

## **THO5025Y**

**Title:** From macro to micro: One model of implementing government policy into classroom practice

### ***Abstract***

Educational research and government policies have identified the need to address the engagement of boys in learning. Consequently, improving learning outcomes for boys involves several key strategies: those aimed at ensuring that boys are at school and actively engaged in learning, and those aimed at enhancing effective pedagogies by ensuring lesson content is relevant for boys and consistent with their preferred learning styles.

Of interest to this conference is the method of implementing such directions in a project that encompasses over 350 schools nationally. The DEST-funded Boys' Education Lighthouse School Stage 2 (BELS) Project has implemented an evidence-based approach that has enabled government, school administrators, teachers, boys and members of the wider community to develop quality strategies that allow for measurable outcomes and community ownership in areas such as literacy, gender and role models, learning styles, numeracy, ICT-supported learning, social competencies, and home and school partnerships. This presentation will use the BELS project to illustrate large-scale implementation of government policy that seeks to improve learning outcomes for boys in a wide variety of classrooms.

### **Introduction**

Educational research and government policies over the past ten years have steadfastly moved towards making boys in classrooms a national educational priority. Several key strategies have been identified as improving learning outcomes for boys. They include: ensuring boys are at school and actively engaged in learning by implementing effective pedagogies; making lesson content engaging for boys; and taking into consideration boys' preferred learning styles. The DEST-funded Boys Education Lighthouse Schools Project Stage 2 (BELS) is a large-scale national project that involves 51 clusters spread over 347 schools that seeks to enact government policy to improve learning outcomes for boys. It does so through the development of school-based projects which focus on productive learning strategies and take into consideration the specific needs of boys within their school setting. Key themes or cluster foci for school projects include literacy, numeracy, gender role models, learning styles, ICT supported learning, social competencies, and home and school partnerships.

Of particular interest to this conference is the methodological approach adopted by BELS designed to meet both government and school needs. This includes the use of an evidence-based approach that stress schools' need to plan how they will monitor and

measure their project's outcomes. In this paper, we discuss the key policy initiatives that drive the BELS project and explain the evidence-based practice that underpins the framing of cluster projects. Three exemplar case studies are then presented to provide snapshots of the project in action.

### **Government Policy**

Boys' education is now established as one of the key political issues in education and will most likely remain so for the foreseeable future. In response to a decade or more of growing anxiety about boys' social and academic problems reflected in academic research and through mass media outlets (Weaver-Hightower, 2000), the politicization of boys' education was instituted into domestic government policy during the 2004 federal election through a series of well reported public interchanges; a "crisis of masculinity" by the then Leader of the Opposition, was followed by a call for male-only teaching scholarships, followed by announcements concerning major funding for boys' education by the Minister for Education. This high-profile commentary during the heat of an election campaign was not in any way reactionary or unconsidered. It was, in fact, a logical and unavoidable step in this issue's evolution from obscure and (arguably) politically inappropriate academic research supported by anecdotal evidences from teachers and concerned parents, to an issue of public concern that has become one of the highest funded educational issues of this decade.

The reality is that since 2000, Australia's Federal Government has pursued a policy of so-called "tipping the balance" back towards boys. It has done so through commissioned research and public-funded, large-scale educational strategies. In particular, boys' social and academic performance in schools has been identified as critical issues of "national health", and strategies that might address any shortfalls have been sought.

A significant early step in this process was one that did not necessarily focus on boys *per se*. Collins, Kenway and McLeod's (2000) report, *Factors influencing the educational performance of males and females in school and their initial destinations after leaving school*, drew on complexities inherent in current gender equality policy to emphasise that the issue of educational fairness lay not in gender exclusiveness, but in identifying 'which boys' and 'which girls' actually needed help. The study synthesised geographic, demographic and socio-economic variables as the most significant factors in this debate.

Gender differences in school retention, participation and performance were more the product of socio-economic status, locality, ethnicity, and disability, rather than gender. The analysis highlighted some reasonably unsurprising facts; retention rates for girls were higher than for boys, particularly beyond year 10; boys' subject choices tended to focus on mathematico-logical formulaic knowledge; girls were more spread across the key learning areas; girls were, on average, performing better than boys; more boys than girls were deemed "slow starters" at literacy; more females than males enter higher education, while more males than females attend TAFE.

If the Collins et. al. (2000) report tended to steer public and government policy towards a more gender-neutral position, Trent and Slade's (2001) study did not enjoy similar liberal parameters of inquiry. *Declining rates of achievement and retention: The perceptions of adolescent males* drew on the views of 1800 young men from 60 secondary schools in South Australia, to investigate boys' reactions to declining retention rates and poor achievement. The study identified some key issues, and clear ways forward.

- a need to understand 'good teaching', and how it related to the learning needs of boys;
- a need for systemic change in schooling which would bring schooling closer to the 'outside' as perceived by adolescent males.
- a need for good research into the nature of learning environments, specific to the issues raised by the boys.
- a need for a new focus in pre-service teacher education on understanding the perceptions, lifestyles, views and aspirations of boys.

In essence, the study detailed the widening gap between boys' lives and their schooling experiences, and it recommended the establishment of authentic learning environments and good teaching to increase boys' achievement and retention. The pendulum had begun to swing from policy derived from academic research rooted in sound theorization of gender, towards the more practical and urbane, school-based epistemologies.

