Teacher
AEW	Aboriginal Education Worker
AGQTP	Australian Government Quality Teaching Programme
AIEO	Aboriginal and Islander Education Officer
AIEW	Aboriginal and Islander Education Worker
AFL	Australian Rules Football
AQF	Australian Qualifications Framework
ARC	Australian Research Council
ASSPA	Aboriginal Student Support and Parent Awareness Programme
BELS	The Boys Education Lighthouse Schools Project (*BELS*) is a Australian Government-funded national project aimed at promoting improved outcomes for boys. *BELS 1* funded schools to document and showcase successful practices in the education of boys. *BELS 2* funds clusters of schools to implement and evaluate innovative approaches to boys' education.
BST	Basic Skills Test
DECS	Department of Education and Children's Services
DEST	Department of Education, Science and Training
DET	Department of Education and Training
ELLA	English Language and Literacy Assessment
EMA	Education Maintenance Allowance
ENI	Economic Needs Index
ESL	English as a Second Language
FLC	Flexible Learning Centre
ICT	Information and Communication Technology
IEO	Indigenous Education Officer
IEPs	Individual Education Programmes
IETSO	Indigenous Education and Training Support Officer
KLAs	Key Learning Areas
MAP	Multilevel Assessment Programme
MOU	Moving On and Up
NESB	Non-English Speaking Background
PA Books	Personal Achievement Books
RTO	Registered Training Organisation
SACE	South Australian Certificate of Education (Stage 1: Yr 11, Stage 2: Yrs 12 and 13)
SABSA	Senior Assessment Board of South Australia
SACSA	South Australian Curriculum Standards and Accountability framework
SAE	Standard Australian English
SAR	School Annual Report
SES	Socioeconomic Status
SLA	Statistical Local Area
SNEP	Senior Negotiated Education Plan

SOSE	Studies of Society and Environment
TAFE	Technical and Further Education
TORC-3	Test of Reading Comprehension
VCAL	Vocational Learning
VET	Vocational Education and Training
WALNA	West Australian Literacy and Numeracy Assessment

EXECUTIVE SUMMARY

Background

This report is the outcome of a research project carried out between December 2004 and June 2005 by the University of Western Sydney. The project was commissioned by the Australian Government Department of Education, Science and Training (DEST) as a quality teacher initiative under the Australian Government Quality Teacher Programme (AGQTP). The aim of the report was to examine the motivation and engagement of boys, in particular those from Indigenous, low socioeconomic, rural and isolated backgrounds. These boys have historically been over-represented among those students who are under-achieving academically and/or experiencing social difficulties.

The objective of this project is to inform teachers' professional learning, knowledge and practice, and school curriculum development in relation to the education of boys in the early and middle years of schooling. In particular, the project sets out to identify and describe evidence-based teaching practices that have proved effective in improving the motivation, engagement and academic and social outcomes of boys, particularly those boys at risk of disengaging from school-based learning activities.

This project focused on developing a research-based contribution to understanding the educational practices experienced by boys. First, it focused on the relationship between these educational practices and boys' motivation, engagement and socio-academic outcomes. A review of the literature and a series of in-depth case studies allowed the research team to generate a set of research-based principles and strategies that underpin successful programmes for boys. The research-based approach adds an important dimension to a collection of evidence-based strategies by situating them in a framework that links them to important concepts and theories. These concepts and theories provide a coherent and argued approach to improving boys' social and academic outcomes.

Second, boys' motivation, engagement and socio-academic outcomes were recognised as being related to, if not inseparable from, boys' socioeconomic status (SES), and/or geographical location and/or cultural factors. Methodologically, this suggests that there is no unified sense of 'boyhood' in relation to motivation, engagement and social and academic performance. A focus on 'boys' as a single, unified category would conceal more than it would reveal. For the purposes of this project then, the data on boys' motivation, engagement, social and academic performance were disaggregated according to factors – SES, geographical (urban, rural/regional) and cultural (Indigenous) factors. The project describes how these intersect and interact and investigates how schools generate and support the conditions that reinforce the motivation, engagement, and social and academic performance of certain groups of boys.

Third, this project explores the strategies for encouraging boys to examine ways in which they can be motivated, engaged and become socially and academically

successful. Further, it considers ways to motivate and engage boys in thinking critically and creatively about their own and their peers' schooling, their worldview, their future employment and what they want to make of their lives. Consideration was given to well-intentioned interventions aimed at confronting the fragility of boys' motivation, engagement and socio-academic performance. Questions were asked about whether these interventions were helping boys to escape from factors constraining their potential. There were also considerations of any unintended or unanticipated consequences, desirable or otherwise, which motivated or inhibited boys' way forward.

This Executive Summary contains summaries of each of the main sections of the report and will be of interest to each of the key groups at whom the report is directed: educational researchers; policy-makers; principals and classroom teachers.

Methodology

The methodology for this project includes a review of the literature and a series of case studies.

Literature review

The review of the literature has three distinct areas of focus:

- a conceptual framework for understanding motivation and engagement
- a synthesis of issues and factors impacting on boys' educational and social outcomes
- a compilation of evidence-based strategies for improving boys' motivation, engagement and educational and social outcomes.

The conceptual framework for understanding motivation and engagement was the *MeE Framework*, developed at the University of Western Sydney by Dr Andrew Martin and Dr Geoff Munns (Munns 2004; Munns & Martin 2005). This framework provides the foundation for understanding the project's analysis of the factors involved in boys' motivation and engagement. The MeE framework also provides educators and schools with a way to understand and work with the complexity of relationships that students have with school and education. It does this by describing the dynamic to this multifaceted relationship that straddles individual, relational and holistic perspectives. It defines three distinct but closely interrelated ways that schools can work on the more positive and enduring relationships that students need to have with education to achieve successful social, academic and life outcomes. The first area (Motivation) is informed by the psychology of education and picks up ideas about individual student motivation. The second area ('e'ngagement) explores, from a sociological position, whole-classroom practices and processes that work towards students becoming meaningfully engaged with their daily learning experiences. The third area ('E'ngagement) brings together both the psychological and sociological concepts. It highlights the whole-school policies, practices and interventions designed to encourage every student to feel that their school is a place that 'works for' them, and that education is opening up opportunities for them to be rewarded and successful, both in the present (in their school lives) and in the future (in their post-school lives, employment and careers). The MeE framework, then, describes the

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interplay of motivation, 'e'ngagement and 'E'ngagement. The review of literature explains the MeE framework in terms of its potential for giving direction to teachers' efforts to improve their practices. The framework has two main strengths: first, for evaluating and situating individual strategies and approaches; and second, for providing a lens for reviewing both classroom and whole-school approaches to the issues of improving boys' outcomes.

The synthesis of issues and factors impacting on boys' educational and social outcomes clearly points to the complex interrelationships between the social, economic, cultural and educational contexts within which boys' schooling occurs. It reinforces the idea that we need to be asking ourselves continually 'Which boys?' and makes plain that there is no simple solution to improving boys' social and academic outcomes.

The compilation of evidence-based strategies for improving boys' motivation, engagement and educational and social outcomes was undertaken with the caveats described in the previous paragraph firmly in mind. The literature review provides an indication of the range of educational interventions that have, in particular environments, shown measurable improved outcomes for particular groups of boys.

Case studies

Case study schools were selected because they were identified as those which had evidence of improved social and/or academic outcomes for boys. This selection was based on systemic and professional advice, and in the light of available student outcome data. Fifteen schools were selected that had demonstrated achievement of improved outcomes in boys' education and represented a cross-section of learners, settings, outcomes and intervention strategies. The case study schools collectively represent the following characteristics:

- *learners*: ages ranging from preschool to middle years; backgrounds including the target groups
- *settings*: government and non-government sectors; preschool, primary, secondary and a combined primary/secondary school in urban, regional and rural locations
- *outcomes*: improved motivation and engagement; improved academic and social outcomes
- *intervention strategies*: traditional and contemporary curricular, pedagogical and assessment practices (including literacy and ICTs); role models and boys' relationships with teachers, peers, families and community.

The case study research employed a number of strategies to ensure the validity of data collection and analysis. These included triangulation through the use of multiple sources of data, a range of data collection methods and member checking. Methods of data collection included interviews, focus groups, observations and artefact collection. Where possible, researchers sought several sources of information for each of the key questions to ensure that different perspectives were represented and also to guarantee a measure of data integrity. The interviews and focus group discussions used a semi-structured approach. One set of questions was used as prompts for all participants.

Training and support was provided for case study researchers. Member checking was also used to ensure validity

Schools were visited and data collected in response to a common set of research questions. The case study teams of researchers were brought together for a two-day data analysis workshop. At this workshop participants actively generated the analysis of the case studies through cross-case analysis and interpretations of the data in relation to the theoretical and empirical findings from the literature review. This workshop had three key components:

- *review of case studies*: focused on clarification of issues and the development of common understandings and meanings which were then refined as the cross-case analysis was undertaken
- *cross-case analysis*: groups focused on a different aspect of the case studies (for example, principles, strategies, MeE framework) and used different analytical techniques (replication strategy, multiple exemplars, clustering and pattern clarification). A set of principles and practices were refined and synthesised
- *collective self-critique of relationships between principles and practices*: verified direct relationships between the identified strategies to ensure consistency with evidence from the literature review and to situate these relationships within the conceptual framework developed as an outcome of the literature review.

In combination, these strategies were designed to ensure a consistency of approach in both the information collected and the reports written for the site visits.

Findings from the case studies

The 15 case studies reveal a variety of policies, interventions and strategies that each school has made in its particular context. For these educational stories the MeE framework offers a vantage point that allows the researcher not only to make explicit, in the context of the theory the immediate work at hand, but also to point to possible future directions. In a word, it provides a way to understand and work with the complexity of relationships that students have with school and education. A summative discussion of the motivation and engagement strategies of the case study schools using each perspective of the MeE framework follows.

Motivation

The school strategies that focus on individual support typically target boys who are either already disengaged or showing signs that they are likely to become disengaged. Interventions are generally characterised by their physical and 'hands on' nature, their opportunities for reflection, their connections with the local and broader community, and an out-of-classroom or off-campus orientation. Activities in the Motivation perspective of the MeE framework are intended to improve students' beliefs about themselves, foster positive attitudes towards learning, achievement and school, develop adaptive thoughts and behaviours about schoolwork and enhance students'

study skills. These activities combine to encourage students to believe that there are good reasons for remaining at school and concentrating on their learning.

Motivational strategies detailed in the case studies may be considered within the following four categories:

- cultural basis
- focus on social outcomes
- enterprise focus
- teacher-directed technical focus.

Four of the case study schools are serving significant numbers of Indigenous students and have introduced culture-based programmes to encourage higher levels of motivation among individual students. These programmes are designed to link the students' community 'lifeworlds' to the world of the school, with its mainstream and non-Indigenous business. One way of achieving this is by involving students in cultural activities during school time, but in traditional settings and in association with community mentors, role models and elders. Another approach is to help Indigenous students cope with the demands of schools and classrooms by offering them a culturally sympathetic learning environment where staff can assist students to develop appropriate skills and attitudes.

Motivation interventions classified as working towards social outcomes are those that aim to develop social skills and attitudes but which invariably sit outside the mainstream school curriculum. There are commercially available programmes, some of which involve boys' physical activity. Others are more specifically aimed at teachers or parents, but all involve reflections about self-control, communication and developing positive peer, familial and community relationships. Other schools have developed their own programmes, based on the perceived needs of their community.

A number of case study schools have devised programmes that not only target social outcomes but have strong academic connections through their constructivist and enterprise focal points. These programmes have a project focus, and students are actively involved in setting their own goals and directing their own learning. They take place outside the normal classroom environment and in the community, and have a strong mentoring component. Other features include presentations and celebrations of achievement followed by rewards in the form of excursions and enjoyable activities.

The final group of approaches detailed in the case studies that are designed to motivate students has a practical and technical orientation. These often have close associations with vocational education strategies and contain a defined technical skills base that is taught under strong teacher direction. This means that there is less autonomous and self-directed learning. Outside these categories of major individual support programmes are various examples of ways that students enhance motivation through literacy support and peer mediation. The use of role models and peer and cross-age tutoring/mentoring also perform important functions within the Motivation sphere.

'e'ngagement

When schools decide to concentrate on the relational perspective of the MeE framework, they become as interested in the work of teachers and their pedagogies as they are in the thoughts, feelings and behaviours of students. The aim is to bring into play classroom learning experiences that are purposefully designed to encourage deep understanding and expertise, and genuine enjoyment. They also aim to promote the valuing of what students are doing and active involvement in what is being learned. This 'e'ngagement perspective has a whole-class focus that also takes up a social justice position. This means that classrooms working towards 'e'ngagement will enhance social and academic outcomes for targetted boys at the same time as they offer advantages to all students.

Pedagogical changes as pathways to 'e'ngagement contained in the school case studies generally fall into two closely interrelated categories. The first has an emphasis on literacy (including ICT). The second has a broader concentration on high-interest and contextually relevant experiences. Both categories are characterised by constructivist approaches that accentuate active and reflective learning and enhanced access to important curriculum knowledge.

Literacy approaches within the 'e'ngagement perspective often have a highly explicit approach within a strongly scaffolded learning environment. In some schools, the integration of ICT is recognised as a critical avenue towards heightened levels of cognition, emotion and participation among boys.

The case studies bring to light a number of impressive examples of highly engaging learning environments. Importantly, they illustrate that these environments can be created across preschool, primary and secondary levels. There are stories of schools that combine engaging content with a strongly scaffolded pedagogy encouraging active problem-based learning. These offer informative examples of both the foregrounding and backgrounding of the teacher's role, which allows boys to feel both autonomous and supported in their learning. Such models exemplify the kinds of pedagogies that promote highly independent, self-regulated and competent learners. The importance of whole-staff cohesion through professional development is also demonstrated.

'E'ngagement

Interventions at a whole-school basis fall into four broad categories, each of which draws attention to the critical ways a school can encourage individual students and particular groups of students (especially those who are disengaged) to feel that: they are valued; they will be supported when they have learning or emotional needs; and they will be offered a wide range of curricular and extracurricular activities. In short, the aim is for each student to feel individually catered for at involvement, emotional and cognitive levels. The four categories are:

- school ethos
- school structure
- mentoring/role models
- productive post-school options.

The case studies have shown that many of the schools have worked on changing the way they are viewed, both by their students and their local and wider communities. This has seemed to be particularly important where there is a history of troubled school–community relations.

Closely aligned to school ethos is the way schools have restructured their curricula to address clearly identified student issues. A number of schools have seen the importance of using positive role models and mentors to encourage boys to see that school is a place that can work for them. They have reasoned that developing positive relationships between boys and their peers, older boys and adults (including fathers) across both curricular and extracurricular experiences can counteract the negative effects of peer pressure and an associated view that school as a place, and education as a resource, are not 'boys' business'.

At an 'E'ngagement level a significant number of case study schools have developed strategies to help boys with post-school options. In many, but not all, cases these strategies are associated with employment and training opportunities in local industries. These schools argue that such interventions keep boys at school who would otherwise leave early and struggle on the job market. These examples from the case studies do, however, carry a danger that boys might be being channelled into a narrowing range of occupations within traditional male-based industries.

The dynamics of motivation and engagement

The stories contained in the case studies support the key ideas promoted in the MeE framework, namely that there are multidimensional and interconnected dynamics of student motivation and engagement. Reading the narratives of how each school faced its particular issues and then initiated interventions from a variety of perspectives, reminds us that the complexity of student relationships with schools, classrooms and education requires educators to think creatively and widely across a wide range of perspectives and approaches. It is across this range that the MeE framework shows how the cooperative processes contain both a focus on the individual and on broader social and educational contexts, and provide critical opportunities for the disengaged student to gain an enduring belief that 'school is for me'. There are critical connections across individual and group processes highlighted within the framework. The support for individual students' cognitive and behavioural lives connects with engaging messages embedded within productive classroom learning experiences. Together, these work towards students becoming 'E'ngaged with school. This 'school is for me' level of engagement is further encouraged and supported by whole-school policies and practices. Such interconnectedness between the three perspectives means that it is not always easy to separate school, classroom and individual interventions into discrete areas. Nonetheless, this process examines the focus and nature of schools' efforts to improve the relationships that their students have with education.

Principles and strategies

The principles and strategies were first developed from the case studies. They were both then both tested against, and used to test, the research literature. There is a very

strong alignment across these reports, with a number of common and converging themes. These include the impact of peer relationships and the construction of masculinities on social and academic learning; the different ways boys learn; the significance of literacy development for lifelong learning; and the importance of quality teaching and productive teacher–student relationships.

The principles have been developed to support schools seeking to build successful and sustainable whole-school programmes to improve motivation, engagement and the educational and social outcomes of boys in their care. They provide overall guidance on how educational leaders might structure interventions so they are successful and sustainable over the long term.

Collectively, the principles and strategies provide strong research-based advice to schools that wish to initiate or further develop a whole-school approach to the improvement of boys' socio-academic outcomes through a focus on motivation and engagement. In particular, these principles and strategies draw on rich case study data that indicate their suitability for boys from Indigenous, low-SES, rural backgrounds, and boys at risk of disengaging from schooling. At the same time, experienced educators will recognise that the principles are generally applicable to any whole-school reform process that seeks to improve socio-academic outcomes for all students, and the strategies may be more widely applied to attempts to improve the educational outcomes of all boys and girls.

The principles

The principles begin with an overarching principle of using the MeE framework to guide the development of a whole-school approach.

The MeE framework provides schools with a way to understand and work with the complexity of relationships that students have with school and education. It does this by describing the dynamic to this multifaceted relationship that straddles individual, relational and holistic perspectives. It defines three distinct but closely interrelated ways that schools can work on the more positive and enduring relationships that students need to have with education to achieve successful social, academic and life outcomes.

While schools may start with strategies or approaches taken from any one of the MeE framework's perspectives, success ultimately lies with an approach that draws on all three. Regardless of whether schools start with a particular focus or adopt a broad range of strategies, the MeE framework has an embedded argument: for schools to encourage strongly motivated and engaged students, then motivation, 'e'ngagement and 'E'ngagement processes all need to be considered seriously.

Underpinning the founding principle are four subsidiary principles:

1 *Focus on student outcomes*
   This entails identifying specific groups of students, specific outcomes and means of collecting evidence. Improvements in student outcomes require explicit attention; first, in identifying the target group of students and the desired outcomes; then the continual collection of outcome data; and the consequential refinement

and development of existing and new approaches based on the analysis of these outcomes data.

2 *Select contextually relevant starting points*
These starting points should be tailored to the particular needs of the students, informed by research, policy and/or local successes and be consistent with the opportunities afforded by the local context and negotiated with relevant stakeholders. They include staff, students, community, external agencies, systems and sources of funds and other support.

3 *Generate pathways that build a coherent and multifaceted approach*
Such pathways need first to be aligned with the broader vision and direction of the school. They also need to respond in sophisticated ways to data collected on student outcomes and feedback from stakeholders. It would be expected that these would evolve over time to meet the changing needs and circumstances of the school and the community, distribute ownership across stakeholders and draw effectively on additional resources.

4 *Develop professional leadership and learning*
A critical aspect of improving the socio-academic outcomes for boys is the relationship between school leadership and professional learning. Strategies for change cannot be implemented successfully without the full commitment of the senior management, and this commitment needs to be shared by all staff involved.

The strategies

Following the principles, the strategies are divided into three distinct but interrelated groups, each containing ten strategies. These groups fall under the MeE framework perspectives of Motivation, 'e'ngagement and 'E'ngagement. Because the three perspectives are themselves interrelated, there is some unavoidable, indeed necessary, conceptual overlap across the groupings of strategies.

1 Individual support strategies highlighting *Motivation*:
   - Develop positive cultural connections between community, home and school
   - Foster supportive learning environments where students feel valued and respected
   - Promote opportunities for renewed community connections
   - Provide authentic, high-interest and challenging learning experiences
   - Allow negotiation and choice at school and classroom level
   - Connect critical syllabus areas (especially literacy) with all individual motivation strategies
   - Support adaptive attitudes and behaviours
   - Work on managing physical actions and emotional responses
   - Develop a wide range of assessment strategies that support early and ongoing intervention
   - Target students with specific socio-academic needs

2 Strategies that promote *'e'ngagement*:
   - Structure learning environments that offer student voice and control
   - Promote self-regulatory and autonomous learners
   - Focus on quality teaching and productive pedagogical relationships
   - Offer projects and problem-based learning

- Develop collaborative learning communities
- Offer access to sophisticated ICTs
- Integrate literacy across all aspects of the curriculum
- Introduce a variety of texts that widely appeal to the interests of boys
- Contextualise and individualise literacy learning
- Provide feedback that is explicit about task criteria, processes for learning and self-regulation of learning

3   Strategies that widely cater for student *'E'ngagement* at involvement, emotional and cognitive levels:
- Have high but realistic expectations within an ethos of pressure and support
- Ensure all students feel that they will be supported socially and academically throughout their school lives.
- Challenge stereotypical views about boys
- Offer a wide range of intellectual, cultural and aesthetic experiences
- Work collaboratively with families and communities
- Use community, cross-age and peer mentoring to support students and to provide positive role models
- Utilise support staff to cater for all students, particularly for those most 'at risk'
- Focus on key transition points
- Promote different pathways for further study and post-school options
- Provide alternative settings for the development of socio-academic learning

Conclusion

The case studies presented in this report provide evidence of the interrelated psychological factors and socioeconomic and cultural circumstances that affect the schooling of boys, particularly those from Indigenous, rural, regional and low-SES backgrounds. These boys are not necessarily passive in their schooling – in fact many struggle against its confines. The case study evidence points to the sensitivities, perceptions and evaluations that such boys invest, mentally and physically, in their everyday schooling. This research indicates that knowledge, not only of their behaviours, but also of their interests, aspirations and imaginings, is necessary to understand boys' motivation and engagement with school. These interdependent factors play a significant part in the confidence and competencies that these boys develop in making their schooling meaningful or otherwise.

This evidence reminds us of the multiple dimensions of the lived experiences of these boys, experiences that are integral to explaining their engagement, motivation and socio-academic achievement. Their cumulative exposure to challenging socioeconomic and cultural conditions instils in them a range of lasting dispositions regarding schooling, education, work and life. However, neither background nor gender is a simple deterministic construct. This report shows that schooling does make a difference.

This report suggests that traditional curricular, pedagogical and assessment practices have failed for some – perhaps many – of these boys. Curricula that connect with boys' interests and experiences can provide rich material through which their existing

knowledge is not only acknowledged, but can be extended, deepened and subjected to critical reflection. Developing curriculum, pedagogy and assessment practices that are relevant and give educational value to boys' existing experiences is not a licence to celebrate insularity or to narrow their horizons. Nor should adapting curriculum to the local context limit boys' education or their sense of vocational options. Schools in the case studies have taken the opportunity to explore their students' local and global knowledge networks.