During the next two years, federally funded reports pursued this theme. Lingard, Martino, Mills, and Bahr's (DEST, 2002) report, *Addressing the educational needs of boys*, investigated practical approaches to meeting boys' educational needs. They stressed that

well- researched and thoughtful changes would be most effective; that issues of difference between genders required complex, not simplistic, responses; that pedagogical and assessment reforms would be key factors in moving towards improved academic and social outcomes for boys; and that a ‘whole school’ policy towards boys would ensure widespread change, and heighten the possibility of a ‘win-win’ context.

During these years, public funding supported studies in boys’ education that moved towards recognition of boys’ schooling troubles as a valid educational priority. Cresswell, Rowe and Withers’ (2002) report, *Boys in school and society*, focused on understanding boys’ development in schools by examining student achievement and attitudes to school, and the way that behaviour affected boys’ educational outcomes. The report looked closely at year 12 performance, educational participation, social development and outcomes, and strategies for boys in relation to performance and health issues. The report found that:

- many boys were disengaged with schooling and were likely to be ‘at risk’ of under achievement;
- many boys displayed greater externalizing behaviour problems;
- many boys reported significantly less positive experiences of schooling;
- boys were more likely to drop out of schooling prematurely;
- boys were more likely to have higher levels of auditory processing problems;
- boys were subject to a greater rate of disciplinary action (including bullying behaviours and expulsions);
- boys were more likely to participate in delinquent behaviours, alcohol and substance abuse; and
- boys were 4-5 times more likely to commit suicide and suffer from depression.

Outcomes from Cresswell et. al’s (2002) study were specific and detailed and prioritized pedagogical initiatives. There needed to be a focus on support for literacy across the curriculum, early diagnosis and intervention aimed at preventing literacy under-achievement, highly structured instructions and lessons, assessment and monitoring systems to prevent under-achievement in key skills, and opportunities for extra tuition and revision.

The impact of reports such as these validated a need for formal political intervention. *Boys: Getting it right: Report on the inquiry into the education of boys* (House of Representatives Standing Committee on Education and Training, 2002) drew on a significant number of submissions to attempt to specify just what *were* boys' problems, and what should educators and policy makers be doing about them? This report cited evidence of boys' under-achievement in terms of school-based and post-school outcomes. It investigated curriculum and pedagogical issues pertinent to boys, particularly the way learning styles and assessment impact on boys in education, and it outlined the importance of a strong foundation of literacy and numeracy in the early years of schooling. The report was specific to the degree that it detailed effective intervention programs like 'reading recovery', 'pre-service education', professional development for teachers, the importance of male relationships in school, and the availability of male role models. It called for a revision and recast of *Gender Equity: A Framework for Australian Schools* into a policy framework consistent with *The Adelaide Declaration on the National Goals for Schooling in the Twenty-First Century*. It reiterated previous calls for a major focus on pre-service and in-service teacher education and further funding to research the effects of different assessment methods. The report also emphasized the raising of community and parental awareness on the effects of parenting styles and the testing of kindergarten children for hearing and sight problems. It recommended more funding from state and territory governments to study auditory processing problems, and more funding for research into a variety of literacy and numeracy programs. Further, it recommended a reduction in class sizes, higher remuneration for teachers, additional allowances, and HECS-free scholarships for equal numbers of male and female students.

The mandate created by the *Boys: Getting it right* report allowed for the first of a number of large classroom-based boys' education projects to be launched. In late 2003 the final report from the first Boys Education Lighthouse Schools (BELS) project *Meeting the challenge: Guiding principles for success from the Boys Education Lighthouse Schools Program Stage One* (Department of Education Science and Training, 2003) described some of the more successful boys' education strategies currently underway in schools around Australia. These strategies included a range of literacy programs for mainstream, 'at risk' and special needs boys, many with an emphasis on 'hands on' learning, outdoor adventure challenges, behaviour management, personal development, peer mediation, and withdrawal programs for boys 'at risk'. Of particular interest was the way that the

projects addressed five very practical areas of boys' learning and development: (1) pedagogy, curriculum and assessment; (2) literacy and communication skills; (3) student engagement and motivation; (4) behaviour management programs; and (5) male role models for students. The report concluded with ten "guiding principles" for success in educating boys – items that have guided subsequent projects including the large BELS Stage 2.

This very brief snapshot of government-initiated studies between 2000 and the present paint a portrait of significant changes in policy direction. The early 2000s was marked by a reluctance to identify boys' education as a separate issue, developing through time to the situation where boys' education issues are accepted as genuine, isolated from girls, worthy of specific attention, and teacher/pedagogy based. During this process the Federal Government remained a key player, not only directing any policy of change through commissioning reports with specific terms of reference, but also by significantly impacting the nature of any change through targeted funding of specific strategies for boys.

Analysis of reports commissioned by the Federal Government since 2000 illustrate a direction of policy development that has altered the nature of gender debate in schools in this country, from "co-gender" oriented discussions in 2000, through a period of public validation of boys' issues in 2002, to the present situation of classroom based "boy-friendly" education practices, funded by public monies. And while this change of direction has largely been orchestrated from within government offices, the vehicle for implementation of the change during this time has been with "independent" academic institutions and curriculum research centres. This may or may not be a new development. However, what is clear is that Universities and other not-for profit educational institutions have, over time, evolved an effective partnership with the Federal Government through the provision of their applied research expertise. In the process, such organisations have become *de facto* vehicles for government policy change.

To all indication, this will become more rather than less prevalent in the foreseeable future. To have any influence over new directions in national educational policy, academic institutions will increasingly be required to supply research expertise to "grassroots" educators. With tendering for a new DEST funded \$1M pilot professional

development project now complete, and an anticipated \$15M in boys' education strategies budgeted during the next three years being directed straight to schools, government policy direction, and its spending policy is quite clear. There is an unequivocal focus on actual measurable learning outcomes, on policy to address classroom based issues, on strategies to be evidence-based, on the use of clear and transparent methods of quality assurance, all with a focus on measurable outcomes that directly impact future teaching practice. And if the future is to be practical, classroom-derived change, so too is the method for the implementation of this policy - independent contractors with proven research expertise and sound knowledge of teaching practice.

As will be described in the following sections, the current Boys Education Lighthouse Schools project is one example of this process in action. It models the application of principles of evidence-based practice directly to teachers in schools, using virtual Communities of Practice, and a strong research based focus on quality assurance and assessment of measurable learning outcomes.

### **Evidence-based Practice**

The growing interest in using research evidence to inform policy and practice with its emphasis on identifying, synthesising, disseminating and applying reputable knowledge to the solution of problems has focused attention on the quality of research itself. In education, the movement to make education more evidence-based arises from the need to contribute to a knowledge-based economy and to be accountable to policy-makers and other stakeholders investing in education. As a consequence a re-evaluation of educational research is taking place.

The idea of evidence-based education first raised by Hargreaves was in response to a number of criticisms about the gap between the teaching and the research communities, the relevance, applicability and quality of educational research, the non-cumulative nature of good educational research and its effective dissemination (Hargreaves, 1999; Hillage, Pearson, Anderson & Tamkin, 1998). To Hargreaves, educational research needs to be directed towards the systematic development of a body of knowledge that is capable of informing the practical judgements of teachers. Hence, the goal of evidence-based research is to maximise the use of its findings for teachers. Hargreaves uses the term 'evidence-informed practice' since relevant research informs rather than displaces the

judgement of teachers. He also argues that research evidence should be decisive and conclusive for practice. The future of educational research is to require more experimental studies and randomised controlled trials in search of what works in practice to produce improvements. Hargreaves also argues that since practical decisions (in policy-making) are context-bound, knowledge derived from research “serves as a supplement to, not as a substitute for the policy-maker’s existing knowledge” (p.246). Davies (1999) too suggests that the purpose of evidence-based practice is (a) to use existing evidence from worldwide research and literature, and (b) to establish sound evidence where existing evidence is lacking or is questionable, uncertain or weak. It is at this level that future research on education needs to meet the criteria of scientific validity. Further, Davies argues the problem is not that teachers do not undertake research or that they are excluded from determining the research agenda, but that there is not a culture of teachers using research to inform their everyday teaching practice. Others see experiments, meta-analyses, and randomized trials as exemplary methods of scientifically based research and which are not being used to advantage in education research (Slavin, 2002). Hence a new view of research as evaluation-based, of quasi-experimentation, and of accountability has emerged with a call for teachers to become more involved in researching their own practice.

However, there have been criticisms of Hargreaves’ (1999) model. Some educators (Elliott, 2001; Lather, 1993) question the emphasis on experimental design and the positivist epistemology that sometimes underlies them. Still others (Willinsky, 2001) have argued that important non-scientific “ways of knowing” will be forgotten in the charge to achieve scientifically based research. More cynical are those who argue that the current state of education research has nothing to do with science, but is as a result of money and politics. Generally, the criticisms can be summarised as:

- problems of causation and measurement in educational research that are not found in medicine and health care;
- the uncertainty as to what counts as evidence; and
- the inadequacy of data-bases and bibliographic resources in education.

Atkinson (2000) joins the debate arguing that research into practice as the only way of improving teaching ignores the role that theory plays in determining teachers’ daily

actions, whether they are aware of it or not. She further argues that Hargreaves emphasis on cognitive science to provide answers does not take into account the complexity of the personal, social or cultural world of teachers and students, or of the thinking process that inform their pedagogy.

### **What counts as evidence?**

The relationship between educational research and professional practice is complex, particularly with the issue about what constitutes 'evidence'. Davies (2000) views evidence as comprising the results of systematic investigation towards increasing the pool of knowledge. He argues that evidence includes the means of proving an unknown fact, support for a belief, use of testimonies and witnesses. Further, evidence can be independently observed and verified and there is broad consensus as to its content. On the other hand, Hammersley (2004) suggests that other kinds of evidence that do not necessarily emerge from systematic investigation may be more important. Finally, Hodkinson and Smith (2004) maintain that the contexts in which practitioners work are more influential than the evidence itself.