The case study evidence points to the multilayered complexities faced by education policy-makers, schools and teachers. First, schools and teachers have to deal with the complexities presented by the interrelated psychological factors and socioeconomic and cultural circumstances that affect the schooling of these boys. Second, they face the complexities of constructing pedagogies that connect with the knowledge networks informing boys' interests and experiences – and doing so in ways that extend and deepen the boys' worlds. The case studies also provide some insights into how schools act towards:

- developing a long-term commitment to whole-school approaches to educational improvement
- forming a shared vision
- developing coherent and integrated programmes
- shaping effective pedagogies
- sustaining supportive school structures and cultures.

The case study evidence also revealed the complexity of outcomes towards which schools are working. These sometimes begin with such basic areas as improvements in school attendance. They then go on to deal with areas such as internal and external academic results, behaviour self-management, cultural knowledge, cross-cultural relations, student self-confidence, and transitions to vocational training, further education or employment.

Although complex, the explicit identification, systematic collection and careful analysis of quantitative and qualitative datasets over the long term is necessary to refine or reinvent the educational principles and strategies directed towards these outcomes.

The MeE framework provides educational leaders, teachers, policy-makers and researchers with a potentially valuable tool for furthering their understanding of the complexities of schooling and for turning these complexities to their own advantage. The case studies provide an empirical basis for testing, refining and elaborating the framework. They suggest its potential for guiding the practices that enhance students' socio-academic outcomes. The MeE framework has also proved valuable as a research tool for generating evidence and knowledge to inform the professional judgements of teachers and principals. It offers a model for diagnosing the relations in which individual boys' actions, beliefs and goals are enmeshed in larger societal dynamics.

The MeE framework also provides a basis for exploring what types of education policies, curriculum frameworks, programmes and pedagogies are effective for boys such as those in the case studies. The case studies suggest that disaffected students

benefit from pedagogies that engage their worldly interests and from interesting and intellectually challenging learning experiences, whereby they acquired new knowledge and had opportunities opened for them both within and beyond their immediate communities.

Boys from low-SES backgrounds, whose communities were experiencing high unemployment, reportedly disengaged from schooling when it did not make connections to vocational opportunities in their future. The economic changes in Australian society have affected the labour market for Indigenous, rural, regional and low-SES males. This raises questions about how to reinvent 'traditional' curriculum, pedagogical and assessment practices to embrace these changes. It also suggests possibilities for re-grounding definitions of socio-academic success and teacher professionalism.

Teachers in the case study schools made connections with the knowledge networks available through their students' lived experiences. The target groups of boys seemed to benefit from schools that acknowledged their out-of-school learning experiences and interests as a source of knowledge acquisition and production. In particular, engaging pedagogies in these case studies embedded key literacy learnings in project-based studies. The extension and deepening of students' language and literacy skills was integral to such projects. Skilled teachers were often able to develop students' capability to decode, analyse, use and produce multimedia texts through 'hands on' and/or investigative projects.

This raises questions about whether various traditional forms of assessment, testing and benchmarking are able to capture such socio-academic learning. What assessment practices are needed to record these boys' performances in:

- undertaking 'hands on' projects
- investigating big ideas
- solving real-life puzzles
- making connections with the extended knowledge networks that link schools to the wider world
- engaging in collaboration, cooperation and negotiation?

The case studies suggest that Australian educators might be able to pioneer forms of assessment, testing and benchmarking that will document the promotion of teamwork, confidence and leadership among these boys.

Moreover, these case studies invite consideration of whether a focus on 'school retention', 'anti-school behaviour', 'classroom strategies' and 'classroom management', while necessary, might be a too limited view of the socio-cultural dimensions of learning. The perennial questions of withdrawal or mainstreaming, single sex or co-educational classes are not resolved in the research report, since these are not seen as the key issues around motivation and engagement. The more central issue is that of enabling boys who may be experiencing difficulties in schooling to engage with their world knowledge. Mentoring also seems to be important. The evidence reported here suggests that the flexible organisation of schooling allows this to happen.

The case study evidence points to improvements in students' socio-academic learning being directly related to the enhancement of teacher professionalism through a range of in-service professional development activities. Since the case studies indicate that teachers are using workplace learning, sport and community service learning effectively in motivating and engaging boys, the connections with their 'out of school' knowledge networks would seem to provide a significant basis, not only for educational innovation, but also for teacher professional enhancement. The developments discussed here may now benefit from a national curriculum, pedagogy, assessment and teacher professional enhancement programme that resources them appropriately. Such a programme might test the possibility of legitimising innovations that productively engage students' knowledge networks as a basis for judging their socio-academic performance. Teachers involved in such curricula and programmes would entrust and enable their boys to progress with a sense of autonomy, control and increasing competence, and make opportunities for them to reflect on their own learning strategies.

'Creativity' was a key issue to emerge from the case study evidence and is a theme running through the discussion of educational principles and strategies. The case studies suggest that, in their ordinary, everyday work, teachers use four key creative processes:

1 Effective teachers and their schools collaborate with other creative, innovative educators in their efforts to view the education of boys in new ways and to find fresh perspectives for framing the issues. Teachers, too, benefit from mentoring schools that build upon of the accomplishments of other schools, as well as their own.

2 Schools and teachers benefit from the experiences of renowned leading educators.

3 Schools and teachers build upon their own earlier accomplishments by trialling appropriate educational interventions for boys, evaluating their success by using relevant quantitative and qualitative data and being flexible enough to revise their interventions accordingly.

4 The case study schools and their teachers recognise and accept that developing educational interventions that produce successful socio-academic outcomes for the target groups of boys is a difficult, arduous and time-consuming task. There are no 'quick fixes' in education; it may take a decade or more to make a productive difference. Typically, effective teachers do not abandon their projects.

A number of key recommendations for systemic intervention arise from this research, namely:

1 That Australian educators across Federal and State systems lead the way in developing among the international education community 'real world curriculum policies'. The formally approved curriculum policies of education authorities may benefit from incorporating the extended knowledge networks of teachers, students, parents and community members that lie beyond the school.

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This would indicate a valuing of the currently extra-curricular knowledge, learning experiences and assessment tasks that motivate and engage these boys, and thereby enhance their socio-academic achievements.

2   That Australian educators across Federal and State systems lead the way in developing among the international education community 'real world assessment, testing and benchmarking' that legitimise the richness of the learnings, and capture the socio-academic achievements of boys (and girls) from rural, regional, Indigenous and low SES communities. For instance, such 'real-world assessment, testing and benchmarking' could find ways of documenting these students' performances in investigating big ideas; engaging in meaningful investigative projects; solving real-life puzzles; making connections with extended knowledge networks and engaging in collaboration, cooperation and negotiation.

3   That Australian educators across Federal and State systems lead the way in developing among the international education community 'real world professional enhancement strategies'. These would enable them to explore whole-school changes to curriculum, pedagogical and assessment practices explicitly intended to improve the motivation, engagement and socio-academic achievement of Indigenous, rural, regional or low-SES boys (and girls).

The report highlights the complexity of issues affecting the academic and social performance of rural, regional, Indigenous and low-SES boys. Because schools do contribute to shaping the work/life trajectories of these students, there is considerable interest in the potential that school leaders, especially teachers, have for transforming the schooling experiences of such boys. Evidence from this research report indicates a reasonably comprehensive range of sound educational principles and effective strategies relevant to enhancing the performance of Indigenous, low-SES, rural and regional boys in early to middle school.

Finally, the report invites us to ask, given the changing pathways to employment, training and further education, what type of education policies, schooling and teachers are really *for* rural, regional, Indigenous and low-SES boys?

1 INTRODUCTION

This report is the outcome of a research project carried out between December 2004 and June 2005 by the University of Western Sydney on behalf of the Australian Government Department of Education, Science and Training (DEST) into the motivation and engagement of boys for improved academic and social outcomes.

The project is a quality teacher initiative under the Australian Government Quality Teaching Programme (AGQTP) aimed at strengthening the skills and understanding of the teaching profession. This national initiative has the goal of maximising student learning outcomes through improving teacher quality and increasing the number of highly effective Australian schools. To that end, this project report identifies pedagogies, programmes and principles which have proven effective in motivating and engaging boys towards improved academic and social outcomes. The particular focus of this project is boys from Indigenous, low socioeconomic, rural and isolated backgrounds who, historically, have been over-represented among those students who are under-achieving academically and/or experiencing social difficulties. This focus is informed by the knowledge generated through the Australian Government Department of Education, Science and Training's (DEST) Boys' Education Lighthouse Schools Stage 1 (*BELS 1*) and Stage 2 (*BELS 2*) projects. *BELS 1* funded schools to document and showcase successful practices in the education of boys. *BELS 2* currently funds clusters of schools to implement and evaluate innovative approaches to boys' education.

This project also builds on the wealth of recent research on boys and schooling which shows that particular groups of boys are under-achieving, especially in literacy, and that these boys are over-represented among students who are being suspended from schools. Further, this project seeks to extend the knowledge relating to the motivational, social and cultural factors that affect many boys' academic and social outcomes.

The research team trusts that this report makes available evidence-rich knowledge about the education of boys in the early and middle years of schooling that will inform teachers' professional learning and practice, as well as school curriculum development, teacher education programmes, policy making and further research agendas.

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2   PROJECT OBJECTIVES AND OUTCOMES

The objective of this project is to inform teachers' professional learning, knowledge and practice and school curriculum development in relation to the education of boys in the early and middle years of schooling. In particular the project identifies and describes evidence-based teaching practices which have proved effective in improving the motivation, engagement and academic and social outcomes of boys, particularly those boys at risk of disengaging from school-based learning activities.

The target groups for the project are boys in the early and middle years of schooling who are considered to be at risk of under-achieving, such as those identified as belonging to one or more of the following categories:

- low-performing
- low socioeconomic status (SES) background
- Indigenous
- from regional and rural areas.

Based on the project brief and advice supplied by DEST, this project has:

- Produced an appropriate methodology for the project that addresses the specifics of reviewing the literature, case study design, data analysis, reporting and synthesis of findings.

- Reviewed the recent national and international research literature to refine the definition of motivation and engagement of boys in the early and middle years of schooling. The literature review focused on the potential for role models, literacy acquisition and models of learning, including the use of information and communication technologies (ICTs). The review identifies a range of factors and causal relationships regarding boys' academic and social performance. The complete literature review is in Appendix A.

- Designed and conducted case studies based on the results of the review of the research literature. The case studies report presents all individual site-based case studies, as well as a cross-case analysis in terms of the conceptual motivation and engagement framework (the MeE framework) developed at the University of Western Sydney. The complete case studies report is at Appendix B.

- Produced a final report detailing the methodology and outcomes of all components of the project. The report specifically identifies the key principles and effective practices for motivating and engaging 'at risk' boys and improving their learning and social outcomes.

When reporting on the issues and strategies relating to boys in early and middle schooling, the project team focused on the needs of teachers and the ultimate applicability of its findings for all students. The project required collaborative working relationships with a range of partners, including the DEST Project Delegate,

the Project Advisory Committee, school sector organisations, school leaders and teachers, parents and students, as well as a range of research consultants from around Australia. The research team wishes to acknowledge and thank all partners, as the completion of this project would not have been possible without their cooperation.

3 METHODOLOGY

This project focused on developing a research-based contribution to understanding the educational practices experienced by boys. First, it focused on the relationship between these educational practices and boys' motivation, engagement and socio-academic outcomes. A review of the literature and a series of in-depth case studies allowed the research team to generate a set of research-based principles and strategies that underpin successful programmes for boys. The research team believes that a research-based approach adds an important dimension to a collection of evidence-based strategies by situating them in a framework that links them to important concepts and theories (explanations). These concepts and theories provide a coherent and well-argued approach to improving boys' social and academic outcomes.

Second, boys' motivation, engagement and socio-academic outcomes were recognised as being related to, if not inseparable from, boys' socioeconomic status (SES) and/or geographical location and/or cultural factors. Methodologically, this suggests that there is no unified sense of 'boyhood' in relation to motivation, engagement and social and academic performance. A focus on 'boys' as a single, unified category would conceal more than it would reveal. For the purposes of this project then, the data on boys' motivation, engagement, social and academic performance were disaggregated according to factors – SES, geographical (urban, rural/regional) and cultural (Indigenous) factors. The project documents how these intersect and interact, and investigates how schools generate and support the conditions that reinforce the motivation, engagement, and social and academic performance of certain groups of boys.

Third, this project explores the strategies for encouraging boys to examine ways in which they can be motivated, engaged and socially and academically successful. Further, it considers ways to motivate and engage boys in thinking critically and creatively about their own and their peers' schooling, their worldview, their future employment and what they want to make of their lives. Consideration was given to well-intentioned interventions aimed at confronting the fragility of boys' motivations, engagement and socio-academic performance. Did these interventions help boys to escape from factors constraining their potential? Were there any unintended or unanticipated consequences, desirable or otherwise, which motivated or inhibited boys' way forward?

The project was undertaken in a concentrated timeframe by a core team of researchers supported by additional researchers and consultants who collaborated on different aspects of the project. The benefits of a team-based approach were increased inter-disciplinarity and local knowledges; increased internal reliability of methods of analysis and decision-making processes; and the ability to undertake multiple tasks concurrently. These benefits, however, came at a cost of additional requirements for quality assurance. Quality assurance was addressed through a secondary layer of leadership and management. This involved a co-leadership strategy for the overall project and for each of its subcomponents. Leaders were assigned to the management of each of the following components: overall project; detailed research methodology; literature review; in-depth case studies and associated reports; and the production of

the final report. As well as co-leadership of each component, groups of researchers worked collaboratively on each of the tasks within a component to ensure timely completion.

3.1   The MeE framework

The MeE framework has been developed at the University of Western Sydney as a way of understanding the complexity of relationships that students have with school and education. The framework consists of three distinct but closely interrelated areas, each of which directs attention to different ways that schools, classrooms and teachers can work on creating more positive and enduring relationships between students and education. The first area (M) is informed by the psychology of education and picks up ideas about individual student motivation. The second area ('e'ngagement) explores, from a sociological position, whole-classroom practices and processes that work towards students becoming meaningfully engaged with their daily learning experiences. The third area ('E'ngagement) brings together both the psychological and sociological concepts. It highlights the whole school policies, practices and interventions that are designed to encourage every student to feel that their school is a place that works for them, and that education is opening up opportunities for them to be rewarded and successful, both in the present (in their school lives) and in the future (in their post-school lives, employment and careers).

3.1.1   Motivation (M) – an individual focus

This psychological perspective uses the *Student Motivation and Engagement Wheel* ('the wheel') (Figure 1) developed by Martin (2005). The wheel defines 'motivation' as the thoughts that students have about themselves, school and schoolwork. 'Engagement' is defined as the behaviours that follow these thoughts.

The upper segments of the wheel show the thoughts associated with positive motivation (feeling self-effective, seeing the value of school, focusing on learning, solving problems and developing skills) and the productive behaviours that flow on from these thoughts (being persistent, planning and managing study).

Figure 3.1: Student Motivation and Engagement Wheel (with permission from Martin 2005)
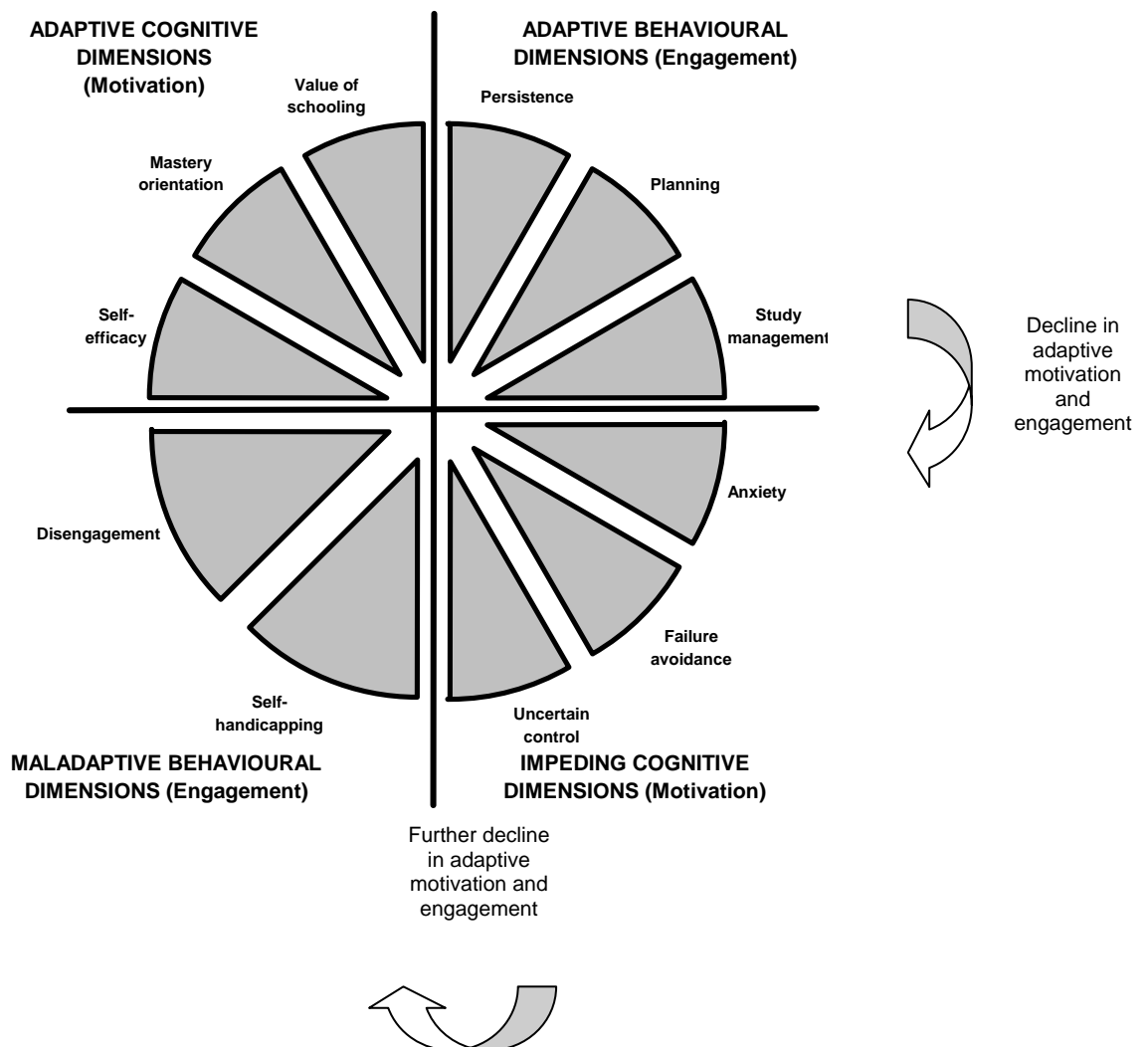
The lower segments point to the thoughts that show negative motivation (being anxious about tasks, performance and results, not feeling in control of learning, avoiding failure). The behaviours that flow on from these thoughts are self-handicapping (that is, actions designed to bring poor results) and disengaging.

The wheel can be used by both teachers and students. It distinguishes clearly between what is 'helpful' (adaptive dimensions) and what is 'unhelpful' (impeding and maladaptive dimensions). This helps students to understand the connections between their thoughts and behaviours. Teachers can use the wheel to discuss these thoughts and behaviours with students and to plan appropriate school and classroom interventions. These interventions would aim to work towards improving individual students' approaches to their schoolwork and their attitudes towards learning, achievement and school. They would also help individual students to develop the skills necessary to plan and manage their schoolwork. This focuses the support on

maximising the thoughts and behaviours in the wheel's upper segments and minimising the thoughts and behaviours in the lower segments.

3.1.2 'e'ngagement (e) – a relational focus

The small 'e' or 'e'ngagement focus takes up a sociological perspective and draws on research into student engagement among low SES students undertaken by the *Fair Go Project* (Munns 2004). Unlike Martin, who separated motivation and engagement into thoughts and behaviours, this focus views engagement as a multidimensional construct. That is, engagement is when the behavioural, the emotional and the cognitive come together powerfully (Fredricks, Blumenfeld & Paris 2004). It means that classroom behaviour is not just following rules but actively participating; emotion is not just liking but deep valuing; cognition is not just simple memorisation but reflective involvement in deep understanding and expertise – in other words, high levels of doing, feeling and thinking. This view of engagement is called small 'e' engagement, or 'e'ngagement.

From a sociological perspective this multidimensional view of 'e'ngagement is more than an individual force among certain students. Rather, it is the result of social processes and relationships involving reciprocity and mutual exchange. This brings the classroom teaching and learning relationships between teachers and students strongly into play. It can be seen that this level of classroom 'e'ngagement implies a highly productive learning environment. Importantly, this perspective also brings attention to the ways classrooms are connected with wider dimensions of power. It offers an explanation of why certain groups of students (for example, boys from poor, Indigenous and isolated backgrounds) are more likely to feel that school is not a place that works for them and that education is not helping them now and will not help them in the future.

Within the 'e'ngagement focus the *Fair Go Project* (Munns 2004) takes up two key ideas. The first is that classrooms are places that send powerful messages to learners through what is taught, how it is taught and the way students are assessed (Bernstein 1996). The second is that these messages operate through 'discourses of power', that is, knowledge, ability, control, place and voice. The best way to understand this is to consider the lived school and classroom experiences of the majority of educationally disadvantaged students. To generalise across the group, students from the target groups for this report (boys from poor, Indigenous and remote backgrounds) historically have received disengaging messages. They have not gained classroom access to powerful and contextualised knowledge. Classroom processes and assessment practices have convinced them that they are not capable of achieving (ability). Their classrooms have been characterised by daily struggles over discipline and behaviour (control). They have not seen themselves as valued as individuals and learners (place). There has been little opportunity for them to have a say in their learning processes and achievements (voice).

When teachers try to encourage this level of 'e'ngagement, they concentrate most of their attention on their own classroom pedagogical processes. They think of ways in which their classrooms can be places where every student is actively involved in tasks of high intellectual quality and can have passionate positive feelings about these tasks.

For this to happen, teachers have to be evaluating their content, pedagogy and assessment processes continually so that they are sending out powerfully engaging messages to all their students, regardless of their social and cultural backgrounds.

3.1.3   'E'ngagement (E) – 'school is for me'

The third perspective of the MeE framework is big 'E' engagement or 'E'ngagement. This comes about as a result of the joint effects of the individual and group strategies undertaken within the psychological (M) and sociological (e) frames. That is, for students to feel that 'school is for me', they have to feel supported as individual learners and as members of a cohesive learning group. It also may be influenced by schools working across their curriculums on policies and practices that complement these individual and group strategies. So it is useful to think of 'E'ngagement as both a positive social outcome as well as a whole-school focus that encourages students to feel valued, supported and catered for at involvement, emotional and cognitive levels. Strategies at this level include:

- a positive school ethos
- curricula choices that support a wide range of learning needs
- a variety of extracurricular activities catering for many different interests
- peer support through mentoring
- the use of role models
- the design of productive post-school options.