Goldstein (2005) agrees that randomized controlled trials are generally accepted as a gold standard in applied statistical work, but argues that it does not enable causal connections to be established, and its use is not necessary for causal connections to be inferred. He distinguishes between (a) evidence which helps to explain whether and why things occur, and (b) evidence which rules out certain explanations or courses of action. Goldstein argues that the debate has been about the former, but what is more important is knowing what doesn't work, and what is logically inconsistent. He insists that we have a lot of information on the latter and this evidence should be acted upon by policy-makers. He also calls for a forum about what would be a realistic expenditure on research for high quality knowledge production.

### **Dissemination of findings**

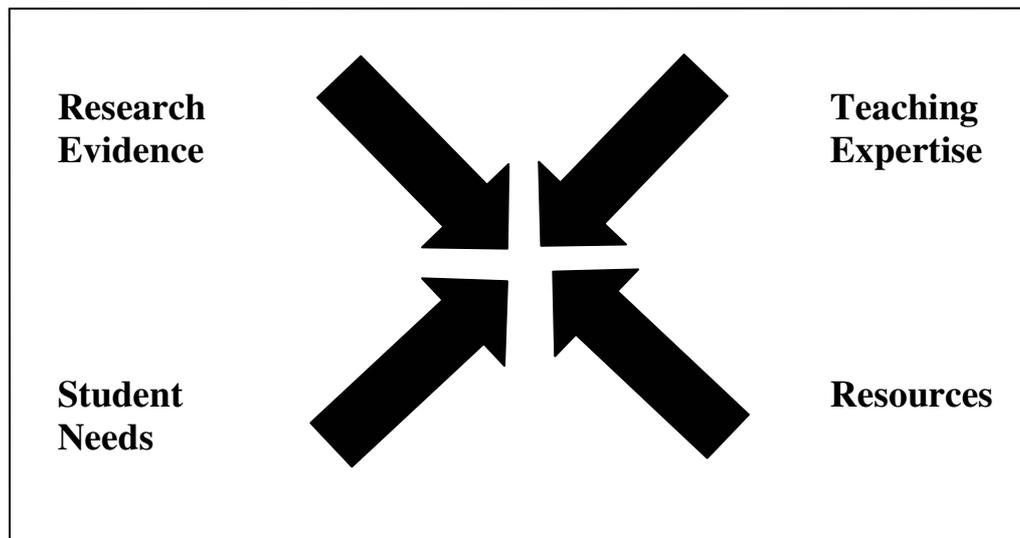
The review by Hillage et. al. (1998) and the study by DETYA (Department of Education Training and Youth Affairs, 2001) identified the need for a more cumulative evidence base to inform decisions about policy and practice. This is necessary for researchers, fund-providers and users to check not only what research has been published, but ongoing research that will be published in the future.

One of the initiatives toward disseminating such evidence is the Cochrane Collaboration in the United Kingdom. Developed initially in the medical field, The Cochrane Collaboration is now an international network of researchers, academics, practitioners and users committed to managing knowledge that is quality assured, accessible and cumulative (Oakley, 2002). The reviews are published electronically in *The Cochrane Database of Systematic Reviews*. In the United States, to assist in narrowing the gap between research and practice, the Campbell Collaboration seeks to develop systematic reviews of studies on the effects of programs in the social and behavioural sectors, including education. The Collaboration is an international network of social scientists and policy analysts, who prepare, maintain and disseminate reviews of research in education, crime and justice, and social welfare. Thus there is a clear audit trail from primary research to the conclusions of the review (Davies, 2000). The general aim of the Collaboration is to: prepare reviews of randomized field trials for practitioners, policy makers, educators and their students and members of the public; assist researchers conduct meta-analyses; spread new standards of assessment and evaluation; and give the public access to research results (Willinsky, 2001).

However, in Australia, an investigation of the relationship between research, policy and practice, found that the impact of educational research on both policy and practice was complex and indirect rather than linear. The report by DETYA suggests an interactive approach to producing, disseminating and using new knowledge which requires a transformative process. Hargreaves (2003) also argues there is current evidence of research having an impact through involving researchers and practitioners as joint or co-creators of new knowledge. He cites the work of William and Lee (2001) on assessment for learning which involved a partnership between researchers and teachers providing a model of development and research which is potentially transformative rather than research and development.

The BELS project supports Atkinson's (2000) purpose of research which is to "continue to inform discussion, among practitioners, researchers, and policy-makers, about the nature, purpose and content of the educational enterprise" (p.328). The project incorporates knowledge arising from research and what maybe teachers' tacit professional knowledge. It adopts a version of evidence-based practice in which teachers

make systematic use of data collected in their practice to inform decisions about what needs changing, and whether the changes introduced do in fact work. Consequently, the emphasis is on improving the quality of data collection (Teaching and Learning Research Programme, 2005). The project as an example of evidence-based practice is presented in Figure 1.



**Figure 1 Evidence-based practice of the BELS project**

The project draws on four components:

- (1) current research on boys' education which is available on the National Quality Schooling Framework (NQS) website
- (2) teachers' experience and expertise in the classroom
- (3) knowledge of the needs of the cohort of boys being targeted
- (4) the internal and external resources available to the project

The most powerful influence on learning is from the processes that take place with regard to the learning environment. Consequently improving the learning outcomes for boys involves two types of strategies.