Implementing such strategies means, first, that students see that their school will look after them and provide them with a wide range of educationally worthwhile and enjoyable experiences across both curricular and extracurricular areas. Importantly, students also will understand that they will be supported if they need help with learning or behavioural problems. Students will not be left to 'fall through the cracks'. Second, students will see their school as a place that will help them gain the educational resources that are so important for their future lives.

The interplay of motivation, 'e'ngagement and 'E'ngagement known as the MeE framework is shown in Figure 2.

Figure 3.2: The MeE framework (with permission from Munns & Martin 2005)

'E'ngagement
'school is for me'

o School is a place that 'works' for me
o Education is a resource that I can employ
   successfully now and in the future

| Personalisation and adaptation to messages – strategy, support, direction, connection | ⟷ | Realisation of engaging classroom messages – knowledge, ability, control, place & voice |

motivation (M)
adaptive thoughts:
o self-efficacy
o mastery orientation
o value of schooling
adaptive effect:
o energy
o drive
o thoughts
o feelings

'e'ngagement
In the classroom students are:
o actively participating (high behaviour)
o genuinely valuing (high emotion)
o reflectively involved in deep understanding and expertise (high cognition)
Their behaviours show:
o persistence
o planning
o study management

3.1.4   The MeE framework in action

The MeE framework serves a number of valuable purposes. The first and principal function is to provide a means through which the perceived tensions and shortfalls between the psychology and the sociology of education might be reconciled.

The second purpose of the MeE framework is to inform and give direction to a review of the research literature, allow evidence-based research such as case studies, and provide a structure for conducting evaluations.

Taken as a whole, the MeE framework attests to the importance of understanding how individual and group processes interplay. For boys at risk, school and classroom strategies that exploit this interplay in powerful and positive ways have the potential to develop their consciousness that 'school is for me'. This offers a way of overcoming disengagement that plays out in resignation and alienation and invariably results in poor academic and social outcomes.

3.2   Review of research literature

The review of the literature had three distinct areas of focus:

- a conceptual framework for understanding motivation and engagement
- a synthesis of issues and factors impacting boys' educational and social outcomes
- a compilation of evidence-based strategies for improving boys' motivation, engagement and educational and social outcomes.

The methodologies for each area are discussed below.

3.2.1   Conceptual framework for understanding motivation and engagement

The research team used traditional methods of building an argument, using appropriate references to support and explain the developing conceptual framework. Particular attention was paid to identifying the underlying theoretical or empirical basis of key components.

To this end, the team adopted the MeE framework currently being developed at UWS by Dr Andrew Martin and Dr Geoff Munns (Munns 2004; Martin & Munns 2005). This framework provides the foundation understanding of the project's analysis of the factors involved in boys' motivation and engagement. The definitions and issues that surround the notions of motivation and engagement and led to the development of the MeE framework, form the basis of the first part of the narrative review of literature in Chapter 4.

3.2.2   Synthesis of issues and factors impacting boys' education and social outcomes

Here, the team concentrated on analysing and synthesising the rich body of knowledge about the issues and factors impacting boys' academic and social outcomes as identified in recent key government and other privately commissioned reports, from within Australia and the United Kingdom, Canada and New Zealand.

3.2.3   Evidence-based strategies for improvement

In order to generate a rigorous synthesis of evidence-based strategies, the team used a form of qualitative meta-analysis (Boston 2004) to ensure that identified strategies were based on evidence from valid and reliable research. This method involved identifying, collecting and reviewing all available literature; selecting literature for inclusion based on a set of criteria (see below); coding and interpreting selected literature; and, finally, drawing empirically grounded and theoretically informed conclusions by synthesising results across case studies. The following steps, modified from the work of Jupp and Norris (1993) and Spradley (1997) were used.

Step 1: Defining the key search concepts

The first step in the meta-analysis of the literature involved examining a range of different perspectives and current research, focused on the following terms:

- motivation
- engagement
- social and academic outcomes.

Analysis of how these terms were explained in the literature assisted the project team to identify what the existing research studies into motivation, engagement and social and academic outcomes had investigated. This laid the groundwork for an in-depth and focused examination of the research literature on boys' education. This applied to all three sections of the literature review, but particularly to evidence-based strategies.

Step 2: Identification of criteria for the selection of literature to be reviewed

The key criteria for selection of literature for the evidence-based strategies were:

- *Recency*: the research team focused on the last five years (1999–2004). Frequently cited seminal works and reputable works in areas where there was no recent literature were also included.

- *Credible qualitative and quantitative research*: the research team looked for sufficient detail regarding methodology and/or credible reviews of literature. This literature included works published in reputable journals, those commissioned by governments or national organisations and those with sufficient detail about their methodology, such that the research team had confidence that the findings were trustworthy.

The research team concentrated on studies, reports and reviews that focused on:

- issues of engagement and/or motivation
- achievement of academic outcomes
- achievement of social outcomes
- boys, or particular groups of boys, such as Indigenous students, students from low SES backgrounds, low-performing students, and students from rural and regional areas
- early and/or middle schooling.

Particular effort was also put into finding works that focused on literacy, role models and mentoring, and the use of ICTs for learning. The research team found that there was very little literature that focused on ICTs, or mentoring and role models, either for boys in general or for particular groups of boys.

The research team also found gaps in the literature at the intersection of types of strategies and target groups. In many instances, useful literature focused on all students or particular groups of students, such as Indigenous students, but did not differentiate by gender. Similarly, there was little or no literature on students or boys from regional and/or remote locations. Table 3.1 provides an overview of the found literature and indicates clearly these gaps and clusters of focus.

Table 3.1: Coverage of found literature across strategies and target groups

	Whole-school strategies	Classroom strategies	Literacy strategies	ICTs	Mentoring/ role models
All students	✓✓✓✓ ✓✓✓ ✓✓✓✓	✓✓✓✓	✓✓✓✓✓✓ ✓✓ ✓✓	✓✓✓	✓✓✓✓
Boys	✓✓✓✓✓ ✓✓ ✓✓	✓✓✓✓✓ ✓✓✓ ✓✓✓✓✓ ✓✓✓✓	✓✓✓✓✓✓ ✓✓ ✓✓✓✓✓✓ ✓	✓✓✓✓✓	✓✓✓✓✓✓
Indigenous students	✓✓✓✓ ✓✓ ✓	✓✓✓✓	✓✓✓✓		✓✓✓
Indigenous boys	✓	✓	✓		
Low SES students	✓✓✓✓	✓	✓✓✓✓		✓✓
Low SES boys	✓✓✓	✓✓✓✓✓ ✓✓	✓✓✓✓		
Low-achieving students		✓	✓	✓	✓
Low-achieving boys	✓	✓✓	✓✓	✓	
Rural/remote students	✓	✓	✓✓		
Rural/remote Boys	✓✓	✓	✓		
Bilingual students	✓✓✓✓	✓✓	✓✓✓✓✓		✓✓
Bilingual boys	✓✓	✓✓	✓✓✓		

Step 3: Collecting the literature on evidence-based strategies

The research team sourced relevant literature through electronic databases such as ERIC and PsychINFO, as well as online internet sites found through a range of search engines. In particular, recent national and international reports in the area of boys' education were reviewed for relevant references.

Step 4: Reviewing the literature on evidence-based strategies

Each study/report/review was analysed by identifying the proposition(s) that the authors had articulated and then analysing critically the evidence that the authors put forward to support these proposition(s). This analysis included a consideration of the methodological strength of the study in terms of soundness and completeness (Brown & Armstrong 1984; Miles & Huberman 1994). Soundness was assessed in terms of whether there was evidence to support the assertions made and whether the ideas

presented were logical. Completeness was assessed on whether the study solved the stated problem and/or led to significant implications.

The research team included only articles in which the propositions or findings were supported with evidence. In cases where the study was generated by a single teacher in a classroom, the research team ensured that this was indicated in any reporting of the study's findings.

Steps 5 & 6: Coding and interpreting the selected literature

These steps were undertaken in conjunction with one another. A 'coding matrix' was used to assist in the documentation and categorisation of the selected literature. The coding matrix included the following items:

- author
- target/setting
- methodology/duration
- key findings
- methodological strength
- links to motivation/engagement.

The project team discussed the criteria to be used in the coding matrix and established shared understandings of their meanings. This ensured that the codes were used consistently. Each reviewer then conducted a trial analysis of a research article using the codes. The team then met to make any modifications that were necessary to clarify the meaning of terms. When a level of consistency was reached, the studies were divided among the members of the research team and each study was coded and entered into the coding matrix (see Appendix A for the coding matrix).

Step 7: Drawing conclusions on evidence-based strategies

In this final step of the meta-analysis of the literature the researchers' conclusions were evaluated to establish how they contributed to knowledge of effective strategies for improving the motivation, engagement and academic and social outcomes for boys in the early and middle years of school. The key findings from the meta-analysis form the bases of the narratives and the summary tables for each of the following subgroups of strategies:

- home, community and school connections
- whole-school strategies
- classroom-based strategies
- language and literacy strategies.

3.3   Case studies

The purpose of the case studies was to collect evidence and analyse the factors, variables and processes within, or connected to, schools that produce improved motivation, engagement and academic and social outcomes for boys. The particular focus was on schools with significant percentages of Indigenous boys, boys from low

SES backgrounds and boys from rural and regional locations. The resulting analysis of the case studies led to a set of principles and strategies that can now inform both teachers' professional learning and school enrichment programmes, thereby aiding improvement in educational outcomes.

3.3.1 Characteristics of the case study schools

The goal was to select approximately 15 schools which had demonstrated achievement of improved outcomes in boys' education and represented a cross-section of learners, settings, outcomes and intervention strategies. The final 15 case study schools were selected in consultation with the DEST Project Delegate and Project Advisory Committee. The case study schools collectively represent the following characteristics:

- *learners*: ages ranging from preschool to middle years; backgrounds including the target groups
- *settings*: government and non-government sectors; preschool, primary, secondary and a combined primary/secondary school in urban, regional and rural locations
- *outcomes*: improved motivation and engagement; improved academic and social outcomes
- *intervention strategies*: traditional and contemporary curricular, pedagogical and assessment practices (including literacy and ICTs); role models and boys' relationships with teachers, peers, families and community.

While not having priority over the matrix described above, it was planned that the number of case study schools in particular states and territories would be related to population, for example, remote, regional and urban.

Case study schools were to have demonstrated outcomes in terms of measurable improvements in the areas of motivation and engagement, and academic and social outcomes for boys, particularly those in the targeted groups. These outcomes/improvements are listed below.

Motivation and engagement
- improved figures among the relevant groups – over an initial period of three years – for school attendance, school suspensions and retention rates into post-compulsory years
- evidence-based nominations from consultants, professional associations, systems managers (for example, district superintendents) and parent groups.

Educational outcomes
- value-added data on standardised tests and/or external examinations and/or national benchmarks
- value-added data on end-of-schooling assessment
- absolute scores on end-of-schooling assessment, which can be deemed to reflect improved achievement in earlier secondary years

- internally assessed relative academic performance among the targeted groups, including targeted groups which were a relatively small sub-set of the whole school population (for example, Indigenous boys)
- tertiary entrance rates
- evidence-based nominations from consultants, professional associations, systems managers (for example, district superintendents) and parent groups
- performance in competitions and prizes which were regarded by the researchers as evidence-based
- improvements in school completions, attendance, truancy and participation in curricular and extra-curricular activities.

Social outcomes

- evidence-based nominations from consultants, professional associations, systems managers (for example, district superintendents) and parent groups. These focused on areas such as student leadership, community service and citizenship, welfare programmes – especially those focusing on student physical and mental health – and school-to-work programmes.

3.3.2 Processes for identifying potential case study schools

Initially, schools were identified as potential case study schools based on advice in relation to the outcomes/improvements noted above as reported by the following educational organisations and educational researchers

Professor Nola Alloway, James Cook University
Professor Roslyn Arnold, Dean of Faculty of Education, University of Tasmania
Professor Barbara Comber, University of South Australia
Professor Bob Connell, Sydney University
Faculty of Health, University of Newcastle
Professor Peter Freebody, Griffith University
Andrew Fuller, Clinical Psychologist working on resilience and valuing boys
Professor Rob Gilbert, James Cook University
Dr Bobby Harreveld, Central Queensland University
Ms Deborah Hartman, Director, Boys in Education Programme, Family Action Centre, University of Newcastle
Professor Jane Kenway, Monash University
Ms Georgie Nutton, Early Years Programme Manager, Curriculum Services Branch, Northern Territory DEET
Dr Tim McDonald, Edith Cowan University
Dr Glenda MacNaughton, University of Melbourne
Dr Wayne Martino, Murdoch University
Dr Martin Mills, University of Queensland
National Council of the Australian Association for the Teaching of English
Dr Maria Pallotta-Chiarolli, Deakin University
Professional Teachers' Council, New South Wales
Dr Leonie Rowan, Deakin University
Dr Bob Smith, ex-Northern Territory University, now Creative Arts Consultant (Music) to Schools
Professor Faith Trent, Flinders University

The research team also accessed a range of educational reports and websites relevant to boys' education and a number of school websites. With regard to schools who were identified through the *BELS 1* and *BELS 2* projects, the following sources were approached: DEST officers re *BELS 1*; the Curriculum Corporation, who managed the *BELS 1* project; and Professor Peter Cuttance, Director, Centre for Applied Educational Research University of Melbourne and Director of BELS.

Each school identified through nominations, literature, web searches and the *BELS 1* reports provided by DEST was critiqued. Any schools that focused on the relevant target groups, had these target groups within their student population, or appeared to have demonstrable outcomes for boys or particular groups of boys were included in the identified list. This process generated a list of 49 potential case study schools.

3.3.3   From potential schools to selected schools

The list of 49 potential case study schools represented a mixture of the following programmes and strategies.

Target groups

- programmes aimed specifically at boys
- programmes aimed at particular groups of boys, for example, 'at risk' boys within a school
- programmes aimed at whole-school improvement, with valuable outcomes for boys.

Strategies

- programmes with a 'welfare first' approach, that is, programmes either focused on social outcomes with an expectation of subsequent improvements in academic outcomes, or with a second phase that focused on academic outcomes (in the tables below, this is categorised as 'Personal development')
- programmes aimed directly at academic outcomes through pedagogical change
- programmes aimed at both social and pedagogical outcomes through a dual focus on whole-school and in-class engagement.

The research team, with staff from DEST, held a workshop to develop a list of 30 preferred schools based on the information available at that particular time. The focus of the workshop was on identifying – across the range of locations, programmes and strategies – a set of schools with demonstrable outcomes for boys or particular groups of boys.

This final selection of the case study schools reflected the search for a broad mix of sites, locations, programmes and strategies. The workshop used an iterative process of identification of potential sites based on nomination by the two researchers who had collected the data. Their criteria for nominating were breadth of focus (programme and strategies) and the existence of evidence. Each nominated school was discussed in terms of its own characteristics, then in terms of its contribution to the overall collection in terms of location (state/territory and metro/regional/rural); target group (low-performing/low SES/Indigenous); and level (early childhood/primary/ secondary). As new sites were added to the list, discussion returned to sites already on

the list to ensure that breadth of coverage was maximised. This process generated three groups of potential case study schools:

- 15 x 'A' sites: identified as preferred case study schools based on the breadth of potential data they could yield
- 10 x 'B' sites: identified as back-up case study schools able to provide a breadth of data should particular 'A' schools be unwilling or unable to participate
- 6 x 'C' sites: identified as additional back-up case study schools should preferred 'A' and 'B' schools not participate.

Lack of information about the remaining 18 schools meant that they were not nominated for any of the lists. Due to the unavailability of particular 'A' schools, the final selection included some 'B' schools. The final 15 case study schools are listed in Table 3.2.

Table 3.2:   Case study schools

State	Code name	Level	Location	Low perf [1]	Low SES	Indig-enous [2]
NSW	Vermilion	Secondary	Metro	✓	✓	✓
Vic.	Russet	Secondary	Regional	✓		
Qld	Olive	Secondary	Regional	✓		
WA	Cerise	Secondary	Remote	✓		✓
NSW	Teal	Secondary	Metro	✓		
NT	Heliotrope	Primary/secondary	Remote	✓	✓	✓✓
Qld	Amber	Secondary	Rural	✓		✓✓
NSW	Indigo	Preschool	Regional	✓	✓	
Vic.	Hazel	Secondary	Metro	✓	✓	
ACT	Azure	Primary	Metro	✓		
Vic.	Ochre	Primary	Regional	✓		
NSW	Violet	Primary	Regional	✓	✓	✓
SA	Sienna	Secondary	Metro	✓	✓	
NT	Magenta	Primary	Remote	✓		✓✓
Tas.	Cyan	Secondary	Metro	✓	✓	

[1] Low perf = boys with low academic performance
[2] Indigenous: ✓ = Indigenous students in the school
                 ✓✓ = school in Indigenous community

These schools provided the following mix of expected strategies, based on the data available at the time of selecting schools. It is worth noting, however, that the actual results of the case study analysis revealed a slightly different profile.

Table 3.3: Mix of expected strategies

Strategies	Frequency
Personal development Anger management, self-esteem etc.	5
Pedagogy	11
Mentoring	2
Role models (including fathers, community elders etc.)	4
ICTs	2
Whole-school approach	2
Boys' programmes	2
Literacy	7
Mixed programmes	6
Empowerment	2
Vocational education & training (VET)	2
Community links	3

3.3.4 Data collection

Fifteen case study teams were formed. Each team comprised a designated researcher and a research assistant. Each team visited a case study school for three to five days to collect data. Questions asked in each case study are listed in Table 3.4.

Table 3.4: Questions asked in each case study school

Q1a	What is the improvement/problem/issue being addressed? What were the teachers doing? Who identified the problem, and how? How was the response arrived at?
Q1b	How is it currently measured/defined?
Q1c	What is the evidence (qualitative and quantitative) for both the change/improvement and current levels of achievement?
Q2a	What factors/variables/processes/programmes have led to/currently give rise to this improvement?
Q2b(i)	Who/what are/have been the key people/institutions/programmes involved with the improvement? What has been their role/influence? How important are they to the continued success of the area?
Q2b(ii)	What are the teachers (plus others) doing?
Q2b(iii)	What are the students doing? What is different for them in terms of motivation/engagement and outcomes? What pedagogies/strategies are being implemented?
Q2c	What have been the responses to the processes/improvements? What do the teachers/parents/students think of the processes/improvements? Have there been any additional positive outcomes or negative outcomes associated with this improvement?
Q2d	Is there evidence of a relationship between improvement in motivation and engagement, academic outcomes and social outcomes?
Q2e	What are the professional learning outcomes for teachers? What are the changes to overarching school or classroom policies and practices?
Q2f	To what extent are these teaching practices transferable or sustainable? What teacher supports are involved?

Table 3.4 presents the case study methodology in matrix form for each of the above questions. For each case study, the data collected under the various headings in Table 3.4 were reported in a combination of prose and points within a common template to

ensure that there were data to address each question. Each of the case studies was analysed individually and collectively at the cross-case workshop as detailed below. The template report was then extended and refined, and the final case study reports written. Each of these reports was written as a stand-alone narrative providing rich, in-depth descriptions of what was working to achieve improved educational and social outcomes for boys in particular target groups. The reports also included explanations of how and why the strategies seem to be working. The narratives are intended to be easily read by a wide range of educational researchers, educators and other interested stakeholders. It is hoped that this collection of case study reports will provide a realistic picture of these educational settings, their people, purposes, strategies and outcomes, thus facilitating the application of the principles and practices described in other educational settings. The narrative also has the potential to become a resource for a range of professional learning and school development activities.

Table 3.5:   Case study methodology

Question	Probes	What data?	Where/who from?	How collected?	How analysed/ reported?
Q1a, b, c	Change over past 3 years? Recognition (school, system, community)? Impact of success? Impact for whom?	Systems outcomes data School data Awards, prizes, competitions Evaluations Reports Self-concept Interest measures	Consultants Professional associations Systems managers Parent groups	By phone or email, confirmed with documentation from school	Content analysis of field notes, documents and other artefacts
Q2a	Origins of improvement? How achieved? Why? Relationship between factors?	Individual recall/opinion Group recall/ opinion Observation data Lesson/student observation	School executives Teachers Parents Students	Interview Focus groups Documents Artefacts Observational records Checklists Lesson/student observation Other observations	Content analysis Analysis of: Checklists Rating scales Field notes Transcripts
Q2b(i) (ii)	Who achieved? How achieved?	Individual recall/opinion Group recall/ opinion Observation data Lesson/student observation	School executives Teachers Parents Community Students	Interview Focus groups Documents Artefacts Observational records Checklists Lesson/student observation Other observations	Content analysis Analysis of: Checklists Rating scales Field notes Transcripts
Q2c	What? How? Strategy to overcome?	Interviews Observation	School executives Teachers Parents/ Community Students	Interview Focus groups Observations	Content analysis Analysis of: Checklists Rating scales Field notes Transcripts

Question	Probes	What data?	Where/who from?	How collected?	How analysed/ reported?
Q2d	What effects/results?	Individual recall/opinion Group recall/ opinion Observation data Lesson/student observation	School executives Teachers Parents Community Students	Interview Focus groups Documents Artefacts Observational records Checklists Lesson/student observation Other observations	Content analysis Analysis of: Checklists Rating scales Field notes Transcripts
Q2e	How? Outcomes? Limitations? Outside perceptions?	Interviews Observations	School executives Teachers Parents Community Students	Interview Focus groups Observations	Content analysis of field notes, transcripts
Q2f	How? Outcomes? Limitations? Outside perceptions?	Interviews Observations	School executives Teachers Parents Community Students	Interviews Focus groups Observations	Content analysis of field notes, transcripts

3.3.5   Data analysis

The case study teams of researchers were brought together for a two-day data analysis workshop. At this workshop participants actively generated the analysis of the case studies through cross-case analysis and interpretations of the data in relation to the theoretical and empirical findings from the literature review.

This workshop had three key components.

Review of case studies

The first stage of the workshop focused on clarification of issues and the development of common understandings and meanings which were then refined as the cross-case analysis was undertaken (Bryman & Burgess 1994)**.**

Cross-case analyses

The second stage of the workshop involved undertaking cross-case analysis in small groups (Miles & Huberman 1994). Each group focused on a different aspect of the case studies – principles, strategies, MeE framework – and used a different analytical technique: replication strategy, multiple exemplars, clustering and pattern clarification. The data, analyses and interpretations generated through these strategies were discussed, synthesised and refined to develop a set of principles and practices.

Collective self-critique of relationships between principles and practices

The final workshop activity involved the research team dividing into small groups to work with the draft principles and strategies. The aims of this activity were to verify direct relationships between the identified strategies to ensure consistency with

evidence available from the literature review and to situate these relationships within the conceptual framework developed as an outcome of the literature review.

3.3.6   Validity

The case study research employed a number of strategies to ensure the validity of data collection and analysis. These included triangulation through the use of multiple sources of data, a range of data collection methods and member checking.

The research was conducted across multiple sites and with a range of participants, including teachers, teacher's aides, family members and students. Methods of data collection included interviews, focus groups, observations and artefact collection. Where possible, researchers sought several sources of information for each of the key questions to ensure that different perspectives were represented and also to guarantee a measure of data integrity. The interviews and focus group discussions used a semi-structured approach. One set of questions was used as prompts for all participants. When in situ, it was the responsibility of the researcher to contextualise the questions, adapt the language and, where appropriate, use probes to elicit the required information.

Training and support were provided for case study researchers. Prior to undertaking the research, all case study researchers participated in either a teleconference or face-to-face workshop on the background of the project, the main findings from the draft literature review, protocols for the site visits, and analysis and reporting requirements. All case study researchers were also provided with a copy of the draft literature review and the case study work plan, including the interview and focus group questions.

The process of member checking was also used to ensure validity Draft case study reports were sent back to the schools for comment by participants in the project and, if necessary, were refined based on the resulting feedback.

The involvement of a large research team with different backgrounds and experiences encouraged the consideration of diverse theoretical perspectives in the research design and data analysis. The involvement of all case study researchers in the case analysis workshop enabled a range of viewpoints to be examined. This provided the opportunity for discussion of key findings, refinement of case study reports and the identification of additional data to be collected or further analysis to be undertaken. This discussion in turn informed the writing of the final versions of the case studies and the development of the principles and strategies.

In combination, these strategies were designed to ensure a consistency of approach in both the information collected and the reports written for each of the site visits.

4 LITERATURE REVIEW

4.1 Introduction

The review of literature into the motivation and engagement of boys has three specific focal points. The first concentrates on definitions and issues surrounding motivation and engagement. The second identifies the key issues and factors in boys' academic and social outcomes and links these back to motivation and engagement. The third focuses on research about school and classroom strategies that have been shown to be effective in improving the academic and social outcomes of boys. These are discussed in the following three sections.

4.2 Motivation and engagement

4.2.1 Defining motivation and engagement

Definitions of motivation and engagement in the research literature cover a range of theoretical constructs. For that reason, this section of the literature review aims to contribute to efforts to resolve continuing tensions surrounding different conceptualisations of motivation and engagement.

Motivation and engagement share a common theoretical and practical orientation. They exist in an interactive relationship that sees each as flowing from, dependent on, or a crucial component of the other. Two current yet distinctive theoretical perspectives have been utilised in this review. The first is Martin's (2002a, 2002b, 2005) work on student motivation. The second is the meta-analysis of research into student engagement conducted by Fredricks, Blumenfeld and Paris (2004). Taken together, this research provides the most up-to-date review of over 50 years international scholarship on student engagement and motivation. Each of these perspectives is briefly discussed in turn.

Martin (2002b, 2005) sees motivation and engagement as integral parts of a positive orientation to education. However, he defines motivation as an 'individual energy', whereas he sees engagement as a flow-on from that energy. Thus 'motivation can be conceptualised as students' energy and drive to learn, work effectively, and achieve to their potential at school' (Martin 2002b, p. 35). By contrast, Martin defines 'engagement' as the thoughts, emotions and behaviours that follow from this energy and drive. Martin (2005) has conceived of a wheel that brings motivation and engagement together. This has been discussed in Chapter 3 when the MeE framework was described (see Figure 3.1, page 26). For literature related to the wheel, refer to the full literature review in Appendix A.

Fredricks, Blumenfeld and Paris (2004) see motivation as a vital component of a wider engagement construct. They argue that engagement is multifaceted. It can be defined as *behavioural*, such as involvement in academic and social/extracurricular activities. This is similar to Martin's 'adaptive behavioural dimensions'. It is also emotional, being evident in positive and negative reactions to schools, classes,

teachers and peers. It also has a cognitive dimension. This is expressed in thoughtfulness and willingness to comprehend complex ideas and master difficult skills. This has its parallel in Martin's 'adaptive cognitive dimensions'.

The Fredricks, Blumenfeld and Paris conceptualisation of engagement is important. However, their positioning of motivation as the thinking and energising aspect of the processes of engagement restricts the exploration of significant theoretical and research perspectives around the multidimensional nature of student engagement. With this in mind, a conceptual framework outlined in Chapter 3 holds motivation and engagement in a dynamic tension. The framework incorporates Fredricks, Blumenfeld and Paris' (2004) meta-engagement construct. At the same time it attaches complementary importance to Martin's (2005) insights about student motivation. The project reported here has tested and refined this framework as a means of improving our understanding of the complexity of relationships between boys and their schooling and education.

4.2.2 Motivation and engagement: Student outcomes and school factors

Educational research has produced wide-ranging evidence that all behavioural, emotional and cognitive aspects of engagement have a strong positive correlation with student achievement. The research indicates that higher levels of behavioural engagement, emotional engagement, cognitive engagement have positive correlations with students' academic achievement (Marks 2000; Voelkl 1997; Nystrand & Gamoran 1991). Research also points to links between engagement and school retention (Connell, Spencer & Aber 1994). Students with low behavioural engagement are less likely to remain at school, and higher levels of emotional engagement can keep at-risk students at school (Wehlage et al. 1992).

School and class factors influence engagement. These include positive student management; shared control; cooperation between teachers and students and the promotion of extracurricular activities at school-level (Finn & Voelkl 1993; Lee & Smith 1995), and teacher support (Skinner & Belmont 1993), positive peer influences (Kindermann, McCollam & Gibson 1996), class climate (Fredricks et al. 2002) and task characteristics (Newmann, Wehlage & Lamborn 1992; Marks 2000; Fredricks et al. 2002) within classes. They are all highly influential in encouraging student engagement.

Students' understandings of work norms is another factor impacting positively on behavioural, emotional and cognitive engagement (Fredricks et al. 2002). Research indicates that, when tasks are authentic, allow students ownership, involve cooperation and are fun, then engagement is enhanced (Newmann, Wehlage & Lamborn 1992). Across both the motivation and 'e'ngagement dimensions of the MeE framework are a number of individual needs that are important for the development of positive school and class relationships:

- for relatedness: caring and supportive environments make students feel as though they belong and enhance their academic engagement (Furrer & Skinner 2003)
- for autonomy: students are more likely to be engaged when they have greater control over their own learning (Connell & Welborn 1991)

- for a sense of increasing competence: this is met when students believe that they can bring about their own success and can see clearly what they need to do to achieve in the classroom (Rudolph et al. 2001).

4.3   Boys' education

4.3.1   Issues and factors

A number of government reports in Australia have highlighted the factors and issues affecting the education of boys and made recommendations about ways to improve their academic and social outcomes (Collins, Kenway & McLeod 2000; House of Representatives 2002; Trent & Slade 2001; Lingard et al. 2002; Martin 2002a). Other privately commissioned reports have supported their findings (see, for example Cresswell, Rowe & Withers 2002). There have been parallel reports in New Zealand (New Zealand Education Review Office 1999, 2000), the United Kingdom (Ofsted 2003a) and Canada (Quebec Ministry of Education 2004). These official reports have both reflected and informed public debates about boys and schooling in these countries. These debates have centred on issues relating to binary oppositions between boys and girls and masculinity and femininity. Generally, these debates have been played out within discourses of:

- 'poor boys' (victims of single families, female-dominated schooling and feminism)
- 'failing schools, failing boys' (ineffective schools in relation to measurable literacy and numeracy outcomes)
- 'boys will be boys' (stereotypical characteristics of boys at odds with the ways schools and classrooms operate) (Foster, Kimmel & Skelton 2001).

A synthesis of the main ideas informing these reports, as well as what they see as critical factors impacting on boys' education have been included in the complete literature review at Appendix A. It is important to recognise that Australian educational research has moved away from essentialised views of either boys or girls as single unified categories, winning or losing the educational race. Although this movement represented an important theoretical shift, it was certainly not uncontested in debates within media and by writers such as Biddulph (1997).

Taken together, international and Australian research has consistently drawn attention to factors associated with the different behaviours and attitudes displayed by boys at school. These behaviours and attitudes are influenced by peer relationships and the construction of stereotypical views of boys' masculine identity. This research also highlights the ways that boys now learn and how this is affected by, and impacts on, the curriculum. Literacy is an area of great significance to boys' achievement, while the importance of quality teaching, as evidenced in productive student–teacher relationships, is a recurring theme throughout this research.

4.3.2   Boys' academic and social outcomes

In the high-tech world of the early twenty-first century, definitions and practices of literacy must now attend to the notion of 'multiliteracies' (New London Group 1996;

Jones Diaz & Makin 2002; Zammit & Downes 2002). The term 'multiliteracies' highlights the influence of the ever-advancing ICTs in education and society:

> *Meaning is made in ways that are increasingly multimodal – in which written linguistic modes of meaning are part and parcel of visual, audio, and spatial patterns of meaning. Take for instance the multimodal ways in which meanings are made on the World Wide Web, or in video captioning, or in interactive multimedia [e.g. mobile phones], or in desktop publishing, or in the use of written texts in a shopping mall. To find our way around this emerging world of meaning requires a new, multimodal literacy.* *(Cope & Kalantzis, 2000, pp.5–6)*

Research into multiliteracies has revealed the importance of teaching understandings of language and literacy codes; multimodal reading and writing practices; multimedia authoring skills; multimedia critical analysis and internet exploration strategies (Alloway & Gilbert 2002a). Students benefit from knowledge-producing pedagogies that engage them in the design and control of texts in a range of genres and modes (Lo Bianco & Freebody 1997).

The social dynamics of classrooms and the provision of curriculum that connects to students' lived knowledge networks are vitally important for improving academic outcomes for all students (Education Queensland 1999; Alloway et al. 2002). Teachers who encourage discussions, negotiation and collaboration share their power with their students (Education Queensland 1999). A curriculum that connects to boys' out-of-school experiential learning and the knowledge networks they find personally meaningful will result in increased emotional engagement in learning, along with positive academic and social outcomes (Mills 2001; Alloway et al. 2002). Educational research into the social outcomes of schooling suggests a number of areas for making interventions likely to enhance the success of boys' education. These include, but are not limited to, programmes that:

- develop the emotional literacy of boys
- demonstrate strong respect for boys by increasing their competency and feelings of self-efficacy
- focus on interpersonal and intrapersonal intelligences
- analyse, critique and challenge forms of masculinity that lead to anti-social outcomes.

4.4   Strategies for improving the motivation, engagement, academic success and social outcomes of boys

The strategies for improving the motivation, engagement, academic success and social outcomes for boys from low-SES, Indigenous, rural and regional backgrounds are discussed in four sub-sections. First, consideration is given to research evidence about home, community and school connections. Much of this research has given particular attention to family involvement and support for student learning, as well as the connections between students' classes and the local and wider community. Second, research about whole-school strategies is discussed. These strategies have been put in

place to develop stronger student relationships between schooling and education and so open up opportunities for future success in life. The research reviewed here highlights issues of school climate, structure and organisation. Third, research about classroom strategies is covered, with evidence relating to pedagogy, curriculum and relationships. Fourth, research about English language and literacy strategies is given specific attention, as the evidence suggests these are areas of major concern in boys' education. The research in this area is critical, given the importance of proficiency in English language and literacy for boys' motivation, engagement, social performance and academic outcomes.

4.4.1 Home, community and school connections

Research points to the advantages of family involvement in boys' education. Boys of all ages and backgrounds benefit from partnerships between families and educational institutions. This section analyses and synthesises research on family involvement, family support for students' learning and links to community experiences. The connections between home, schools and communities are broader than just parental involvement. These extend to students' out-of-school interests and experiential learning, and the knowledge networks within their homes and communities. Epstein and associates (2003) report that these intersecting influences enhance student success when the three spheres of school, community and family are closely linked (Epstein et al. 2003). Schools and early childhood settings that have implemented strategies to bring all three spheres closer together see enhanced student success. However, families' decisions about their capacities to participate are formed and informed by their work/life circumstances and their prior educational experiences as much as the attitudes of the educational setting.

The research suggests that the complex relationships between families, communities and schools have a special significance for the academic achievement and social success of students from educationally disadvantaged groups. The evidence indicates that boys from all backgrounds benefit from family and community involvement. More research is required, however, into strategies for improving the motivation, engagement, social performance and academic outcomes for Australian boys from low-SES, rural, Indigenous, and regional backgrounds (Lingard et al. 2002).

4.4.2 Whole-school strategies

Research into whole-school strategies has reported on a number of ways in which schools are working to improve boys' social and academic outcomes. The importance of teacher professional development and its effect on whole-school awareness of and commitment to addressing factors which impact on the relationship between boys and education is a recurring theme. The research points to the value of mentoring for boys' education and of continuing the debates around single-sex schools and classes. Key strategies evidenced in the research include (Refer to Appendix A for the related research):

- professional development in relation to pedagogy and understanding and valuing boys resulting in improved social and academic outcomes
- challenging dominant masculinities resulting in improved social and academic outcomes

- mentoring and improved social and academic outcomes
- whole-school strategies for minority and Indigenous students.

In relation to single-sex schools and classes, the literature review produced mixed results. Some research indicated improved achievement from single-sex schools; some had little or no evidence of improvement from single-sex schools; some showed the dangers of single-sex classes; yet other found improvements in classroom climate in boys-only classes.

4.4.3   Classroom-based strategies

The following two sections focus on research into classroom strategies for boys that impact positively on their motivation and engagement, thus leading to improvements in their social performance and academic outcomes. The first section summarises key findings from the research about the strategies used in effective classes for boys. The second section builds on this discussion to synthesise evidence from the research about English literacy and language strategies. Taken together, these two sections present a coherent picture of classroom-based strategies that the research evidence suggests will bring about improved social and academic outcomes for boys from low-SES, Indigenous, rural and regional backgrounds

In classroom-based strategies the motivation and 'e'ngagement components of the MeE framework come into play. The motivation component provides an evaluative frame for examining evidence of the impact of classroom-based strategies aimed at helping individual boys to build and maintain their motivational strengths and to remedy impeding or maladaptive areas of motivation. It is useful also in evaluating research into pedagogies intended to develop boys' academic resilience. The 'e'ngagement component provides an evaluative frame for examining evidence of teaching practices intended to increase student engagement, concentrating on the classroom-based interplay of behaviour, emotion and cognition at high levels. It is useful also in evaluating research into equity issues facing different groups of boys regarding their engagement or otherwise with the messages mediated through classroom-based curriculum, pedagogy and assessment systems. The motivation and 'e'ngagement components highlight the important work of teachers in constructing and maintaining boys' classroom-based relationships.

Research into boys' education has established that there are significant numbers of classroom-based elements that result in advancements in the social and academic achievement of boys. These include:
- an ethos that encourages improved classroom-based relationships and productive classroom-based activities
- classroom activities and strategies that incorporate active learning approaches
- curriculum approaches that make classroom-based activities interesting and worthwhile (for example, contextually embedded in real-life examples and issues)
- the kinds of teachers who develop positive classroom relationships with boys and help improve motivation and engagement (teachers who exhibit interest in and know their male students, who have high expectations and 'demand' work in a friendly way, and who develop interesting teach/learning experiences).

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Detailed discussion for these strategies can be found in Appendix A.

4.4.4 Language and literacy strategies

The research into language and literacy approaches with boys has identified a number of pedagogical and curricular interventions that might be considered by educators concerned with the motivation and engagement of boys from Indigenous, low-SES, rural and remote backgrounds. The evidence suggests that these boys might benefit from thoughtful and tactful integration – through responsive and supportive pedagogies – of their experiential knowledge about language and literacy into class-based teaching/learning activities. Studies have also pointed to a number of curricular approaches using ICTs that are likely to have positive impacts on such boys. There are some concerns, however, about imposing a single, unified approach to address the educational needs of these boys. These concerns reinforce the importance of enhancing teacher professionalism in order to generate effective evaluative data and make informed professional judgements. The language and literacy strategies reviewed in this section are:

- the positive impact of an integrated culture of literacy – taking an integrated approach across the curriculum
- effective writing strategies; for example, ensuring that boys understand the technical skills of writing and understand the meaning and purposes of writing
- effective cooperative experiences – making reading a socially constructed activity by giving the students the opportunity to discuss between themselves the relevance of the text to other texts and to their lives
- the importance of oral language in improving in writing
- the value of explicit teaching of reading and writing – providing clear objectives, a variety of text types, content that engages the interest of boys and questions that promote understanding
- the value of teacher feedback – effective assessment and constructive feedback from teachers
- the need for high but realistic expectations
- the positive impact of the integration of ICTs
- linking literacy to boys' experiences and popular culture
- multimodal texts and boys' interests
- the dangers of generalising content for boys
- boys and critical literacy.

4.5 Conclusion

This review of the research literature provides:

- a conceptual framework for understanding motivation and engagement
- a synthesis of issues and factors impacting boys' educational and social outcomes
- a compilation of evidence-based strategies for improving boys' motivation, engagement and educational and social outcomes.

The MeE framework is proposed as a conceptual framework for understanding the psychological and sociological mechanisms that contribute to the positive and/or negative social and academic schooling outcomes for boys, particularly boys from low-SES, Indigenous, rural and NESB backgrounds. The review explains the MeE framework in terms of its potential for giving direction to teachers' efforts to improve their practices. The framework has two main strengths: first, to evaluate and situate individual strategies and approaches; and second, to provide a lens for reviewing a whole-school approach to the issues of improving boys' outcomes. In the 15 case studies, which are outlined in the next chapter and detailed in the Appendix B, the MeE framework is used to introduce each of the case studies and to analyse their approach.

The synthesis of issues and factors impacting on boys' educational and social outcomes clearly points to the complex interrelationships between the social, economic, cultural and educational contexts within which boys' schooling occurs. It reinforces the idea that we need to be asking ourselves continually 'Which boys?' and makes plain that there is no simple solution. It is with these two caveats in mind that the review provides an indication of the range of educational interventions that have, in particular environments, shown measurable improved outcomes for particular groups of boys. Combined with and refined by the evidence arising from the case study reports, these strategies are put forward in the final chapter of this report for consideration by systems and teachers seeking to improve the educational and social outcomes of boys in their schools.

5   CASE STUDIES

5.1   Introduction

The MeE framework provides a strong connection between theory and practice. In bringing together psychological and sociological approaches it helps educators to comprehend the complex individual and group processes they need to consider when they are trying to develop strong positive student relationships with their classrooms, schools and education. It can point to individual student support strategies (M), changes to whole-classroom teaching and learning experiences (e), and school policies and practices at a whole-school level (E), while highlighting a strong interplay between the three perspectives. It is also sensitive to an evaluation of particular areas of need that different schools might identify as their specific points of concentration at any period of time. For example, a school with a group of highly disengaged boys whose aggressively resistant behaviour is putting a great deal of pressure on the school and their classrooms might begin by developing a special programme of interest-based activities outside normal classroom work. This would be working primarily from the motivation (M) perspective. Another school might believe that the best way to improve student relationships among largely disinterested boys is through restructuring teachers' classroom pedagogies so that all students are involved in high-interest and intellectually challenging learning experiences. This would be a strong 'e'ngagement focus. A third school, noting that boys have few post-school options, might start with 'E'ngagement strategies involving VET by developing strong links with community industries. Regardless of whether schools start with a particular focus or adopt a broad range of strategies, the MeE framework has an embedded argument; for schools to encourage strongly motivated and engaged students, motivation, 'e'ngagement and 'E'ngagement processes all need to be considered seriously.

The 15 case studies in this research show schools that have taken up the significant challenge of working towards improving social and academic outcomes for their boys. The complete case study reports are at Appendix B. These case studies reveal a variety of policies, interventions and strategies, reflecting the different educational decisions that each school has made as a result of identifying its particular contextual needs. It also highlights the different stages that each school has reached on a significant educational journey. For each of these educational stories, the MeE framework offers a vantage point that allows us not only to make explicit, in theoretical terms, the immediate work at hand, but also to point to possible future directions. The complex dynamic within the individual, social and cultural relationships of motivation and engagement captured within the framework means that it is not always possible to locate each school's interventions neatly within a particular perspective (M, e or E). Indeed to attempt this is not to appreciate fully the interrelatedness and interplay at the heart of the framework. Nonetheless, the case studies are presented in an order that invites a systematic consideration of where each school's activities are positioned across individual support strategies, group learning experiences and whole-school policies and practices.

5.2   The case studies

Vermilion is a secondary school in a very needy public housing estate on the outskirts of a large Australian city. The main feature of this story is the way the school has responded to a large group of under-achieving and aggressive 'lost boys'. Vermilion's *Boys' Project* is a powerful example of a motivation (M) strategy, aimed at encouraging individual disengaged boys to improve their attitudes to schoolwork and their relationships with the school. It is also interesting to see how this intervention works with an ethos of pressure and support (E) and critical changes to the quality of classroom pedagogy (e).

The *Russet* case study school is of a school in a much more advantaged community. While this offers some immediate striking contextual contrasts, it shows that issues of disaffection and lack of school success cut across social and cultural groups. Alongside the Vermilion case study, it highlights another whole-school strategy (*Mindware*) aimed at improving the motivation (M) and, consequently, the behaviour and performance of its Year 9 and Year 10 students. *Mindware* is for all students, although its constructivist and enterprise underpinnings are thought to be particularly suitable for boys. Both the Vermilion and the Russet programmes work on principles of project, choice, mentoring and celebration of success, and both operate outside normal classroom structures. Russet's work in motivation is also strongly supported by movements towards engaging classroom experiences (e).

Another school project with a strong motivation (M) focus is found in the third case study. *Olive* High School identified a number of boys whose low levels of literacy and academic under-achievement indicated that they were in danger of become disengaged. In many ways similar to the authentic and contextualised nature of the interventions described in the Vermilion and Russet case study schools, the Olive *Small Motors* programme aims to improve the boys' adaptive thoughts and behaviours at the same time as addressing their literacy development. It differs in that its practical and technical nature is much more tightly focused around future work possibilities in the local rural and mining community.

The fourth case study school, *Cerise* High School, also takes up the school-to-work challenge as a way of addressing its boys' social and academic problems of retention, truancy, disengagement and low literacy levels. Within its remote community, its *Pathways* programme targets the 'E'ngagement (E) perspective by working with the local technical education institution and industry to provide viable post-school options for its boys. As with many of the case study schools, Cerise High School recognises the importance of a multifaceted approach and has designed literacy interventions and a cultural programme that cater particularly for Indigenous boys. These supportive strategies straddle both the motivation (M) and 'e'ngagement (e) perspectives of the MeE framework.