- (1) Strategies aimed at ensuring that boys are at school, in the classroom and engaged in learning which involves the development and implementation of practices that 'work' in the specific circumstances of each school. This requires an evidence-based approach to monitor attendance and engagement, one that uses the evidence as data to continually adjust teaching practices to meet student needs. Since teachers need to acquire specific knowledge and learn appropriate strategies to be

effective in improving attendance and engagement, scaffolding teacher learning is provided through the knowledge base developed on the NQSF website.

- (2) Strategies aimed at enhancing the effectiveness of classroom teaching and learning through school improvement and cultural change. These are the focus of strategic interventions to change the practise of teachers.

### **Case Studies**

Across the 51 clusters and 347 schools involved in BELS, a diverse range of projects have been developed that seek to improve learning outcomes for boys. Some key foci or themes for the projects have emerged across clusters, and in some instances within individual schools. These include:

- using Information and Communication Technology (ICT) to engage boys in learning (Gilbert & Gilbert; 1998; Meredyth et. al. 1999; Millard 1997);
- applying whole school pedagogical approaches to engage and support boys' learning, such as catering for boys' different learning styles (Commonwealth of Australia, 2002; Lingard et. al., 2002; Cortis & Newmarch, 2000);
- developing boys' awareness of multiple masculinities that challenge stereotypical identities (Alloway et. al., 2002; Connell, 1995; 2000; Imms, 2000; Martino, 2003);
- establishing meaningful and productive relationships, including the provision of male role models (Biddulph, 1997; Connell, 2000; Lingard et. al., 2002; Commonwealth of Australia, 2002); and
- stimulating boys' interest in literacy through strategies that involve hands on, student-centred learning approaches (Alloway & Gilbert, 1997; Alloway et. al., 2002; Commonwealth of Australia, 2002).

The strategies that underpin the cluster projects must have a strong evidence base of producing effective learning outcomes for boys. The NQSF Resources, which are accessible to all BELS schools, allow access to world-wide educational data bases and literature that can be sourced for this evidence.

These qualities are illustrated in the following section, where three case studies from the current BELS project are presented. These studies provide insights into the ways that

individual clusters have identified the needs of their boys and collectively designed their projects to meet these needs by using productive pedagogies and innovative approaches to teaching and learning. Each case study has a different focus: establishing meaningful relationships; stimulating an interest in literacy; and applying ICT.

### **Eden Cluster**

The Eden Cluster is situated on the far south coast of New South Wales. It consists of one secondary co-educational government school, four government co-educational primary schools and one Catholic co-educational primary school. The cluster's project, *Hierarchical Mentoring Program*, evolved out of a concern by the Lighthouse School, Eden Marine High School, for boys' negative behaviors and their failure to cope with classroom demands. School records revealed that boys comprised 75% of school sanctions and 67% of school suspensions. Furthermore, the school's Conduct Disorder Program was filled exclusively with boys. Of particular concern was the fact that boys were accountable for only 25% of the school academic awards. With the closure of the Wilderness program and the Behavior and Attendance Program, which the school accessed, it was felt some decisive action must be taken to address behavioural issues described by Steve Biddulph (1997) as: an 'aggressive style of relating'; 'hypermasculine behaviour and interest'; and 'derogatory attitude towards women and minorities'.

In response to these concerns, Mike Maxworthy, an industrial arts teacher at Eden Marine High School (EMHS), created a mentoring program for at risk students that involved hands-on repair of push bikes under the tutelage, supervision and guidance of retired men from the local community. What quickly became apparent through anecdotal evidence provided by both the men and the boys were the beneficial relationships that developed between the mentors and the mentees during the two-hour bike repair sessions, as the men assisted the boys to develop the skills and knowledge required for effective bike repairs. Bonds that were formed during the sessions would sometimes extend into out-of-school family visits and activities.

Following media attention <<http://www.abc.net.au/southeasternsw/s897250.htm>> and a heightened community awareness of the perceived benefits of the project, local feeder schools to EMHS expressed interest in formation of a the cluster, leading to a refinement of the project for the BELS Project Stage 2. As noted in the cluster's application, school

attendance of the mentees increased noticeably, school sanctions and suspensions were reduced and merit awards to boys increased. This was of considerable interest to those schools joining the project as their records showed that school suspensions and detentions involved boys almost exclusively. Moreover, a strong correlation between boys' negative behaviour and poor academic outcomes was similarly evidenced by the primary schools.

The cluster project for BELS evolved into a hierarchical mentoring program. The pilot program in 2004 included two boys from Grade Six from two of the primary schools with one boy in the remaining four schools participating in a control capacity. Four senior boys, who had previously completed the mentoring program and the men volunteers from the local community, mentored the primary school boys during two-hour sessions for six weeks. The two goals identified by the cluster were clearly achieved: the development of positive peer role modeling relationships, and the engagement and motivation of the targeted boys that was transferable to the classroom context. These outcomes were affirmed by the data collected from: teacher observation record sheets; counselor interviews pre and post involvement with the mentoring program with the mentees; interviews with the adult mentors; review of the boys' learning journals; and the mentees' PowerPoint presentations on the mentoring process.