Teal High School has a much wider 'E'ngagement (E) focus to its programmes. In a similar way to the first three case studies, there is a central strategy (*Machismo*) that aims to challenge the relationship that its low-SES boys have with school and

education. The difference here is that this is a creative and performing arts programme, which presents an intriguing contrast to the more practical and technical interventions of some of the previous case studies. While the *Machismo* programme seems to work most acutely across the motivation (M) and 'E'ngagement (E) perspectives, Teal High School also has a wide variety of other strategies that target individual motivation (M) and classroom learning (e). It widely addresses motivation and engagement and so also may be compared with schools such as *Sienna*, *Magenta* and *Cyan*.

The sixth and seventh case study schools, *Heliotrope* and *Amber*, are both primarily concerned with the social and academic outcomes for their significant numbers of Indigenous students. The Heliotrope case study highlights the importance of cultural awareness when making policy, curricular and pedagogical decisions, and also makes some important observations about the sustainability of programmes. With its wide focus across the MeE framework, the case study builds on insights from previous case studies, while overlaying further cultural understandings within its specific attention to Indigenous education. Amber High School presents a different approach to strategies for its Indigenous students, although the school also adopts a multipronged approach to deal with similar issues of low literacy levels and disengagement. There are VET initiatives (E) and changes to classroom pedagogies (e). The case study also makes some interesting observations about the withdrawal of students and so picks up issues at the intersection on motivation (M) and engagement (e).

While signs of boys' disengagement from school invariably reach their most visible peak in the middle years of secondary school, the *Indigo* case study school offers a timely reminder that boys' issues need to be carefully considered across the whole continuum of schooling. Indigo Preschool draws attention to a number of critical issues identified as impacting on its boys. Not the least of these is the way that boys see themselves and the effect that viewpoint has on their current and future education. The preschool throws out important challenges to stereotypical 'boys' business' from its community relationships and its classroom practices. Here is a decisive interplay across individual (M) and group processes (e). Indigo also sheds important light on the transition from early childhood to school education.

Another school interested in addressing critical transition points is described in the ninth case study school. *Hazel* High School works closely with a cluster of primary feeder schools to ensure quality and consistency in its pedagogy. This is a valuable process that bolsters student engagement across both primary and secondary levels. The case study underlines a concerted effort to bring about classrooms where students actively participate in learning experiences of high intellectual quality. It is a strong 'e'ngagement (e) focus with clear messages to students around their knowledge, ability, control, place and voice. Moreover, Hazel High School ensures that it has support (M) processes in place for those students in danger of 'falling though the cracks' by offering them academic support and helping them to alternative post-school options. It is a case study where the flow-on to 'E'ngagement (E) from its interventions is palpable.

The next three case studies describe the work of primary schools. Each serves a markedly different community and has developed unique approaches to their contextual issues. *Azure* Primary School is a city school where focused literacy

strategies (cooperative and integrated with ICTs) are working alongside a wide range of whole-school sporting and arts activities. It is clear from the case study that there is a strong ethos of catering for all students (E). Within this ethos there are strategies to encourage students to see the value of schooling (M) and the quality of classroom experiences (e). The *Ochre* case study school has a very dedicated application to the nature of classroom pedagogy. It offers insights into distinctive teaching and learning approaches that aim to provide the active involvement, passionate positive feelings and high cognitive demands that characterise 'e'ngagement (e). This case study shows that consistency in approach and a strong theoretical basis for the design of learning experiences results in a strong embedding of 'e'ngagement (e) and 'E'ngagement (E). Here is persuasive illustration of the 'future in the present'. *Violet* Primary School serves a disadvantaged community that has typical correlations of low academic levels (most noticeably in literacy) and aggressive behaviour among its boys. The school has developed interventions across all perspectives of the MeE framework, while paying particular attention to individual boys' motivation (M). Importantly, the case study shows a school in the early stages of its journey towards improving the social and academic outcomes of its students. Taken together, these three case studies make an important contribution to an understanding of how different contexts invariably demand different policy, curricular and pedagogical decisions. They further illustrate the usefulness of the MeE framework in an analysis and evaluation of different pathways towards 'E'ngagement (E).

The final three case studies provide salient examples of schools that have adopted a wide range of strategies across all perspectives of the framework. *Sienna* High School has an ethos of developing resilience across its whole school community and so is held together by strong ideas about individuals developing adaptive thoughts and behaviours (M). From this focal point come a number of interventions that target individual social needs and group learning processes (e). What is evident from this case study is the school's firm commitment to catering for a wide variety of students, irrespective of their situation, needs and interests. This results in developing a belief among students that their school can offer them support at cognitive, emotional and participatory levels (E).

The *Magenta* Primary School case study also describes a school which has a multilayered approach to improving social and academic outcomes for its students (many of whom are Indigenous). This approach highlights the critical interplay of school ethos (E), individual support strategies (M) and whole-class approaches to literacy learning (e). Importantly, the case study provides an insight into how a school can reflect positively on its own circumstances and work towards socially just changes that aim to benefit the neediest students. This results in robust and widespread benefits for the whole school community.

The final school provides a fitting conclusion to the collection. *Cyan* High School is an impressive illustration of cohesive intervention across all perspectives of motivation and engagement. It is a story of innovation and challenges to the traditional educational processes that work against many boys in schools. There are individual support policies (M), whole-classroom processes giving students voice and control (e) and a wide range of whole-school strategies aimed at 'catching' all students. Across this interplay of perspectives are powerful messages that drive towards a core student belief that 'school is for me'.

Motivation and engagement in the case study schools

These case studies have highlighted different ways to approach the challenging task of improving the relationships that boys have with education, schools and classrooms. There is a dynamic to this complex relationship that straddles individual, relational and holistic perspectives, and this dynamic is picked up by the joint psychological and sociological focus of the MeE framework. The framework provides important opportunities not only for exploring the different strategic positions that schools have adopted to improve boys' motivation and engagement, but also for evaluating the effectiveness of those strategies. Before undertaking this exploration and evaluation it is important to revisit a number of important ideas embedded within the framework.

The first is that the MeE framework points to the need to consider boys' school and classroom relationships from multiple perspectives. There is the perspective of individual support (Motivation); this is designed to maximise positive (adaptive) and minimise negative (impeding and maladaptive) thoughts and behaviours. This support often targets boys who are displaying open signs of active and passive disengagement.

Another perspective is the reshaping of classroom pedagogies and curriculum with the aim of offering learning experiences that encourage high-level cognition, emotion and participation. This 'e'ngagement focus inevitably works from within a social justice agenda and is aimed at enhancing social and academic outcomes for all students, not just those who are most in need.

The final perspective of 'E'ngagement is the critical role a school can play in encouraging all students (especially those who are disengaged) to feel widely valued, supported and accommodated at involvement, emotional and cognitive levels.

The second is that schools might choose to begin their interventions from any perspective of the framework, and the third idea is that, in order to bring about strong and enduring levels of motivation and 'e'ngagement, there is a valid argument that schools need to adopt approaches and strategies across all three perspectives of the MeE framework.

The final important idea is that there are critical connections between all areas of the framework. The support for individual students' cognitive and behavioural lives connects with engaging messages embedded within productive classroom learning experiences. Together, these work towards students becoming 'E'ngaged with school. This 'school is for me' level of engagement is further encouraged and supported by whole-school policies and practices. Such interconnectedness between the three perspectives means that it is not always easy to separate school, classroom and individual interventions into discrete areas. Nonetheless, this process provides a central evaluative process that examines the focus and nature of schools' efforts to improve the relationships their students have with education.

Following is a summative discussion of the motivation and engagement strategies of each case study school using each perspective of the MeE framework.

Motivation

The school strategies that focus on individual support typically target boys who are either already disengaged or showing signs that they are likely to be disengaged. Interventions are generally characterised by their physical and 'hands on' nature, their opportunities for reflection, their connections with the local and broader community and an out-of-classroom or off-campus orientation. Activities in the motivation perspective of the MeE framework are intended to improve students' beliefs about themselves, foster positive attitudes towards learning, achievement and school, develop adaptive thoughts and behaviours about schoolwork, and enhance students' study skills. These activities combine to encourage students to believe that there are good reasons for remaining at school and concentrating on their learning. Motivational strategies detailed in the case studies may be considered within the following four categories:

- cultural basis
- focus on social outcomes
- enterprise focus
- teacher-directed technical focus.

Four of the case study schools are serving significant numbers of Indigenous students and have introduced culture-based programmes to encourage higher levels of motivation among individual students. These programmes are designed to link the students' community 'lifeworlds' to the world of the school, with its mainstream and non-Indigenous business. One way of achieving this is by involving students in cultural activities during school time, but in traditional settings and in association with community mentors, role models and elders. The Cerise and Heliotrope case studies provide useful examples of these kinds of programmes. Another approach is to help Indigenous students cope with the demands of schools and classrooms by offering them a culturally sympathetic learning environment where staff can assist students to develop appropriate skills and attitudes. The *Community Outreach* programme and the Indigenous Bridging Unit at Magenta Primary School give important insights into the implementation and success of such interventions. Likewise, there are Indigenous literacy and numeracy support strategies at Amber High School, although it is interesting to note from this case study that the Indigenous students in these programmes wanted to return to mainstream classes and not be taught as a withdrawal group. This led the initiative to have much more of an 'e'ngagement perspective.

Motivation interventions classified as working towards social outcomes are those that aim to develop social skills and attitudes, but which invariably sit outside the mainstream school curriculum. There are commercially available programmes such as *Rock and Water* (used at Magenta Primary School and Violet Primary School), *Boys' Business* (Magenta Primary School), *FISH* and *Bounce* (Sienna High School). Some of these involve boys' physical activity. Others are more specifically aimed at teachers or parents, but all involve reflections about self-control, communication and developing positive peer, familial and community relationships. Other schools have developed their own programmes, based on the perceived needs of their community. The *Warrigal* leadership and management programme at Cyan High School, the '*Yes, We Can*' course at Violet Primary School and the *Chill Out* programme at Sienna High School demonstrate the development and implementation of these kinds of programmes.

Two schools have devised programmes that not only target social outcomes but have strong academic connections through their constructivist and enterprise focal points. These innovative schemes are the *Boys' Project* at Vermilion High School and *Mindware* at Russet High School. The initiative at Vermilion High School began by targeting a small group of highly disengaged boys and has now grown to the point that it is offered to all boys in Years 7, 8 and 9 and has even been extended to senior boys in the school's primary feeder schools. At Russet High School, *Mindware* is available to all Year 9 students but is recognised by the school as being particularly suitable for boys. Both schemes have a project focus, and students are actively involved in setting their own goals and directing their own learning. Both programmes take place outside the normal classroom environment and in the community, and both have a strong mentoring component. At the conclusion of each programme there is a presentation and celebration of achievement followed by rewards in the form of excursions and enjoyable activities. The *Boys' Project* and *Mindware* have been very positively evaluated by students, teachers and their communities and also recognised by the wider educational community.

The final group of approaches detailed in the case studies which are designed to motivate students has a practical and technical orientation. These have close associations with the vocational education strategies discussed elsewhere. In this sense they differ from the *Boys' Project* and *Mindware*. They also vary subtly but significantly from those schemes, in that they contain a defined technical skills base which is taught under strong teacher direction. This means that there is less autonomous and self-directed learning. An example of this kind of intervention among highly disengaged boys is the *Small Motors* initiative at Olive High School, where weekly sessions of working on real motors with teachers, TAFE lecturers and community mentors are conducted in an informal classroom setting. This programme has an important literacy focus and varies from normal classroom structures in its pedagogy and class sizes, thus arguably presenting 'e'ngagement connections. Cyan High School runs a similar intervention – *Autoworks* – and also offers an *Agriculture* programme that caters for specific student interests.

Outside the four main categories of major individual support programmes described in the case studies are various examples of ways in which students enhance motivation through literacy support (Cyan High School, Violet Primary School) and peer mediation (Amber High School). The use of role models and peer and cross-age tutoring/ mentoring (discussed elsewhere) also perform important functions within the motivation sphere.

'e'ngagement

When schools decide to concentrate on the relational perspective of the MeE framework, they become as interested in the work of teachers and their pedagogies as they are on the thoughts, feelings and behaviours of students. The aim is to bring into play *classroom* learning experiences that target multifaceted definitions of 'e'ngagement. That is, when teachers accept that the term 'e'ngagement can only be applied when there are high levels of student cognition, emotion and participation, then they purposefully design classroom activities that encourage deep understanding and expertise, genuine enjoyment and valuing of what students are doing, and active

involvement in what is being learned. This brings forward engaging messages around knowledge, ability, control, place and voice. This 'e'ngagement perspective has a whole-class focus that also takes up a social justice position. The rationale is that classroom decisions considered from the position of the most disadvantaged will bring benefits to all students. Within the concerns of this report, this means that classrooms working towards 'e'ngagement will enhance social and academic outcomes for at-risk boys at the same time as they offer advantages to all students.

Pedagogical changes as pathways to 'e'ngagement contained in the school case studies generally fall into two closely interrelated categories. The first has an emphasis on literacy (including ICT). The second has a broader concentration on high-interest and contextually relevant experiences. Both categories are characterised by constructivist approaches that accentuate active and reflective learning and enhanced access to important curriculum knowledge.

Literacy approaches within the 'e'ngagement perspective often have a highly explicit approach within a strongly scaffolded learning environment. The *Intensive Literacy Immersion* programme at Cerise High School sits alongside a general classroom focus on what the school feels is a boy-friendly environment. The *Accelerated Literacy Programme* at Magenta Primary School has a strongly supportive and non-threatening pedagogy that encourages participation and success. Importantly, it reduces the resistance to literacy lessons typically found among Indigenous students. Violet Primary School's cross-age mentoring programme made critical classroom connections which have resulted in significant gains in boys' keenness to engage and construct texts. Azure Primary School's cooperative reading strategy is underpinned by concepts of belonging, autonomy and competence within a supportive learning community.

At Violet Primary School, Amber High School and Azure Primary School the integration of ICT is recognised as a critical avenue towards heightened levels of cognition, emotion and participation among boys. Across all schools concentrating on literacy 'e'ngagement, there is evidence of engaging messages about knowledge, ability and control.

The case studies bring to light a number of impressive examples of highly engaging learning environments. Importantly, they illustrate that these environments can be created across preschool, primary and secondary levels. The high-interest and contextualised curriculum at Indigo Preschool matches engaging content with a strongly scaffolded pedagogy, encouraging active problem-based learning. It is an informative example of both the foregrounding and backgrounding of the teacher's role and allows boys to feel both autonomous and supported in their learning. At Ochre Primary School, the combination of the Reggio Emilia philosophy for younger learners and the George Betts Autonomous Learner Model exemplifies the kinds of pedagogies that promote highly independent, self-regulated and competent learners. The importance of whole-staff cohesion through professional development is also demonstrated.

Cyan High School offers a compelling example of how changes to a school structure can open up opportunities for innovative and powerful learning experiences. This case study highlights some important engaging strategies centred on the development of

skills and knowledge (*Kitbag*) supporting independence and autonomy (*Personal Choice*) and the development of a student learning community (*Team Personal Choice*). Sienna High School emphasises the critical part that student voice plays within an 'e'ngagement perspective.

'E'ngagement

Interventions at a whole-school basis fall into four broad categories, each of which draws attention to the critical ways a school can encourage individual students and particular groups of students (especially those who are disengaged) to feel that: they are valued; they will be supported when they have learning or emotional needs; and they will be offered a wide range of curricular and extracurricular activities. In short, the aim is for each student to feel individually catered for at involvement, emotional and cognitive levels. The four categories are:

- school ethos
- school structure
- mentoring/role models
- productive post-school options.

The case studies have shown that many of the schools have worked on changing the way they are viewed both by their students and their local and wider communities. This has seemed to be particularly important where there is a history of troubled school–community relations. Two interesting examples are Magenta Primary School and Vermilion High School. Faced with a changing student population that was turning it into a majority Indigenous school, Magenta Primary School instigated a range of programmes specifically designed to show that it is prepared to care for and cater for all its Indigenous students, even those who are disengaged from school and facing enormous social problems. The significant flow-on effect to its largely at-risk Indigenous boys is their belief that the school is 'there for them'. Vermilion High School challenges the negative self-concept of its boys and their community with a philosophy of 'pressure and support'. This means the school does not accept poor attendance and behaviour and puts pressure on students not to act in the way 'expected' of those in a disadvantaged public housing community. At the same time, the school's range of programmes offers considerable support to help students rise above these expectations. While both of these schools have worked on their ethos for all students, Indigo Preschool and Violet Primary School are working on educational philosophies designed specifically to address boys' learning and social needs.

Closely aligned to school ethos is the way in which schools have restructured their curricula to address clearly identified student issues. Perhaps the most dramatic example of this is Cyan High School. Changes to traditional organisation, content and pedagogy, an emphasis on strong teacher–student relationships and with a focus on student interest, voice and control, combine to offer all learners (particularly boys) an innovative and cohesive learning environment. Teal High School concentrates more expressly on perceived boys' needs and issues and offers a wide range of curricular programmes (for example, creative and performing arts, Talented Athletes, specific integrated learning projects). These programmes are designed not only to cater for different learning requirements, but also to challenge stereotypical boys' interests and

choices. In a different way, Heliotrope School has experimented with ability, interest and gender grouping to accommodate the different ways that boys can 'belong' to their school. Magenta Primary School, Azure Primary School and Violet Primary School emphasise the importance of extracurricular activities in encouraging student participation.

A number of schools have seen the importance of using positive role models and mentors to encourage boys to recognise that school is a place that can work for them. They have reasoned that developing positive relationships between boys and their peers, and older boys and adults (including fathers) across both curricular and extracurricular experiences can counteract the negative effects of peer pressure and an associated view that school as a place and education as a resource are not boys' business. Indigo Preschool's fathers' programmes and the associated questioning of male and female stereotypes through employment strategies provide a strong example of this among young boys. Elsewhere, Magenta Primary School and Heliotrope School both see the importance of Indigenous male role models (teachers, parents and elders) in all their school activities. Vermilion High School, Violet Primary School, Sienna High School and Azure Primary School all have productive peer mentoring and cross-age mentoring initiatives in place.

At an 'E'ngagement level a significant number of case study schools have developed strategies to help boys with post-school options. In many, but not all, cases these strategies are associated with employment and training opportunities in local industries. Cyan High School, for example, has established an off-campus working factory where students learn a range of trade-based and hospitality skills. Among their many other post-school options is an industry-partnered VET programme with a *No Dole* charter, thus challenging low aspirations in a community where many adults are social security recipients. Teal High School, Sienna High School and Hazel High School have developed *School-to-Work* programmes with links to further education courses in order to increase their boys' future employment opportunities. These schools argue that such interventions keep boys at school who would otherwise leave early and struggle on the job market. Sienna High School also caters for more academically able students by offering pathways into science and mathematics courses in association with a city university. This strategy has a strong cross-age mentoring component, involving university, secondary and primary age students. At Amber High School there is an alternative community-based VET programme for disengaged Indigenous boys. These examples from the case studies do, however, carry a danger that boys might be being channelled into a narrowing range of occupations within traditional male-based industries. At Olive High School, for example, boys learning how to work on 'small motors' in combination with a literacy programme might be receiving strong messages about where their future job prospects lie. Yet even here, the school is broadening boys' opportunities beyond what the immediate district appears to offer.

Notwithstanding these specific examples, it is important to note that each of the case study schools demonstrates ways that classrooms can send engaging messages across knowledge, ability, control, place and voice. These kinds of messages drive in vigorous ways towards students becoming 'E'ngaged with school.

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5.3   Conclusion

The stories contained in these case studies support the key ideas promoted in the MeE framework, namely that there are multidimensional and interconnected dynamics of student motivation and engagement. Reading the narratives of how each school faced its particular issues and then initiated interventions from a variety of perspectives, reminds us that the complexity of student relationships with schools, classrooms and education requires educators to think creatively and widely across a broad range of perspectives and approaches. It is across this range that the MeE framework shows how the cooperative processes are contained within a focus on the individual and on broader social and educational contexts and provide critical opportunities for the disengaged student to gain an enduring belief that 'school is for me'. These are stories worth telling.

6 PRINCIPLES AND STRATEGIES

In this report, the 'principles' focus on the essential characteristics of successful and sustainable interventions which can be applied in a wide variety of education settings. The 'strategies' are the detailed elements within these interventions. These may be used individually or in combination for specific purposes and contexts.

The principles and strategies were first developed from the case studies. They were both then tested against, and used to test, the research literature. In particular, the findings of recent Australian, British and Canadian Government research provide an important reference for exploring these issues. These reports are:

- N Alloway and P Gilbert (2002a): *Boys and Literacy K–12*
- B Lingard, W Martino, M Mills and M Bahr (2002): *Addressing the Educational Needs of Boys*
- DEST (2003): *Meeting the Challenge: Guiding Principles for Success from the Boys' Education Lighthouse Schools programme, Stage One*
- A Martin (2002a): *Improving the Educational Outcomes of Boys*
- Ofsted (2003a): *Boys' Achievement in Secondary Schools*
- Quebec Ministry of Education (2004): *Boys' Academic Achievement: Putting the Findings into Perspective*.

As reported in the review of literature, these reports are strongly aligned, displaying a number of common and converging themes. These include the impact of peer relationships and the construction of masculinities on social and academic learning; the different ways boys learn; the significance of literacy development for lifelong learning; and the importance of quality teaching and productive teacher–student relationships. Importantly, as a result of both the intensive case study and literature analysis, this report, in all probability, goes beyond many previous reports in:

- introducing the MeE Framework as a theoretically informed way of understanding the complex and interrelated individual, social and cultural relationships that students have with education, school and classrooms
- deploying the term 'socio-academic outcomes' to signify the interrelatedness of the necessary outcomes to improve boys' schooling and life experiences
- generating a comprehensive, evidence-based set of principles and strategies embedded within the MeE framework to create a wide-ranging research-based approach to improving boys' socio-academic outcomes.

Collectively, the principles and strategies provide strong research-based advice to schools that wish to initiate or further develop a whole-school approach to the improvement of boys' socio-academic outcomes through a focus on motivation and engagement. We use the term 'research-based' here, rather than 'evidence-based' because we have positioned the evidence-based strategies within a conceptual and theoretical framework, the MeE framework, so that schools have access to a coherent and cogent approach to the efforts to improve boys' socio-academic outcomes.

In particular, these principles and strategies draw on rich case study data that indicate their suitability for boys from Indigenous, low-SES, and rural backgrounds and boys at risk of disengaging from schooling. At the same time, experienced educators will recognise that the principles are generally applicable to any whole-school reform process that seeks to improve socio-academic outcomes for all students; the strategies may be more widely applied to attempts to improve the educational outcomes of all boys and girls.

The principles begin with an overarching principle of using the MeE framework to guide the development of a whole-school approach. Underpinning this founding principle are four subsidiary principles addressing student outcomes, contextually relevant starting points, multifaceted and coherent pathways, and professional leadership and learning.

Following this, the strategies are divided into three distinct but interrelated groups, each containing ten strategies. These groups fall under the MeE framework perspectives of Motivation, 'e'ngagement and 'E'ngagement. Because the three perspectives are themselves interrelated, there is some unavoidable, indeed necessary, conceptual overlap across the groupings of strategies.

These principles and strategies will be discussed further in Sections 6.1 and 6.2. Each principle and strategy is followed by a *text box* that identifies the underpinning case study schools and literature. This serves the dual purpose of indicating the source of the evidence, as well as a link for the reader into the relevant case study schools and literature.

6.1   The principles

The principles have been developed to support schools seeking to build successful and sustainable whole-school programmes to improve motivation, engagement and the educational and social outcomes of boys in their care. They provide overall guidance on how educational leaders might structure interventions so that they are successful and sustainable over the long term.

The principles have been defined in terms of one overarching principle and four subsidiary principles. These are presented in Table 6.1.

Table 6.1:   Key principles for a whole-school approach to motivating and engaging boys

Overarching principle 1 Use the MeE framework to guide the development of a whole-school approach Subsidiary principles 2 Focus on student outcomes 3 Select contextually relevant starting points 4 Generate pathways that build a coherent and multifaceted approach 5 Develop professional leadership and learning

6.1.1 Overarching principle: Use the MeE framework to guide the development of a whole-school approach

The MeE framework provides schools with a way to understand and work with the complexity of relationships that students have with school and education. It does this by describing the dynamic to this multifaceted relationship that straddles individual, relational and holistic perspectives. It defines three distinct but closely interrelated ways that schools can work on the more positive and enduring relationships students need to have with education to achieve successful social, academic and life outcomes.

While schools may start with strategies or approaches taken from any one of the MeE framework's perspectives, success ultimately lies with an approach that draws on all three. Regardless of whether schools start with a particular focus or adopt a broad range of strategies, the MeE framework has an embedded argument: for schools to encourage strongly motivated and engaged students, then motivation, 'e'ngagement and 'E'ngagement processes all need to be considered seriously. Importantly, the case study schools that demonstrate long-term and sustained success with their boys – Indigo Preschool, Ochre Primary School, Vermilion High School, Teal High School, Sienna High School and Cyan High School – have developed a suite of programmes that have addressed all three perspectives.

The importance of an integrated whole-school approach cannot be underestimated. Two of the recent Australian reports (Lingard et al. 2002; DEST 2003) also identify the necessity of a whole-school approach. Both also stress the importance of a common vision and coherence. The MeE framework provides the basis for a coherent approach. It also directly addresses the connection between effective pedagogies, school structures and cultures, another of the key themes of these reports.

6.1.2 Principle 2: Focus on student outcomes

Improvements in student outcomes require explicit attention: first, to identifying the target group of students and the desired outcomes; then, to the continual collection of outcome data; and the consequential refinement and development of existing and new approaches based on the analysis of these outcomes data.

In order to focus effectively on student outcomes, schools need to identify their target students (Which students?), target outcomes (What outcomes?) and identify information (What evidence?) they will use to measure improvements in target outcomes. Each of these three aspects is explored in more detail below.

Which students?

A variety of groups of students were targeted within and across the case study schools. At times the targeting was gendered, focused on Indigeneity and/or on identification of at-risk or low-achieving boys, or all of these. At other times decisions were made to change classroom learning experiences for all students as a way of helping boys towards increased motivation and higher levels of engagement. Importantly, when case study schools made decisions about target groups, they

recognised that boys are not all the same and that gender intersects with other factors to influence each student's experience of school.

Within and across the case study schools, at various times, the target groups were:

- all students
- at-risk students
- Indigenous students
- low-achieving students
- at-risk Indigenous students
- all boys
- at-risk boys
- Indigenous boys
- low-achieving boys
- boys at a particular stage of schooling (for example, boys in Year 1, Senior boys)
- gifted and talented boys.

An analysis of the case studies within the MeE Framework indicates that strategies focusing on motivation target individuals and specific groups of boys, while strategies focusing on (e) need to work with class groups or the whole school, and strategies for (E) are effective with a mixture of individuals, target groups, all boys or all students.

What outcomes?

The case analysis revealed a similar complexity of targeted outcomes both within and across schools. These ranged across the key areas of motivation, engagement, social outcomes and academic outcomes. They included improvements in literacy, Year 10 exam results, life outcomes (for example, transition to work or further study), behaviour, knowledge of own Indigenous culture, cross-cultural relations, attendance rates, reduced rates of truancy, greater self-confidence and broadened interests.

The interrelatedness of the outcomes is a key finding of the case studies and the literature. For the purposes of this report, the term 'socio-academic outcomes' has been adopted as signifying the strength and importance of the connections between social and academic learning. The Principal of Sienna High School summed this up perfectly:

> *If you don't have the connection with kids, it doesn't matter what you teach them; they will actually choose not to learn it, but if you have the connection you can actually teach them.*

This interrelatedness of outcomes has been recognised in other studies on boys' education. In general, the finding in the literature is that outcomes related to social indicators such as behaviour, retention or motivation are closely interlinked with success in academic areas such as literacy or numeracy. This important finding stands in stark contrast to the often perceived dichotomy between academic and social outcomes which positions one as opposed to the other. Hence this report argues for the conceptualisation of a construct such as *socio-academic outcomes* that clearly signifies the interrelationship.

What evidence of improvement?

Evidence of improvement in students' socio-academic outcomes can include both quantitative and qualitative data.

Quantitative evidence obtained through case studies included: rates of attendance, participation, retention, suspension and detention; incidents of misbehaviour; pre- and post- test results for literacy and numeracy; absolute and relative performance on a range of statewide and national benchmarks; student employment or pathways to employment; surveys of students' perceptions of school and attitudes towards learning; and parent surveys.

Qualitative evidence used included feedback from students, families and communities; portfolios of students' work; and observations of changes in student behaviour and engagement. Analysis of qualitative data can provide information regarding students' motivation, engagement and attitudes towards learning, students' self-image and self-esteem, school and classroom relationships, the depth and quality of boys' socio-academic learning; and the school's reputation in the local community.

A number of schools were just beginning to develop methods for systematically collecting and analysing both quantitative and qualitative student data, while others had been doing it for a number of years. For some, the systems are now in place, ready for benchmarking whole-school and individual student progress in future years. For others with a large turnover of students and significant shift in the demographics of students in the school, longitudinal data analysis remains problematic.

During the case study visits, the researchers were able to collect qualitative data through document analysis, interviews, focus groups and classroom observations. These data provided a rich source of evidence, observations and views about improvements from the perspectives of teachers, parents and students. Such data are a key component of any research-based approach to education and a necessary supplement to other forms of systematic data collection on student outcomes. Any school seeking to build a successful programme for its boys needs to develop ways of capturing both quantitative student outcome data and rich qualitative data.

Case study schools with a focus on interrelated outcomes: Ochre, Indigo, Cerise,
Cyan, Magenta, Sienna, Vermilion.
Case study schools with a blend of qualitative and quantitative data: Cyan, Magenta,
Vermilion, Hazel.
Relevant research literature: Lingard et al. 2002; DEST 2003; Ofsted 2003a

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6.1.3   Principle 3: Select a contextually relevant starting point

Any school seeking to build a successful programme for its boys needs to identify a contextually relevant starting point. Across the case study schools there were a variety of starting points for intervention programmes. Importantly, the cross-case analysis revealed that there is not one 'best' starting point. The key to success lies in the professional judgements used to ensure that a selected starting point is:

- tailored to the particular needs of the students
- informed by research, policy and/or local successes
- consistent with the opportunities afforded by the local context
- negotiated with relevant stakeholders – staff, students, community, external agencies, systems and sources of funds and other support.

Tailored to particular needs

Effective case study schools first generated an understanding of the strengths and needs of their students and then were prepared to modify the school to take into account these various needs. When drawing on external advice or existing educational programmes, these schools were able to adapt these resources to the specific needs of their students.

Informed by research, policy and/or local successes

Selecting strategies or approaches that have worked in similar schools or communities, or in neighbouring case study schools means there is greater likelihood that the initiatives will be effective. As well, there may be current practices or programmes within the school that have proved successful, that can be adapted or expanded. A number of case study schools have demonstrated the successful transfer of programmes to other schools in a cluster or region.

Schools are also advised to examine recent and relevant literature and authoritative sources for information about successful initiatives for boys (and girls). Published research was a catalyst for change in a number of the case study schools, while data collected within the school about its own students were the catalyst for change in other case study schools. This latter strategy is also strongly recommended in both stages of the *BELS* projects.

Consistent with opportunities afforded by the local context

An important component of developing successful programmes for boys is to initiate change and then be resourceful about taking action to improve the school – based on the opportunities available in the local context. Different contexts create different needs and also different opportunities. As was evident in the case study schools, the ability to take advantage of these opportunities depends on the school developing strong links with the local community. A number of case study schools were able to capitalise on local resources; for example, by interacting with local industry in productive ways, or finding funding and resources for their programmes. In the remote case study schools, Indigenous communities provided valuable role models for students and offered opportunities for engaging activities. Other case study schools were able to undertake change by drawing mainly on the internal resources of the school. A central feature of all the case study schools is that once they had pinpointed a problem, they exhibited a willingness to identify the opportunities within the local context that would allow them to address the problem. The importance of the recognition that they can 'do something about it' also comes through as a guiding principle in the literature.

Negotiated with relevant stakeholders

When schools work with the strengths and needs of their students and tailor their programmes to their local context, then an essential feature of a successful initiative must be that schools negotiate with relevant stakeholders. These stakeholders include staff, parents, the wider community and the students themselves. An initiative should not be imposed on the school without consultation and appropriate adaptation to the local environment. Both internal and external stakeholders need to be included, as appropriate. The case study schools handled these negotiations with key stakeholders in a variety of ways. Some schools cultivated stakeholder ownership by developing their own programmes through a collaborative process of consultation. In case study schools where the initiative was inspired by research conducted elsewhere or built on a commercially available programme, processes of staff commitment, learning and collaboration ensured that the programme was adapted to the school context and therefore 'owned' by staff, students, families and the local community.

While engagement with the community is a recurring theme in the literature, the evidence from the case study schools indicates that 'engage' does not fully encompass the level of negotiation required with the broader school community. A key finding of this report is that schools should avoid top-down approaches to implementing school programmes/strategies, and from the initial step of identifying the problem, participate in open and frank discussions with all relevant stakeholders.

Case study schools tailoring their programmes to the particular needs of the students:
        All
Case study schools using local industries: Cerise, Cyan, Olive, Teal
Case study schools using external research: Cerise, Cyan, Indigo, Ochre
Case study schools using local successes/local data: Cyan, Hazel, Olive
Case study schools with strong stakeholder involvement: Indigo, Ochre, Russet,
        Amber, Sienna, Magenta, Cyan
Relevant research literature: Lingard et al. 2002; DEST 2003; Ofsted 2000a

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6.1.4 Principle 4: Generate pathways that build a coherent and multifaceted approach

There are many different pathways a school can follow to support and build its repertoire of programmes to improve the motivation, engagement, educational and social outcomes of boys. Whatever pathway is chosen it needs to:

- be aligned with the broader vision and direction of the school
- respond in sophisticated ways to data collected on student outcomes and feedback from stakeholders
- evolve over time to meet changing needs and circumstances of the school and the community
- distribute ownership across stakeholders
- draw effectively on additional resources.

Each of these characteristics will be discussed in turn below.

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Be aligned with the broader vision and direction of the school

Strategies that aim to increase socio-academic outcomes must be part of a wider effort toward changing the school culture. Evidence of this fit within the broader perspective was illustrated in a number of the case studies; that is, strategies which improved social outcomes for boys and led to academic gains were part of a larger school improvement strategy. In the absence of such integration, a number of case study schools were not able to maintain particular programmes.

Respond in sophisticated ways to data collection on student outcomes and feedback from stakeholders

Collection of data from a range of sources can best determine when the programmes/strategies a school is implementing are appropriate to their students. Data can demonstrate what is not working, as well as identify successes. The experience from the case studies is that schools must be flexible enough to respond to this feedback in creative and appropriate ways. A number of case study schools had to modify, delete or restructure a programme that was not meeting the needs of the community or the students. The literature also points to the importance of a culture of continuous improvement, even to the point of structural change.

Evolve over time to meet changing needs and circumstances of the school and community

The process of research and continuous improvement takes time. The case studies with long-term sustained success had a continuous commitment to change and improvement over many years and were continuing to evaluate and modify their programmes in response to student outcomes. In a number of case study schools, there was a snowballing effect – as schools introduced successful programmes, they became good places to be, parents and community member became more interested in supporting change and other opportunities and resources became available.

Distribute ownership across stakeholders

Ownership must be distributed to stakeholders involved in the programme, including staff, families, communities and students. A number of case studies demonstrated the benefits of distributed ownership and a shared learning community. In schools where ownership is not distributed, there is the possibility of a programme being abandoned when relevant staff members leave, as happened in one case study school (Heliotrope). Distributing ownership across stakeholders rather than having it invested in an individual reduces such a risk. In a number of case study schools, students also had a strong sense of ownership of their own learning. This approach is supported by the literature, particularly in the *BELS 1* report and in Martin's work on Motivation.

Draw effectively on additional resources

Schools do not exist in isolation. Other schools, education packages, research projects at state and national levels, educational consultants and community expertise are just some of the resources that can be accessed to enhance a reform initiative. What is fundamental is that schools are aware of the opportunities around them, and are proactive about drawing on these resources. All of the case study schools demonstrated the ability to draw effectively on additional resources embedded in the

school community and relevant educational systems, local communities, industries and other schools.

Case study schools where strategies are aligned with broader vision of the school: Hazel, Cyan, Ochre, Sienna, Russet
Case study schools responding in sophisticated ways to data collection: Vermilion, Sienna, Cyan, Amber
Case study schools that have evolved over time to meet changing needs and circumstances: Cyan, Indigo, Hazel, Ochre, Sienna, Cerise, Russet, Magenta, Amber, Olive
Case study schools where ownership was distributed across stakeholders: Indigo, Russet, Cyan, Sienna
Case study schools where students had a strong sense of ownership of their own learning: Russet, Cyan, Teal, Vermilion, Sienna
Case study schools that drew effectively on additional resources: all
Relevant research literature: Ofsted 2003a; DEST 2003; Lingard et al. 2002; Martin 2002a; Quebec Ministry of Education 2004

6.1.5 Principle 5: Develop professional leadership and professional learning

A critical aspect of improving the socio-academic outcomes for boys is the relationship between school leadership and professional learning. Strategies for change cannot be implemented successfully without the full commitment of the senior management, and this commitment needs to be shared by all staff involved. Throughout the case studies the importance of leadership at the senior level was confirmed. At some case study schools it was the vision of a director/principal that led the reforms, or extended and strengthened current reforms. At others, principals effectively supported initiatives led by members of staff and took an active role in whole-school planning.

The literature highlights the crucial role of professional development of teachers in improved socio-academic outcomes for students. The importance of professional learning is supported by the findings of the case studies. The form of professional learning varied, but the aim was to extend and develop classroom teachers' knowledge and understandings. Professional development which incorporated literacy, numeracy and issues surrounding student behaviour was a common focus. Many case study schools arranged visits from academics, theorists and practitioners in order to extend staff members' understandings of contemporary approaches to teaching and learning. Several case study schools were involved in long-term collaboration with academics and theorists to enhance their professional learning and develop a shared vision.

Other key professional development strategies identified in the literature and found in case study schools included the employment of specialist staff to support teachers' professional development and the implementation of curriculum change, team-teaching and mentoring. Analysis of the case study data suggests that, when combined with ongoing peer, self- and supervisory assessment of teaching practices, these strategies are particularly useful in bringing about changes in classroom pedagogies.

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In many ways, professional leadership and learning underpin the successful implementation of the previous four principles. The enthusiasm, commitment, knowledge and skills required for the effective implementation of a successful and sustainable whole-school approach to improving boys' socio-academic outcomes will not be possible without strong leadership and continuous professional learning of all staff. Similarly, each of the strategies listed in Section 6.2 may well require new understandings and skills of the school leaders and classroom teachers if they are to be implemented successfully.

Case study schools with principals as strong leaders of the boys programmes: Amber, Cyan, Cerise, Indigo, Magenta, Ochre, Russet Sienna, Teal, Vermilion, Violet

Case study schools where professional development resulted from extending theoretical understanding: Ochre, Russet, Sienna, Hazel, Cerise, Indigo

Case study schools where professional development was supported by employment of specialist staff: Azure, Ochre, Cerise, Amber

Relevant research literature: Younger and Warrington 2003; Bleach 1998a; Noble 1998; Davidson and Edwards 1998; Quebec Ministry of Education 2004

6.2   The strategies

Strategies for improving boys' socio-academic learning have been organised around the MeE framework of Motivation, 'e'ngagement and 'E'ngagement. Motivation strategies are those that provide individual support for boys to develop adaptive behaviours of resilience, self-belief and positive attitudes towards learning achievement and school, study and work skills. 'e'ngagement strategies focus on boys' experiences at a classroom level. These strategies concentrate on ways in which teachers can structure meaningful learning environments that promote boys' engagement with school learning. The final group of strategies focus on 'E'ngagement at a whole-school level. These strategies work to create expectations that school will be a positive experience for boys and their families.

Table 6.2 presents a set of ten strategies for each of the three areas: Motivation, 'e'ngagement and 'E'ngagement.

Table 6.2:   Strategies for motivating and engaging boys

Motivation (M): individual support strategies
- Develop positive cultural connections between community, home and school   - Foster supportive learning environments where students feel valued and respected   - Promote opportunities for renewed community connections   - Provide authentic, high-interest and challenging learning experiences   - Allow negotiation and choice at school and classroom level   - Connect critical syllabus areas (especially literacy) with all individual motivation strategies   - Support adaptive attitudes and behaviours   - Work on managing physical actions and emotional responses   - Develop a wide range of assessment strategies that support early and ongoing intervention   - Target students with specific socio-academic needs
'e'ngagement: engaging messages about knowledge, ability, control, place and voice
- Structure learning environments that offer student voice and control   - Promote self-regulatory and autonomous learners   - Focus on quality teaching and productive pedagogical relationships   - Offer projects and problem-based learning   - Develop collaborative learning communities   - Offer access to sophisticated ICTs   - Integrate literacy across all aspects of the curriculum   - Introduce a variety of texts that widely appeal to the interests of boys   - Contextualise and individualise literacy learning   - Provide feedback that is explicit about task criteria, processes for learning and self-regulation of learning
'E'ngagement: widely catering for each student at involvement, emotional and cognitive levels
- Have high but realistic expectations within an ethos of pressure and support   - Ensure all students feel that they will be supported socially and academically throughout their school lives.   - Challenge stereotypical views about boys   - Offer a wide range of intellectual, cultural and aesthetic experiences   - Work collaboratively with families and communities   - Use community, cross-age and peer mentoring to support students and to provide positive role models   - Utilise support staff to cater for all students, particularly for those most 'at risk'   - Focus on key transition points   - Promote different pathways for further study and post-school options   - Provide alternative settings for the development of socio-academic learning

6.2.1 Motivation (M): individual support strategies

Develop positive cultural connections between community, home and school

There is convincing evidence within the case studies to show that encouraging individual boys to think and act in adaptive ways within school and classroom environments requires considerable awareness and understanding of their individual and cultural backgrounds. Strong levels of awareness and understanding are facilitated by positive and respectful home, school and community relationships, with exchanges of information and ideas that flow freely in all directions. While this is important for the motivation of all boys, it is critical when schools are working with low-SES and Indigenous boys. Case study data highlight how positive cultural connections help with the development of culturally appropriate pedagogies that support cultural identity. In particular, stories from schools serving Indigenous communities show decisive work in promoting identity as both an Indigenous boy and a successful school student. These data are consistent with themes within the research literature.

> *Case study schools developing positive cultural connections between community, home and school: Cerise, Heliotrope, Magenta, Vermilion, Indigo*
> *Relevant research literature: DETYA 2000; Simpson, McFadden and Munns 2001; Purdie 2003; Mellor and Corrigan 2004*

Foster supportive learning environments where students feel valued and respected

The strong correlation between student motivation and school and classroom relationships is clearly shown in the case studies and is also a consistent research literature theme. Schools that devote time, energy and resources to developing caring and supportive environments where all students felt valued and respected are highlighted as places where boys' motivation is increased. What appears to be central here is that environments are consciously crafted to promote positive peer, cross-age and student–teacher relationships. As shown above, these relationships are significantly enhanced when there are positive home–community–school connections. When students feel as though they belong at school and they are helped towards present and future academic success, then there are associated improvements in socio-academic outcomes. Value and respect are seen to be even more significant in the development of relationships with Indigenous boys.

> *Case study schools fostering supportive learning environments: Amber, Cerise, Cyan, Heliotrope, Indigo, Magenta, Russet, Sienna, Teal, Vermilion, Violet, Ochre*
> *Relevant research literature: Finn and Voelkl 1993; Lee and Smith 1995; Rudolph et al. 2001; Lingard et al. 2002; Furrer and Skinner 2003; Younger and Warrington 2003; Munns 2004; Quebec Ministry of Education 2004*

Promote opportunities for renewed community connections

Many of the case study schools have established innovative, community-based projects for boys that focus on reciprocity and service learning. In these projects the

idea is for the boys to learn valuable social and academic skills while making contributions to their local community. Contributions to the community can involve physical activities of making and constructing or providing more direct support for those who are in need. There are examples in the case studies of boys restoring machinery for a local museum, helping with a food programme for the aged and sick or collaborating with outside agencies to improve opportunities for learning. Community-based learning of this type crosses traditional discipline boundaries and enables boys to showcase new knowledge and skills and gain respect inside and outside their school.

> *Case study schools promoting opportunities for renewed community connections: Cyan, Heliotrope, Indigo, Olive, Hazel, Russet, Sienna, Teal, Amber, Vermilion*
> *Relevant research literature: Alloway et al. 2002; Martin 2002b; DEST 2003*

Provide authentic, high interest and challenging learning experiences

Many of the case study schools offer their boys a variety of learning activities characterised by authentic links to their interests and experiences. These kinds of learning experiences invariably involve boys working in active ways and often take place outside the classroom. Levels of individual motivation across all other school and classroom areas are increased when boys' learning is practical and project-based and makes real-life, family and community connections. Research within the case studies and as reported in the literature reveals that these kinds of learning experiences work most powerfully for both socio-academic outcomes when there are high expectations and intellectual challenges.