No changed behaviors were observed for the boys in the control group. These boys will join the project in 2005 and the collected data will provide baseline data. However, for the participants, the program generated "genuine excitement and energetic response" and the mentors were "glowing in their in their observation of the boys' involvement and commitment", according to cluster reports. They particularly remarked upon the resilience showed by the boys when tasks became challenging. This resilience transferred to the classroom with the teacher of two boys noting they were "now trying so hard and doing well" – the antithesis of their usual apathetic and disinterested behaviour. The PowerPoint presentations of the bike repair workshop processes were all of a "commendable quality" and "attacked with verve, gusto and enthusiasm" that had not previously been observed in the boys. Boys reluctant to do school work were now working over lunch periods to have their PowerPoint presentations ready.

Teachers claimed that overall the boys were more willing participants in class activities and demonstrated a changed attitude. A Principal noted "a remarkable turn around in

behaviour” and a look of satisfaction on the boys’ face that had been missing for some time. Parents too observed an improved sense of self worth and attitude at home. For one boy, the result of the project means he will enter an academic class at EMHS in 2005. Without the mentoring program he would have been allocated to a mixed ability class. Teachers stated that whilst in the program, “no boy had any sanction or disciplinary action directed toward him” – a remarkable turn around.

A concern raised was that the primary school boys were less inclined to accept guidance from the high school mentors, instead deferring to the older men. On reflection, the BELS team have accepted the EMHS boy mentors were “too emotionally needy and young” to perform their role effectively. Boy mentors in future will be selected from Year 10 students and chosen for their communication skills and social confidence. The role of the learning journal will also be modified with laptops being used for the entries. This intervention is a response to the level of encouragement needed by teachers for boys to complete their entries. Importantly, the boys all persevered but the entries were not of a high quality. The use of laptops should improve the boys’ motivation and engagement with the learning journals, and hopefully have the spin off of enhancing the boys’ literacy skills. This intervention acknowledges that digital technology is increasingly seen as an area of high cultural currency for adolescent males (Millard, 1997; Gilbert & Gilbert, 1998).

This case study has demonstrated the possibilities of changing boys’ behaviour and attitude to learning by establishing meaningful and productive relationships with male mentors. It has also revealed the importance of supporting boys’ level of engagement by catering for more hands-on, kinesthetic learning opportunities. While bike repairs have provided a shared purpose between the boys and the men, the cluster suggests alternative activities could equally be applicable, for example lawn mower repairs, horticultural projects and furniture restoration. The Eden cluster project has affirmed Gilbert and Gilbert’s (1998) claim that developing skills, such as interpersonal communication, can assist boys in their relations with others and have a positive effect on their lives. Moreover, the cluster links with Slade’s (2002) research that shows the importance of establishing relationships with students based on mutual respect and understanding, as occurred through the mentoring process with the older men.

## Mildura Cluster

The Mildura cluster comprises 10 government co-educational schools within the Sunraysia precinct of Victoria: five primary schools; three Middle schools (7-10); and two secondary colleges. Across all cluster schools, raising the literacy standards for boys was identified as the key issue and challenge. Analysis of literacy data from the Assessment Improvement Monitor (AIM) and the Curriculum and Standards Frameworks (CSF) has shown that in the Middle Years the literacy levels of boys are up to 12 months behind those of the girls, and below the state benchmarks. Teachers have noted that boys are not engaging productively in their learning. Consequently, the cluster's project, *Active Literacy*, has two goals: to improve literacy standards for students in years 5-9; and to improve teacher competence and confidence in teaching literacy. Within the literacy context, the majority of schools have chosen to focus on the reading domain and the others on the writing domain.

Given the diversity of schools and student needs, two key strategies were selected to drive the cluster's agenda of literacy improvement for boys: Literature Circles (Harvey, 2002; Harvey & Steineke, 2004); and Supporting Writers for Authentic Purposes (Bergeron & Rudenga, 1996; Komeroff & Morrison, 2001), often referred to by its acronym, SWAT. One school is using the Rose scaffolding strategy (Rose et. al., 1999; Rose, 2004), which has been designed to meet the specific needs of Australian indigenous children. However, given the limited scope of this paper it will not be addressed. Details of this specific strategy will be available on NQSF.

Many variations of Harvey's (2002) Literature Circles exist, dependent on the context in which they operate and the philosophical constructs of the teachers. However, there is a strong emphasis on students choosing their own reading material and taking on specific roles such as clarifier, illustrator, questioner, predictor, connector, clarifier and summariser. The roles are a means of keeping students focused and taking an individual and shared responsibility for the group's text study. In the Mildura cluster, the specific guiding principles for Literature Circles included:

- providing mini lessons to teach explicit;
- introducing reflective practices to develop metacognitive awareness;

- teaching explicit skills and behaviours that enhance the social interactions of cooperative learning;
- using reading partners or (trios) to encourage talk about the texts being read;
- teaching students to self-select texts that are appropriate and interesting;
- setting explicit short term goals to give students responsibility for deciding purpose of work and appropriate quantity; and
- encouraging supportive strategies, such as using ‘post-it’ notes to record ideas while reading.

The model used for the secondary school settings was FAB (Friends and Books – Falkenberg, K., Robinson, A. & Zrna, J., unpublished paper). The authors of this program have made considerable alterations to the traditional Literature Circles model. Key features of FAB are the use of reading partners or triads rather than larger groups, the use of explicit teaching for all students through mini-lessons, and the inclusion of silent reading time in the secondary setting.