> *Case study schools providing authentic, high-interest and challenging learning experience: Amber, Azure, Cyan, Hazel, Heliotrope, Indigo, Magenta, Russet, Sienna, Teal, Vermilion, Violet*
> *Relevant research literature: Martino 2001; Alloway et al. 2002; Kamil, Intrator and Kim 2000; Rowan et al. 2002; Wilhelm and Smith 2002; Millard 2003; Martin 2002a; DEST 2003; Lingard et al. 2002, Quebec Ministry of Education 2004*

Allow negotiation and choice at school and classroom level

Closely related to the previous strategy is the opportunity for boys to be able to negotiate different curricular pathways and content areas and to be able to make their own choices as a result of these negotiations. The case studies contain examples of schools offering a differentiated curriculum, often within a project-based learning environment. Choices made on both personal and team levels give students opportunities to pursue their own interests. Importantly, the case studies draw attention to the ways in which boys can self-direct their own learning and actually build increased levels of academic challenge for themselves. The relationship between quality student work and enhanced opportunities for student self-regulation is also highlighted in the literature review.

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Connect critical syllabus areas (especially literacy) with all individual motivation strategies

Strategies designed to motivate boys are found to be more effective when there are links across curriculum areas. This targets both socio-academic outcomes at the same time and allows a cumulative effect as they come together. The case studies contain clear evidence that, when schools introduce programmes of high interest to boys, then there are important opportunities to integrate these with other aspects of the curriculum. Links with literacy are especially valuable when targeted boys are not achieving in this area. Reports from a number of case study schools indicate that motivational strategies (high-interest, authentic, practical) with a strongly embedded literacy focus help boys to increase their language knowledge and improve levels of literacy at the same time as they develop their confidence, sense of responsibility and enthusiasm for learning.

Support adaptive attitudes and behaviours

One of the key findings emerging from both the research literature and the case studies is the value of individual support strategies specifically designed to encourage adaptive thoughts and behaviours. This involves discussion between teachers and students and individual student reflection about appropriate ways for students to manage their schoolwork. Often this requires individual evaluations of student needs, followed by plans designed so that boys can better manage their studies. When this is associated with boys being encouraged to work within a mastery orientation and to see the value of schooling, the upper (positive) segments of the Student Motivation and Engagement Wheel (Martin 2003) are brought strongly into play. In this way anxiety, uncertain control and failure avoidance are proactively addressed.

Work on managing physical actions and emotional responses

Individual support strategies taken up in a number of the case study schools recognise that many boys respond physically and emotionally in schools and classrooms in ways that seriously disrupt their own schooling as well as interfere with the learning of other students. The research literature reveals that this is more likely to be the

situation where students historically come from educationally disadvantaged backgrounds (for example, low-SES or Indigenous students). In concert with a number of previously discussed strategies, programmes that focus on emotional, social and life skills and help boys to manage their physical and emotional actions appropriately have been found to be effective in improving school and classroom relationships. A common feature of these commercial or school-developed socially oriented programmes is the idea of shared control and leadership and giving increased responsibility to the students for their own behaviour.

> *Case study schools working on managing physical actions and emotional responses:*
> *Amber, Cerise, Cyan, Heliotrope, Indigo, Magenta, Russet, Sienna, Vermilion, Violet*
> *Relevant research literature: Foster, Kimmel and Skelton 2001; Rudolph et al. 2001; Furrer and Skinner 2003; Soorin 2004*

Develop a wide range of assessment strategies that support early and ongoing intervention

The evidence of the case studies strongly supports the importance of effective assessment and early intervention. This acknowledges the critical interplay of social and academic development and recognises that low academic levels are frequently associated with impeding thoughts and maladaptive behaviours. The data emphasise that, in order to improve motivation across all school cohorts, students who are experiencing difficulty must be identified early and given every opportunity to catch up and develop more positive attitudes and confidence across all curriculum areas. Of particular significance are assessment and interventions around the key transition periods (for example, beginning school and primary to secondary school). Interventions reported in the research have included withdrawal programmes focusing on individual and small-group needs, one-to-one assistance (often involving teacher's aides and other support personnel), peer assessment and individualised feedback. The evidence from the case study schools demonstrates that early identification and strategic support can significantly improve both academic and social outcomes.

> *Case study schools developing a wide range of assessment/intervention strategies:*
> *Amber, Cerise, Cyan, Heliotrope, Sienna, Violet, Hazel, Magenta*
> *Relevant research literature: Hill et al. 1998, 2002; Alloway 2002; Lingard et al. 2002; Ofsted 2003b; Younger and Warrington 2003*

Target students with specific socio-academic needs

A final individual support strategy builds on the need for data-driven and diagnostic teaching (above) and also resonates with a wider school ethos of ensuring that no student is allowed to 'fall through the cracks'. A critical focus for schools is to pay particular attention to students currently and potentially at risk across all aspects of their school and classroom work. The case studies highlight the gains for the whole school community in modifying pedagogical approaches, looking for alternative pathways and building relationships: in short, working creatively and energetically towards supporting the most socially and academically needy students. There is a strong social justice principle in operation here. Not only are resources allocated where a distinct need is pinpointed, but there is a positive flow-on to the engagement

with learning of the entire school community when classroom spaces are not dominated physically, emotionally and pedagogically by at-risk students.

> *Case study schools targeting students with specific socio-academic needs: Amber, Cyan, Hazel, Magenta, Olive, Vermilion, Violet*
> *Relevant research literature: Ball and Lamb 2001; Trent and Slade 2001; Cresswell, Rowe and Withers 2002; Martin and Marsh 2003; New Zealand Ministry of Education 2003; Younger and Warrington 2003*

6.2.2 'e'ngagement – engaging messages about knowledge, ability, control, place and voice

The following group of strategies focus on boys' 'e'ngagement at a classroom level. These strategies focus on ways in which teachers can structure meaningful whole-classroom learning environments that connect with boys' worlds outside the classroom and where students have a voice and feel a sense of belonging.

Structure classroom learning environments that offer student voice and control

For students to engage with classroom learning and to develop an enduring sense that 'school is for me', there needs to be, first of all, powerful, engaging messages relating to their knowledge, their ability, their sense of control, their feeling of place and an acknowledgement of their voices. When there is a classroom ethos that enables boys to have some control of knowledge acquisition and production, and where their opinions are valued, there are improved socio-academic outcomes. An effective strategy for the inclusion of student voices in the curriculum is the use of different curricula, such that students are able to negotiate to explore their chosen learning focus. The case study research demonstrates that this type of classroom structure increases boys' confidence in themselves as learners and results in greater depth of learning.

> *Case study schools offering student voice and control: Cerise, Cyan, Hazel, Indigo, Ochre, Olive, Russet, Sienna, Teal, Vermilion*
> *Relevant research literature: Alloway et al. 2002; Lingard et al. 2002; Wilhelm and Smith 2002*

Promote self-regulatory and autonomous learners

Effective classrooms are ones where boys are autonomous learners and where they are encouraged to regulate their own learning. Teachers have an important role in facilitating independent learning and the development of students' self-efficacy. The case study research confirms that, when boys have ownership of and take responsibility for making decisions about their own learning, there is a high level of engagement. Effective teachers entrust and enable boys to progress in their learning with a sense of autonomy and control; this in turn builds increasing competence. Involvement in self-selected projects and open-ended experiences, negotiation of curricular pathways and setting of their own learning goals assist boys to develop a range of academic and social resources that support lifelong learning.

> *Case study schools promoting self-regulatory and autonomous learners: Cyan,*
> *Indigo, Ochre, Russet, Vermilion, Sienna*
> *Relevant research literature: Alloway et al. 2002*

Focus on quality teaching and productive pedagogical relationships

Quality teaching and productive pedagogical relationships play a crucial role in bringing about positive cognitive, affective and behavioural outcomes for boys. Student–teacher relationships, where respect, knowledge and understanding are paramount, produce positive outcomes for boys. A key finding of the review of research into boys' academic success is that teacher effects are much more significant than differential gender effects. Analysis of the case study data suggests that committed teachers are key elements in any successful programme for boys. Students who participated in focus groups emphasised that their learning was contingent on respectful teacher–student relationships. Productive pedagogical relationships, characterised by humour, trust and an individual concern, made explicit by investing time to interact with students in and out of the classroom, are particularly significant for Indigenous students.

> *Case study schools focusing on quality teaching and productive pedagogical*
> *relationships: Amber, Hazel, Heliotrope, Russet, Sienna, Teal,*
> *Vermilion, Indigo*
> *Relevant research literature: Munns 1998; DETYA 2000; Lingard et al. 2002; Martin*
> *2002a; Wilhelm and Smith 2002; Ofsted 2003a; Rowe 2003; Quebec*
> *Ministry of Education 2004*

Offer projects and problem-based learning

Projects and problem-based learning provide opportunities for boys to investigate big ideas and to engage in solving real-life puzzles. These types of experiences encourage processes of exploration, discovery, investigation and problem-solving that strengthen boys' engagement with learning. When classrooms make connections with boys' social worlds outside the school, there is an increase in the relevance and meaning of school for many boys, resulting in higher levels of engagement and achievement. The case study research demonstrates the way that meaningful projects and investigations connected to boys' everyday worlds are effective ways of engaging boys in literacy and numeracy. Projects and problem-based learning experiences that are contextually embedded in real-life examples and issues have the potential to position boys as experts with much knowledge to be shared. When teachers and students work collaboratively within these learning contexts, boys' real-world knowledge can be transformed into academic knowledge.

> *Case study schools offering projects and problem-based learning: Amber, Azure,*
> *Cyan, Heliotrope, Indigo, Ochre, Olive, Russet, Sienna, Vermilion;*
> *Cerise, Teal*
> *Relevant research literature: Alloway et al. 2002*

Develop collaborative learning communities

The importance of teachers structuring powerful collaborative learning experiences and supporting communities of learners is highlighted in both the research literature and the case studies. Small-group learning experiences where all students are encouraged to engage in responsive and supportive interactions provide contexts that facilitate cooperation and negotiation, and support academic learning. Collaborative learning contexts also empower students to reflect upon their own learning strategies and group processes and to use the insights gained to further develop effective learning strategies. When families and communities are also included in communities of learners as supportive resources and as co-constructors of knowledge, there are many opportunities for all stakeholders to share ideas, as well as to develop shared understandings of curriculum and processes of learning.

Case study schools developing collaborative learning communities: Amber, Cerise, Cyan, Hazel, Heliotrope, Indigo, Magenta, Ochre, Russet, Sienna
Relevant research literature: Noble 1998; Pianta 1999; Alloway et al. 2002; Lingard et al. 2002; Ofsted 2003b

Offer access to sophisticated ICTs

The integration of technologies into classrooms provides a context where many boys, particularly those from disaffected groups, can draw on their family and community contexts to experience success in the classroom, increase their confidence and self-esteem, and engage with school learning. Of particular value are sophisticated technologies that involve the integration of different communications modes such as oral, visual and written to create multimodal and multimedia texts. The use of a range of technologies and communication modes reflects the reality of everyday literacy practices and can be particularly effective in allowing second language and at-risk learners to engage with literacy learning. While many of the case study schools did not make effective use of the potential of sophisticated technologies to support students' learning, some schools did integrate ICTs into the curriculum as research tools and as tools to assist with the representation of ideas. These schools integrated ICTs into classroom pedagogies in ways that empowered learners to investigate, collaborate, communicate and reflect on their learning. Both the literature review and case study research highlight the importance of combining relevant knowledge-producing pedagogies with new technologies to promote engagement and learning.

Case study schools offering access to sophisticated ICTs: Amber, Azure, Cerise, Cyan, Heliotrope, Magenta, Sienna, Teal, Violet
Relevant research literature: Kamil, Intrantor and Kim 2000; Alloway et al. 2002; Rowan et al. 2002

Integrate literacy across all aspects of the curriculum

The integration of literacy across all aspects of the curriculum is highlighted in both the research literature and the case studies as a useful strategy for increasing boys' engagement with school literacies. Investigations, projects, integrated units of work and the incorporation of literacy into personal-interest subjects all provide opportunities for students to integrate literacy naturally. These types of experiences encourage boys to use exploratory talk in meaningful contexts and provide

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opportunities for teachers to demonstrate and scaffold a range of literacy processes and concepts. The successful use in many of the case study schools of whole-class and small-group discussions to scaffold writing also confirms the crucial role of oral language in vocabulary-building and the scaffolding of text structure prior to writing.

Case study schools integrating literacy across all aspects of the curriculum: Azure, Cyan, Indigo, Ochre, Olive, Sienna, Vermilion
Relevant research literature: Alloway et al. 2002; Ofsted 2003b; Younger and Warrington 2003

Introduce a variety of texts that widely appeal to the interests of boys

The inclusion of 'boy-friendly literature' may be a useful strategy in engaging some boys in literacy learning, but care needs to be taken not to reinforce stereotypical and dominant discourses of masculinity. Contemporary research advocates the inclusion of texts that connect to boys' interests and experiences, while at the same time, encouraging the extension to new areas of interest and the critical analysis of dominant masculinities. Rather than only focusing on 'boys' literature', a number of case study schools provided a wide range of reading materials that catered for boys' interests and also worked to broaden their experience. The research literature indicated that teachers who understand the dichotomisation of gender-constructed roles are able to challenge negative social constructions of masculinity in their classes.

Case study schools introducing a variety of texts: Amber, Heliotrope, Indigo, Olive
Relevant research literature: Martino 2001; Rowan et al. 2002

Contextualise and individualise literacy learning

Effective literacy teaching is responsive to learners' needs. Contextualising literacy to individual needs is particularly important for boys whose cultural and linguistic capital is different from that which is valued by the school. A number of case study schools, through the provision of additional literacy support for students in a heavily scaffolded environment, have implemented literacy programmes. While carefully structured programmes can have benefits for students' literacy learning, it is also essential that literacy experiences are meaningful and relevant to everyday life. The case study research establishes that students actively engage with literacy when they are given the opportunity to interpret and create texts with significance and meaning for them. Both the research literature and the case studies stress the importance of a balance between a focus on technical skills, such as handwriting and spelling, and an emphasis on the meanings of texts. Explicit literacy programmes which focus on decoding have shown some success; however, the case studies highlight the importance of an integrated approach to literacy, where readers are supported to produce, use and analyse texts for a range of purposes, as well as to decode texts.

Case study schools contextualising and individualising literacy learning: Amber, Azure, Cerise, Cyan, Heliotrope, Magenta, Sienna, Teal, Violet
Relevant research literature: Hill et al. 1998, 2002

Provide feedback that is explicit about task criteria, processes for learning and self-regulation of learning

Feedback that is explicit about task criteria, that is given as soon as possible after the event, that celebrates successes and that gives specific and constructive advice on areas for improvement is effective in supporting boys' learning. Responsive diagnostic teaching that includes specific feedback and instructions to break down tasks into manageable steps makes a difference for boys not engaging with school literacies. Successful literacy teachers provide boys with clear objectives, ask questions that promote understanding, and structure process-oriented, short-term tasks with clear goals and deadlines. Specific, targeted feedback and support assists students to monitor and regulate their own learning.

> *Case study schools providing explicit feedback: Amber, Azure, Cerise, Cyan, Heliotrope, Magenta, Sienna, Teal, Violet, Hazel*
> *Relevant research literature: Hill et al. 1998, 2002*

6.2.3   'E'ngagement – widely catering for each student at involvement, emotional and cognitive levels

The final group of strategies focus on 'E'ngagement at a whole-school level. These strategies create expectations that school will be a positive experience for students and families, where students will develop strong relationships and confidence in themselves as learners.

Have high but realistic expectations within an ethos of pressure and support

A key strategy for improving boys' socio-academic learning is a school ethos where staff and students feel valued and where students are expected to achieve. Both the research literature and case study data suggest that high but realistic expectations are important for all students, and are particularly significant for Indigenous students. There is also evidence that transition programmes can create expectations in Indigenous students that school will be a positive experience for students and families and that students will succeed academically. Social and academic support in a climate where all students are expected to succeed and where they are supported to do so assists students to develop confidence in themselves as learners and to feel a sense of belonging in the school, resulting in increased retention rates and fewer suspensions.

> *Case study schools having high but realistic expectations: Cerise, Cyan, Hazel, Magenta, Olive, Sienna*
> *Relevant research literature: Younger and Warrington 2003*

Ensure all students feel that they will be supported socially and academically throughout their school lives

There are examples from the case studies of schools recognising the importance of developing a whole-school culture that provides social and academic support for every student throughout the entirety of their time at the school. This is closely aligned with the idea discussed above that no student will be allowed 'to fall through the cracks'. Schools with a positive 'E'ngagement ethos, work hard to offer each

student a wide range of learning experiences and activities at involvement, emotional and cognitive levels. As well, these schools show that there are a comprehensive set of strategies in place that will support any student when they have a learning or emotional need.

Case study schools supporting students socially and academically: Amber, Cerise, Cyan, Heliotrope, Indigo, Magenta, Russet, Sienna, Teal, Vermilion, Violet, Hazel
Relevant research literature: Finn and Voelkl 1993; Lee and Smith 1995; Rudolph et al. 2001; Furrer and Skinner 2003; Younger and Warrington 2003; Munns 2004

Challenge stereotypical views about boys

While the use of male mentors can be beneficial (see below), they need to be carefully chosen so that they do not reproduce hegemonic masculinities. The case study research demonstrated that the involvement of male role models in non-traditional experiences can assist in breaking down stereotypes. A vital area of whole-school change is the development of a school culture that challenges stereotypical views about boys. Sociocultural approaches which contest dominant masculinities underpin other strategies aimed to improve socio-academic outcomes for boys. Effective programmes go beyond a focus on academic learning to challenge narrowly gendered identities and stereotypes that limit boys' relationships and participation in school life and, consequently, their academic learning and life opportunities. Central to the process of improving boys' socio-academic outcomes is teachers' awareness of boys' academic potential and the need to challenge stereotypical assumptions about boys.

Case study schools challenging stereotypical views about boys: Azure, Heliotrope, Indigo, Magenta, Ochre, Sienna, Teal
Relevant research literature: Davison and Edwards 1998; Francis 2000; Martino 2001; Younger and Warrington 2003

Offer a wide range of intellectual, cultural and aesthetic experiences

A school culture which celebrates achievement in a range of areas is important in contesting dominant masculinities and opening up possibilities for boys to experience a range of intellectual, cultural and aesthetic experiences. The provision of a range of curriculum choices in some of the secondary case study schools means that boys can move outside traditionally masculine curriculum areas to follow their interests. Involvement in a range of intellectual, cultural and aesthetic experiences promotes communication, interdependence, trust and creativity, as well as improved attendance and greater engagement in traditional classroom tasks. Learning outside the classroom in experiences that cross traditional discipline boundaries presents boys with new opportunities and insights and supports alternative forms of practical and aesthetic knowledge that enables some boys to showcase their own knowledge and to gain respect.

Work collaboratively with families and communities

Collaborative partnerships between schools, families and communities have a strategic role in the social and academic achievement of students. Parental support and positive relationships with communities have long-term educational benefits for all students, and are particularly significant for Indigenous and minority students. Case study schools with effective partnerships with families and communities were able to provide culturally sensitive environments that fostered students' self-identity and engagement with school. As a result, these schools had a strong reputation in both the Indigenous and non-Indigenous communities; children were attending school; children and families were feeling confident and empowered; and there were positive relations between Indigenous and non-Indigenous communities.

Use community, cross-age and peer mentoring to support students and to provide positive role models

Mentoring by community members as well as students is a valuable strategy for improving educational outcomes for boys. Mentoring can raise the academic attainment of under-achieving students, particularly in the area of literacy. Many case study schools draw on tertiary institutions, families, local businesses and communities to provide positive male role models and mentors for students. Case study schools with high numbers of Indigenous students provide male Indigenous role models through the employment of Indigenous staff and the involvement of local community-based elders and storytellers. Cross-age and peer mentoring are also employed in a number of case study schools as a strategy to support social and academic learning. Synthesis of the literature and case study findings suggests that the key to successful peer and cross-age mentoring is the development of trusting relationships, where mentors respect the mentees' point of view and where there is collaborative decision making.

> *Case study schools using community, cross-age and peer mentoring: Amber, Azure, Cerise, Cyan, Heliotrope, Indigo, Magenta, Olive, Russet, Sienna, Teal, Violet*
>
> *Relevant research literature: Bleach 1998a; Frater 1998; Berryman and Atvars 1999; Lints 1999; Morrison, Everton and Ruddock 2000; Demie 2001; Alloway and Gilbert 2002b; Reid 2002; Sipe 2002; Younger and Warrington 2003; Quebec Ministry of Education 2004; The National Literacy Trust 2000*

Utilise support staff to cater for all students, particularly for those most at risk

The case study research suggests that support staff play an important role in working with individuals and small groups to support literacy and numeracy, establishing new programmes and strengthening community engagement. In case study schools with large numbers of Indigenous students, Indigenous support staff provide individual assistance to students, liaise with families, Indigenous communities and the school and often play significant roles in the implementation of innovative programmes. Indigenous support staff have a key role in building positive relationships between schools, families and communities and in promoting congruence between home and school practices. Indigenous staff know the parents and students, understand their family situations and cultural responsibilities and value the boys and their families. They also provide important role models for Indigenous students and promote understanding and appreciation of Indigenous culture among non-Indigenous students.

> *Case study schools utilising support staff to cater for all students: Amber, Cerise, Cyan, Heliotrope, Indigo, Magenta, Sienna, Violet*
>
> *Relevant research literature: James, Jurich and Estes 2001*

Focus on key transition points

There are key points where schools need to focus on support, particularly for their at-risk students. These points include the preschool years, the early years of school and the first years of secondary education. Early identification and support for literacy and numeracy needs with intensive immersion programmes at key periods can achieve significant improvements in both attitudes and academic learning. Preschool education also plays a crucial role in addressing boys' relationships, in fostering positive dispositions towards learning and in identifying support needs that will impact on future academic learning. In addition, transition to school programmes for at-risk and disengaged students have a significant role in supporting students' social learning and engagement or re-engagement with formal academic learning. Transition programmes in Indigenous communities create expectations that school will be a positive experience for students and families and that the students will succeed academically.

Promote different pathways for further study and post-school options

The research literature indicates that a key feature of successful programmes for at-risk boys is a focus on pathways to employment and further study. A key feature of the secondary case study schools is their futures orientation, with an emphasis on a range of pathways and post-school options. The programmes implemented promote strong links between senior students, communities and employers, encourage goal-oriented behaviours, increase self-esteem and pride, and assist students to make a smooth transition to the workforce. There is clear evidence from the case study schools that effective pathways to employment result in increased attendance and retention rates, as well as positive recognition for the students and school in the wider community, and an increased awareness of the need for ongoing education and training.

Provide alternative settings for the development of socio-academic learning

Involving students in learning outside traditional school boundaries of the school is important for the motivation, engagement, social success and academic achievement of all boys, including those from educationally disadvantaged communities. Many of the case study schools involve students in experiences in the wider community that promote boys' teamwork, confidence and leadership. Experiences such as classes in TAFE colleges, community service and workplace learning increase rates of retention and assist students to move gradually into the workforce. Projects in the local community and school camps also provide informal learning contexts which offer opportunities for staff and students to talk about a range of issues and to build positive relationships and a sense of trust.

6.3   Conclusion

In this report, the term 'principles' refers to the essential characteristics of successful and sustainable interventions that are able to be applied in a wide variety of education

settings. The term 'strategies' refers to the detailed elements within these interventions. These may be used individually or in combination for specific purposes and contexts.

PRINCIPLES

1 The *overarching* principle suggested for applying successful and sustainable interventions is the use of the MeE framework to guide the development of a whole-school approach. The importance of an integrated whole-school approach cannot be underestimated. The MeE framework provides the basis for a coherent approach. It also directly addresses the connection between effective pedagogies, school structures and cultures.

The subsidiary principles are:

2 *Focusing on student outcomes.* Improvements in student outcomes require explicit attention: first, to identifying the target group of students and the desired outcomes; next, the continual collection of outcome data; and finally, the consequential refinement and development of existing and new approaches based on the analysis of these outcomes data.

3 *Selecting contextually relevant starting points.* The key to success lies in the professional judgements used to ensure that a selected starting point is: tailored to the particular needs of the students; informed by research, policy and/or local successes; consistent with the opportunities afforded by the local context; and negotiated with relevant stakeholders.

4 *Generating pathways that build a coherent and multifaceted approach.* Whatever pathway is chosen it needs to: be aligned to the broader vision and direction of the school; respond in sophisticated ways to data collected on student outcomes and feedback from stakeholders; evolve over time to meet changing needs and circumstances of the school and the community; distribute ownership across stakeholders; and draw effectively on additional resources.

5 *Developing professional leadership and learning.* The report has highlighted importance of both professional leadership and learning in the successful implementation of the previous four principles. What has become clearer is that strong leadership and continuous professional learning of all staff both contribute significantly to the enthusiasm, commitment, knowledge and skills required for the effective implementation of a successful and sustainable whole-school approach to improving boys' socio-academic outcomes.

STRATEGIES

Strategies aimed at *Motivation* are individual support strategies. These key strategies are to: develop positive cultural connections between community, home and school; foster supportive learning environments where students feel valued and respected; promote opportunities for renewed community connections; provide authentic, high-interest and challenging learning experiences; allow negotiation and choice at school and classroom level; connect critical syllabus areas (especially literacy) with all individual motivation strategies; support adaptive attitudes and behaviours; work on managing physical actions and emotional responses; develop a wide range of

assessment strategies that support early and ongoing intervention; and target students with specific socio-academic needs.

Strategies aimed at *e'ngagement* are those strategies that produce engaging messages about knowledge, ability, control, place and voice. These key strategies are to: structure learning environments that offer students voice and control; promote self-regulatory and autonomous learners; focus on quality teaching and productive pedagogical relationships; offer projects and problem-based learning; develop collaborative learning communities; offer access to sophisticated ICTs; integrate literacy across all aspects of the curriculum; introduce a variety of texts that widely appeal to the interests of boys; contextualise and individualise literacy learning; and provide feedback that is explicit about task criteria, processes for learning and self-regulation of learning.

Strategies aimed at *E'ngagement* are those which widely cater for each student's emotional and cognitive involvement. These key strategies are to: have high, but realistic expectations within an ethos of pressure and support; ensure all students feel that they will be supported socially and academically throughout their school lives; challenge stereotypical views about boys; offer a wide range of intellectual, cultural and aesthetic experiences; work collaboratively with families and communities; use community, cross-age and peer mentoring to support students and to provide positive role models; utilise support staff to cater for all students, particularly for those most 'at risk'; focus on key transition points; promote different pathways for further study and post-school options; and provide alternative settings for the development of socio-academic learning.

7 CONCLUSION

The engagement, motivation, academic and social outcomes of students are significant concerns for education policy-makers, teachers and educational researchers throughout Australia and overseas. One major set of concerns involves boys in the early and middle years of schooling, especially those who are from Indigenous, rural, regional and low-SES backgrounds. Not all boys experience problems in their schooling and where they do, various factors intersect to influence their experiences at school. There are important questions surrounding the extent to which the education of these boys should engage with the social and economic disadvantages or the historical and geographic adversities which they and their communities face. Of particular interest are issues concerned with the degree to which education should engage with the specific social conditions that affect the lives of men and the changing economic conditions that impact upon their future educational and career prospects.

The case studies presented in this research report have focused on the education of boys, with some specific focus on those from Indigenous, rural, regional and low-SES backgrounds, and have identified factors that contribute to both the positive and negative dimensions of their schooling. The report extends and refines the related research literature. It offers a contribution to the profession's knowledge of research-based educational practices and extends the possibilities presented by such knowledge for mediating the negative school experiences experienced by such boys.

The conclusions which can be drawn from this report are presented below.

7.1 Interactions, connections and complexities

The case studies presented in this report provide evidence of the interrelated psychological factors and socioeconomic and cultural circumstances that affect the schooling of boys, particularly those from Indigenous, rural, regional and low-SES backgrounds. These boys are not necessarily passive in their schooling – in fact many struggle against its confines. The case study evidence points to the sensitivities, perceptions and evaluations that such boys invest, mentally and physically, in their everyday schooling. This research indicates that knowledge, not only of their behaviours, but also of their interests, aspirations and imaginings, is necessary to understand boys' motivation and engagement with school. These interdependent factors play a significant part in the confidence and competencies that these boys develop in making their schooling meaningful or otherwise.

Thus the case study evidence describes the socioeconomic and cultural dynamics impacting on the schooling of these boys. Together, the case studies suggest that these boys may not have access to the socioeconomic and cultural resources many schools take for granted as enhancing their students' emotional, cognitive and behavioural engagement with classroom life. This evidence reminds us of the multiple dimensions of the lived experiences of these boys, experiences which are integral to explaining their engagement, motivation and socio-academic achievement. (We use the term

socio-academic throughout the report to indicate the degree to which academic and social learnings are interactive within the case study data). The larger societal forces within which the schooling of these boys is embedded include: significant historical legacies in the case of Indigenous students; the defining poverty of low-SES students, and isolation from the social, economic, cultural and technological opportunities of metropolitan Australia for those in certain rural and regional areas. The cumulative exposure of such boys to these challenging socioeconomic and cultural conditions instils in them a range of lasting dispositions regarding schooling, education, work and life. However, neither background nor gender is a simple deterministic construct. This report shows that schooling does make a difference.

The curricular, pedagogical and assessment practices these boys are exposed to shape their motivation to learn, as well as shaping their social success and their academic performance. This report suggests that traditional curricular, pedagogical and assessment practices have failed for some – perhaps many – of these boys. Curricula that connect with boys' interests and experiences can provide rich material through which their existing knowledge is not only acknowledged, but can be extended, deepened and subjected to critical reflection.

Developing curriculum, pedagogy and assessment practices that are relevant and give educational value to boys' existing experiences is not a licence to celebrate insularity or to narrow their horizons. Nor should adapting curriculum to the local context limit boys' education or their sense of vocational options. Schools in the case studies have taken the opportunity to explore their students' local and global knowledge networks. These networks were enabled by the students' and the school communities' connections with businesses, including popular culture industries, such as surfing or skateboarding. Educational interactions with local industry provided opportunities for exploring the local-global connection and extended students' imaginings of the pathways their vocational skills might offer them. The efforts made by rural and regional Indigenous communities to establish themselves in the global marketplaces of tourism and cross-cultural education provide just such opportunities. Schools need to continue understanding and working with the complexities in their students' lives, facilitating their educational transitions and enabling the realisation of their work/life projects.

There are no simple solutions to improving the motivation, engagement and socio-academic achievement of boys, particularly those from Indigenous, rural, regional and low-SES backgrounds in the early to middle years of schooling. The case study evidence points to the multilayered complexities faced by education policy-makers, schools and teachers. First, schools and teachers have to deal with the complexities presented by the interrelated psychological factors and socioeconomic and cultural circumstances that affect the schooling of these boys. Second, they face the complexities of constructing pedagogies which connect with the knowledge networks informing boys' interests and experiences – and doing so in ways that extend and deepen the boys' worlds. Summarised below are five further interrelated dimensions of the complex work of policy-making, schooling and teaching to which the case studies have provided some insights:

- developing a long-term commitment to whole-school approaches to educational improvement

- forming a shared vision
- developing coherent and integrated programmes
- shaping effective pedagogies
- sustaining supportive school structures and cultures.

School leaders and teachers in these case studies are conducting complex interventions into whole-school programmes. These include a range of pedagogical, curricular and assessment changes, including class restructuring and introducing specialist programmes for individuals and small groups of students.

The case study evidence also revealed the complexity of outcomes towards which schools are working. These sometimes begin with such basic areas as improvements in school attendance. They then go on to deal with areas such as internal and external academic results, behaviour self-management, cultural knowledge, cross-cultural relations, student self-confidence, and transitions to vocational training, further education or employment.

Although complex, the explicit identification, systematic collection and careful analysis of quantitative and qualitative datasets over the long term are necessary to refine or reinvent the educational principles and strategies directed towards these outcomes. Despite the complications often created by staff turnover and student mobility, it remains essential for schools to keep and analyse longitudinal data on academic results, as well as on student attendance, retention, suspension, detention and exit destinations.

7.2   The MeE framework

The MeE framework offers educational leaders, teachers, policy-makers and researchers with a potentially valuable tool for furthering their understanding of the complexities of schooling and for turning these complexities to their own advantage. The case studies provide an empirical basis for testing, refining and elaborating the framework. They suggest its potential for guiding the practices which enhance students' socio-academic outcomes. The MeE framework has also proved valuable as a research tool for generating evidence and knowledge to inform the professional judgements of teachers and principals.

The MeE framework suggests an interdependence between boys' cognitive, emotional and behavioural processes and the socioeconomic and cultural dynamics in which they and their schooling are embedded. This research report does not claim an automatic derivation of the psychological from the social, or vice versa. It rather suggests that the sharp demarcation between the psychological and the social creates problems in education policy-making and pedagogy by preventing educators from understanding how they are interwoven. The MeE framework offers a model for diagnosing the relations in which individual boys' actions, beliefs and goals are enmeshed in larger societal dynamics. It also makes it possible to see how schools both consist of, and are anchored in, certain socially valued forms – in other words, to make explicit the ways in which schools are endowed with considerable social,

economic and cultural significance. These societal dynamics find expression in the day-to-day negotiations between teachers and their students.

The MeE framework provides a basis for exploring which types of education policies, curriculum frameworks, programmes and pedagogies are effective for boys; those in the case studies offer exemplars. The case studies suggest that disaffected students benefit from pedagogies that engage their worldly interests. School classrooms were designed for another era, and the case study schools and teachers are working to push beyond the boundaries of these spaces. The case studies suggest that these students benefited from interesting and intellectually challenging learning experiences, whereby they acquired new knowledge and had opportunities opened for them both within and beyond their immediate communities.

7.3   Reworking schooling: Integrating extra-curricular activities into curriculum policy development

Boys from low-SES backgrounds, whose communities were experiencing high unemployment, reportedly disengaged from schooling when it did not make connections to vocational opportunities in their future. The economic changes in Australian society have affected the labour market for Indigenous, rural, regional and low-SES males. The case studies indicate that the education profession is searching for policies, curriculum frameworks, forms of schooling and teaching practices that will engage students against the background of these changes in work/life trajectories and demonstrate the full, available range of employment options. Consideration also needs to be given to how students' learning might better position them in relation to the powerful changes continuing to impact on their communities. These changes are associated with ever-advancing technologies, new and changing work practices and increased environmental and security risks. This raises questions about how to reinvent 'traditional' curriculum, pedagogical and assessment practices, while taking these changes into account. It also suggests possibilities for re-grounding definitions of socio-academic success and teacher professionalism.

Teachers in the case study schools made connections with the knowledge networks available through their students' lived experiences. The target groups of boys seemed to benefit from schools that recognised their out-of-school learning experiences and interests as a source of knowledge acquisition and production. Where educational policies, schooling structures and pedagogies sought to draw upon family and community knowledge, these interventions enhanced the potential of these boys for success. This differs from, but builds on, schools' efforts to communicate with families and to involve fathers, local community services and businesses in school activities. It involves developing pedagogies which, from the earliest years, value these boys' out-of-school literacies, interests and concerns, by engaging with community knowledge in ways that enhance boys' socio-academic achievements. The pedagogies utilised in these case studies for example embedded key literacy learnings in project-based studies. The extension and deepening of students' language and literacy skills was integral to such projects. Skilled teachers were often able to develop students' capability to decode, analyse, use and produce multimedia texts through 'hands on' and/or investigative projects.

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The case studies thus point to the importance of involving students in learning that goes outside the boundaries of school, particularly for motivating and engaging boys from communities experiencing socioeconomic, geographic and/or historical adversity. The case study schools have made an important contribution to enlarging what is regarded as legitimate 'educational' knowledge. They have enabled their students to engage with knowledge networks hitherto excluded, or otherwise ignored by traditional schooling. This research report suggests the value of continuing those educational interventions which integrate varied extra-curricular activities into the formal curriculum. In fact, curriculum policy development is one of the crucial issues to emerge from this report. Formally authorised curriculum frameworks and their associated assessment procedures could contribute to this important work by giving these school-level developments increased formal sanction and accreditation.

The teachers in the report focus on active and purposeful hands-on, mentally engaging activities. In particular, they promote inquiry-based, action learning using project-based pedagogies that accommodate the boys' interests in real-life problems and their connections with the sources of knowledge available through their family and community. The curriculum focus most attractive to these boys is one based on topics and activities embedded contextually in the nitty-gritty of real life. Linking their schooling to the outside world of knowledge has been found to increase their motivation and engagement with the academic work built around it.

This raises questions as to whether various traditional forms of assessment, testing and benchmarking have the capacity to capture such socio-academic learning. Given that problem-posing, project-based pedagogies seem to enhance the motivation, engagement and socio-academic achievements of these boys, education policy-makers and schools now face the problem of designing assessment practices that tap into and value the richness of these learnings. What assessment practices are needed to record these boys' performances in:

- undertaking 'hands on' projects
- investigating big ideas
- solving real-life puzzles
- making connections with the extended knowledge networks that link schools to the wider world
- engaging in collaboration, cooperation and negotiation?

Given the nature of the tasks involved, the case studies suggest that Australian educators might be able to pioneer forms of assessment, testing and benchmarking that will document the promotion of teamwork, confidence and leadership among these boys.

Moreover, these case studies invite consideration as to whether a focus on 'school retention', 'anti-school behaviour', 'classroom strategies' and 'classroom management', while necessary, might be a too limited view of the socio-cultural dimensions of learning. This is particularly so in terms of structuring students' opportunities to access the larger funds of knowledge now available through local/global connections. The perennial questions of withdrawal or mainstreaming, single sex or co-educational classes are not resolved in the research report, since these

are not seen as the key issues relevant to motivation and engagement. The more central issue is that of enabling boys who may be experiencing difficulties in schooling to engage with their world knowledge. Mentoring also seems to be important. Cross-age mentoring offers possibilities for improving these boys' sense of themselves as learners; it also offers the chance to build upon their socio-academic achievements. The case studies demonstrate numerous instances where community and peer mentors have provided both teachers and students with trained, trusted and collaborative assistance. The evidence reported here suggests that the flexible organisation of schooling allows this to happen.

7.4   Enhancement of the teaching profession

Since the case studies indicate that teachers are using workplace learning, sport and community service learning effectively in motivating and engaging boys, the connections with their 'out of school' knowledge networks would seem to provide a significant basis, not only for educational innovation, but also for teacher professional enhancement. The developments discussed here may now benefit from a national curriculum, pedagogy, assessment and teacher professional enhancement programme that resources them appropriately. Such a programme might examine the possibility of legitimising innovations which productively engage students' knowledge networks as a basis for judging their socio-academic performance.

The case study evidence indicates that improvements in students' socio-academic learning is directly related to the enhancement of teacher professionalism through a range of in-service professional development. Whole-school staff presentations, supportive and innovative leadership, workshops, reflective learning meetings, staff conferences and lesson observations combine to provide the supportive scaffold that extends and deepens teachers' knowledge. Professional development activities such as in-service courses, team-teaching, mentoring, peer- and self-assessments enable teachers to take the strategic risks necessary to make the effective educational changes likely to improve boys' outcomes.

This study provides some insights into the type of professional who is successful in motivating and engaging Indigenous, rural, regional and low-SES boys. These boys benefit from teachers who are have realistically high expectations; who engage them with interest, humour and affability; and who are firm and friendly in their demands for performance. The thoughtful teachers represented in the case studies make themselves aware of the community knowledge these boys (and girls) bring to school. They are proactive in harnessing the resources these knowledge networks offer to the education of their boys, thus enhancing those boys' capacity to succeed. Moreover, these teachers make valid educational uses of the ever-advancing ICTs as well as 'boy-friendly' texts and other artefacts produced by popular culture industries. They use computers, mobile phones, electronic games, weblogs and the products of the popular culture industries as a means to motivate and capture boys' interests in learning. Of particular value are literacy activities that promote the collaborative use, analysis and production of multimodal and multimedia texts. These teachers use these active learning opportunities to enhance the multiple dimensions of boys' literacy. This includes engaging boys in the preparation and presentation of multimedia texts for real-world audiences. Importantly, they justify their selection of such curriculum

materials on evidence that reflects and gives expression to the era in which these students' learning/earning trajectories are now situated.

These teachers trust and enable their boys to progress with a sense of autonomy, control and increasing competence, and make opportunities for them to reflect on their own learning strategies.

'Creativity' was a key issue to emerge from the case study evidence, and is a theme running through the discussion of educational principles and strategies. Teachers indicated the need to be creative in their responses to, and engagement with, the education of students from Indigenous, rural, low-SES and regional communities, particularly boys. The case studies highlight the socio-academic gains made through creative approaches to pedagogies that support socially and academically needy students. What do the case studies indicate about creativity that could provide a focus for educational interventions? The case studies suggest that, in their ordinary, everyday work, teachers use four key creative processes:

- Effective teachers and their schools collaborate with other creative, innovative educators in their efforts to view the education of boys in new ways and to find fresh perspectives for framing the issues. Teachers, too, benefit from mentoring schools that build upon of the accomplishments of other schools, as well as their own.

- Schools and teachers benefit from the experiences of renowned leading educators. For example, teachers From Ochre Primary School visited Reggio Emilia in Italy to learn about its philosophy, exploring how its style and structure might be remodelled for an Australian community. Typically, teachers begin by imitating initiatives such as Betts' Autonomous Learning Model or the Framework for Effective Learning, until they have enough confidence to give these theories their own shape and substance. Some teachers might be unable to turn their own reflections into educational interventions without borrowing from such successful approaches. These models provide a pathway.

- Schools and teachers build upon their own earlier accomplishments by trialling appropriate educational interventions for boys, evaluating their success by using relevant quantitative and qualitative data and being flexible enough to revise their interventions accordingly.

- The case study schools and their teachers recognise and accept that developing educational interventions which produce successful socio-academic outcomes for the target groups of boys is a difficult, arduous and time-consuming task. There are no 'quick fixes' in education; it may take a decade or more to make a productive difference. Designing effective educational interventions can be a frustrating experience. Teachers invest much of their careers into trying to help their students succeed. They may meet dead ends over the years as they struggle to invent appropriate educational interventions. Typically, effective teachers do not abandon their projects.

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7.5   Conclusions and beginnings

Taken as a whole, this research report indicates a complex array of relations which together produce the pattern of (comparatively) low performance in Indigenous, rural, regional and low-SES boys in the early and middle years of schooling. Educators are concerned that the correspondence between the social, emotional and mental formations of these boys may be undermined by the ways schools are or have been positioned, or otherwise now have to position themselves. Effective teachers and principals understand that being an Indigenous, rural, regional or low-SES schoolboy means that these boys' very being is located within the historical, social, cultural and economic circumstances, which is their everyday lives.

The work of educational improvement continues throughout the career of a committed teacher and through a school's lifecycle. Effective teachers ceaselessly recommence the work that is necessary to intervene in the education of disaffected students (both boys and girls) in order to make a difference to their lives. These teachers know that overcoming the ordinary, everyday realities of the poverty and/or isolation faced by these boys cannot be achieved through a single intervention.

To briefly reiterate: students in these case studies appeared to benefit greatly from project-based work derived from real-life problems which had them:

- undertaking 'hands on' projects
- investigating big ideas
- solving real-life puzzles
- making connections with the extended knowledge networks that link schools to the wider world
- engaging in collaboration, cooperation and negotiation.

This is not to say that simply turning aspects of schooling over to projects based on life in their broader, beyond-school communities is a panacea. The key issue needs to be the richness of the tasks in which they are engaged and the skills involved: investigating, connecting, collaborating, negotiating, problem-solving – and reflecting on these skills. However, these rich skills were seen to be enhancing the motivation and engagement of boys when embedded in projects and problems that brought the world beyond the school gate into the school.

Hence, a number of key recommendations for systemic intervention arise from this research, namely:

1   That Australian educators across Federal and state systems lead the way in developing among the international education community real-world curriculum policies. The formally approved curriculum policies of education authorities may benefit from incorporating the extended knowledge networks of teachers, students, parents and community members that lie beyond the school. This would indicate a valuing of the currently extra-curricular knowledge, learning experiences and assessment tasks that motivate and engage these boys, and thereby enhance their socio-academic achievements.

2   That Australian educators across Federal and state systems lead the way in developing among the international education community real-world assessment, testing and benchmarking that legitimise the richness of the learnings, and capture the socio-academic achievements of boys (and girls) from rural, regional, Indigenous and low SES communities. For instance, such real-world assessment, testing and benchmarking could find ways of documenting these students' performances in investigating big ideas; engaging in meaningful investigative projects; solving real-life puzzles; making connections with extended knowledge networks and engaging in collaboration, cooperation and negotiation.

3   That Australian educators across Federal and state systems lead the way in developing among the international education community real-world professional enhancement strategies. These would enable them to explore whole-school changes to curriculum, pedagogical and assessment practices explicitly intended to improve the motivation, engagement and socio-academic achievement of Indigenous, rural, regional or low-SES boys (and girls).

The report highlights the complexity of issues affecting the academic and social performance of Indigenous, rural, regional or low-SES boys. These complexities may not always be immediately apparent. Because schools do contribute to shaping the work/life trajectories of these students, there is considerable interest in the potential that school leaders and teachers have for transforming the schooling experiences of such boys. Evidence from this research report indicates a reasonably comprehensive range of sound educational principles and effective strategies relevant to enhancing the performance of Indigenous, rural, regional or low-SES boys in early to middle school.

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