Ultimately, the use of Literature Circles is intended to develop higher levels of critical awareness by students when reading texts. The choice of the literature circle strategy was based on evidence from Cullican and Fattor’s (2003) study that found when used as an intervention approach Literature Circles improved boys’ attitudes to reading substantially. Literature Circles also connect with research evidence that shows increased exposure to fiction influences student learning and response styles (Bleach, 1998; Sukhmandan, 1999), and that the teaching of discussion skills increases boys’ responsiveness in small group contexts (Godinho & Shrimpton 2003).

The cluster teachers were supported by District Support staff with expertise in Literature Circles, and were encouraged to engage in peer observation as a means of learning from and with each other. Regular cluster meetings were held to share and deconstruct experiences. Data collection to measure improvement in the boys reading was based on the Test of Reading Comprehension (TORCH) and student opinion surveys developed by teachers in the program. These tools provided specific information about the levels of comprehension students were using. Whilst all students, both boys and girls, were tested and surveyed, a smaller group of boys deemed ‘at risk’ were interviewed by the class

teachers to ascertain more specific information about their attitude to reading and the kinds of reading behaviours they identified in themselves.

While the cluster acknowledges that data techniques still need to be refined, analysis based on the data collected in 2004 show the value in explicit teaching of reading skills and the importance of student involvement in text selection. In several schools some funding was used to allow the purchase of small sets of new texts. Groups of students involved in the project went to the local bookseller with staff and participated in selection and purchase procedures. A significant finding for the secondary schools was the increase in sheer volume of reading. Boys claimed to have read more books in the six months of the project than in the previous few years combined. One school which was targeting underachieving boys reported that “highly able boys were extremely motivated in their discussion, so much so, they were ‘borrowing’ the books from the shelf a week in advance to ‘get in front of’ the other boys in their group.”

Much of the evidence that teachers reported in reflective journals related to observation of attitudinal changes. One school noted:

- ensuring high procedural support enabled the children to maintain their focus on each week’s task in an organized and efficient manner;
- providing scaffolding for boys gave guidance, support and direction when they were responding to texts;
- allowing children to help choose titles gave momentum and enthusiasm to the program; and
- mini-lessons and explicit modeling (improve student) questioning.

The SWAT strategy involves students taking an active role in identifying local newsworthy events and the publication of these as a means of building students’ writing skills. The strategy embraces Boomer’s (1991) notion of negotiated curriculum and connects with Cambourne’s (1988) Conditions of Learning. It emphasises the need for students to be actively involved in their learning, completing hands-on tasks to achieve a tangible result and to have an authentic purpose for the learning activity. Key principles that underpin this project include:

- using student interest to generate ideas for writing;

- emphasising ‘tuning in’ tasks to ensure students are well prepared for the writing task;
- applying a range of templates and rubrics to support students in planning writing and collecting data to be used for writing purposes;
- drawing on guest speakers and excursions to introduce the topic and act as real resources to be used for data gathering;
- teaching explicit skills and strategies that are needed in the writing, editing and publishing processes;
- creating reflective instruments to get students to identify their own attitudes and level of engagement in daily writing tasks; and
- involving a high level ICT skills in publishing programs to support the writing process.

Schools involved in this aspect of the project used the Single Word Spelling Test (Scarce & Masterson 2000) and a locally developed attitude to writing survey. After working to research, create, and publish a newspaper with specific scaffolding applied, students were given the same assessment tools again. Teachers in the project indicated that “the program appears to have had a positive impact on the spelling.” Results on the attitude survey were very mixed, rendering it difficult to draw conclusions. While the boys involved in the project liked the physical involvement and publishing process, the boys in the ‘at risk’ category “liked the activities but did not see the correlation between the activity and becoming more motivated to write.” However, teachers at one of the primary school indicated that “the quality of work produced by the students was far superior compared to first samples collected... students stayed on task for longer periods and needed less direction to stay on task.”

The pilot study phase of this case study has revealed the potential of the FAB Literature Circle strategy to change boys’ attitude to reading, which is likely to impact on their reading achievement levels in the longer term. Teachers in the schools piloting SWAT believe it has improved boys’ spelling, however, this may be attributable to other factors. While boys may not see the correlation between the SWAT strategy and becoming more motivated to write, indication that some boys are remaining on task, taking more responsibility for their learning and producing better quality work augurs well for the next phase of the project.

### **Knox Northwest Cluster**

The Knox Northwest Cluster in Victoria comprises six coeducational, government primary schools and one government co-educational secondary college. Six of the schools are situated in the Eastern suburbs of Melbourne around the foothills of the Dandenong Ranges with the seventh located in the Bellerine Peninsula about 120 kms away. The cluster of schools was formed in 2003 as part of the Victorian Education Department Schools for Innovation and Excellence programme with four of the schools working on projects in an Online Community of Practice to improve transitions links for students between the primary and secondary sectors; foster student engagement by developing Middle Years teaching and learning programs; and create authentic online relationships between students, teachers, administrators and the community.

The cluster's project evolved out of a concern for 'at risk' boys in terms of their education and behaviour. Supported by suspension records, school coordinators felt that 75% of their time was spent dealing with boys' classroom behaviour incidents. Teachers also reported frustration caused by boys' disruption to classroom activities. Research data from studies conducted in the schools revealed that boys in Years 5-9 were disengaged with learning, thereby not performing at a comparable level to girls. School records also revealed the need to raise the levels of Numeracy as some levels were below state benchmarks or below the Like School groups.

Research findings of ICT projects conducted earlier across the majority of schools in the cluster identified boys' preference for hands-on applications with individual and group work. One of these projects, the 'City-to-Surf' Online Collaborative Mentoring (OCM) project pioneered at Bayswater Primary School led four of the cluster schools to implement two other OCM projects: 'Online Domino Robotics' and 'Kids Cooking with Calculations and Chemistry (KC3)'. These projects were ICT-based and involved students in hands-on ICT-driven learning, promoted interaction and addressed the affective and cognitive needs of students in the cluster. The skills and experiences acquired by participants (administrators, teachers, students, community members, and researchers) informed the development of the Online Classroom Corporations (OCC) project.

The Online Classroom Corporations pilot program in 2004 involved boys and girls from Years 5-6 from each of the primary schools and selected students from Years 7 to 10 from the secondary college. Financial numeracy (including 'hotspots' such as fractions, decimals, percentages, algebra and graphical representation of data) were identified as academic outcomes that needed improvement across the schools in the cluster. Social outcomes targeted included appropriate classroom behaviour and connectedness to the school. The OCC project involved students, teachers, administrators and the external community working together in an online economy. At the classroom level, the OCC project involved the setting up of mini projects (Student Classroom Businesses) which bought and sold products and services from a manufacturing industry with secured loans from an online central bank. The learning process covered:

- the classes registering as a business, completing detailed business plans and marketing strategies which were then submitted to the student-run online bank for approval;
- the selection of a delegate from each business who became part of the Corporation or parent company whose objective it was to promote online sharing of information and knowledge, ensure fiscal responsibility, and the successful running of businesses; and
- the members of the Corporation reviewing progress reports and overseeing the donation of company profit to worthy charities with a view to fostering ethical business practices.

Some of the key principles which guided the project included:

- making teacher learning a priority since the teacher is a crucial element in student learning and engagement;
- empowering teachers to foster self-directed learning through the use of synchronous and asynchronous technology; and
- empowering students in setting authentic, hand-on tasks which promoted interaction and enjoyment of learning.

The three goals established by the cluster were achieved: (1) improving teacher knowledge and skills about boys' education; (2) improving students' numeracy

outcomes; and (3) enhancing partnerships within the cluster schools and between the cluster schools and the external community. Evidence of the cluster's success included the following key points.

- The feedback sought by teachers indicated that the students had engaged in the activities in which they were immersed and made connections between the numeracy concepts and the real world.
- The cluster developed a website to inform the community of the project – <http://www.bayswatersc.vic.edu.au/bels.htm>.
- The cluster created a webpage linked to Think.com and NQSF for teacher professional learning.
- A community of practice was established through the website, email, and videoconferencing.
- A school management team was created.
- The cluster designed and developed the Online Classroom Corporations concept; and proforma for the 2005 project.
- The teachers' perceived students had ownership of their learning; "they had a choice; they did something that was very meaningful to them and that they themselves wanted to do. They came up with the ideas after their small groups' discussion. It was amazing to see them work so hard to meet deadlines that they had set".
- Partnerships with business, manufacturing and other educational sectors were established, and parent skills were utilised by classes to select, advertise and sell products.

Classroom partnerships formed between teachers and students in the 7 schools during the pilot stage in 2004 have been extended to include approximately 30 classrooms in 2005. The results from the Numeracy Challenge test administered in February 2005 have been used to target specific cohorts of students.

This case study demonstrates the possibilities of changing boys' attitudes and behaviours to learning and improving numeracy outcomes through innovative activities. By using an established motivator, such as ICT, the study also revealed the importance of supporting boys' engagement by providing hands-on, real-life experiences. The Knox Northwest

Cluster project validates Hawkes' (2001) claim that ICT can assist boys in terms of learning outcomes, motivation and self-esteem. Moreover, the cluster links with Lingard and Ladwig's (2001) research that highlights the importance of increasing teachers' productive pedagogy through challenging intellectual demand and social support.

## **Conclusion**

The cluster reports required by the project, and referred to in the case studies, indicated that using an evidence-based approach had assisted the schools in identifying strategies they perceived to be effective in improving learning outcomes for boys. The evidence at this point is based on trialling, on a small sample, measurement tools selected by the cluster to determine how effectively their project goals have been met. In many instances, the tools have now been modified in light of the experiences gained from the implementation of the pilot studies. In 2005, the measurement tools, refined in some cases, will be applied across a wider cohort of students to obtain more robust measures of improved learning outcomes for boys.

While some teachers have found the process of completing reports at different stages of the pilot study onerous, it would appear that the four-staged reporting procedure has assisted clusters in defining clear goals for their projects, investing and/or creating appropriate measurement tools, determining the data collection methods, and monitoring progress of the project. This has positioned the clusters to implement their projects more confidently and rigorously in 2005.

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