

THO05459

Research As A Core Practice Of A Teacher Learning Community

**Jean Thompson & Filocha Haslam, Centre for Applied Educational Research,
The University of Melbourne**

Abstract

Teacher learning and subsequent enhancement of practice through evidence-based innovation is a most significant factor in improving student learning outcomes. This research-based learning requires teachers to work in professional learning teams and to be at the centre of the change process. The purpose of this paper is to review how research in the classroom is drawing teachers into developing a learning community. The Boys' Education Lighthouse (BELS) project, which is a work-in-progress, provides examples of evidence-based practice in schools where teachers learn from each other and assume responsibility for each other's professional growth. The school clusters incorporate knowledge arising from research and more tacit professional knowledge. The BELS project 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. The cluster's project draws on current research on boys' education; teachers' experience and expertise in the classroom; knowledge of the needs of the cohort of boys being targeted; and the internal and external resources available to the project.

Introduction

This paper explores the Boys' Education Lighthouse (BELS) project which is a cluster-based collaborative approach to teacher research and professional learning. The authors have been working with school clusters to trial different pedagogical approaches to improve boys' learning, and have assisted with teacher learning to meet the project's reporting guidelines. Data reported in this paper include interpretive perspectives, experiences and examples from a range of evidence-based contexts and settings that arose during the implementation of the BELS project in 2004, as reported by clusters in their reports.

Literature grounding the approach to BELS

Over the last decade there has been widespread, perhaps universal, acceptance about the centrality of teachers' professional development to educational change (Bell & Gilbert, 1996; Hargreaves & Evans 1997; Wood, 2003) and the re-conceptualisation of teacher professional development from an *event* to an on-going work process (Baird & Mitchell, 1987; Hoban, 1997; McRae, Ainsworth, Groves, Rowland & Zbar, 2001). Hence, there is a reported shift from teacher professional development that involved attending seminars and external training programs, to professional learning that is integral to teachers' work, where teachers derive meaning from their own classroom experience, reflection and active collaboration with colleagues to build a learning community (Bell & Gilbert 1996; Hill, Petit & Dawson, 1995; Retallick, 1997; Cuttance, 2001).

Cochran-Smith and Lytle (1992) argue for a knowledge base that includes the insights of the teacher researcher whose questions and processes are entrenched in classroom practices. We borrow their term ‘teacher research’ to represent a planned rather than a spontaneous activity, a systematic, intentional inquiry by BELS cluster teachers about their own school and classroom work regarding the education of boys.

McRae et. al. (2001) in the report: *PD 2000 Australia -A National Mapping of School Teacher Professional Development* note that there has been considerable progress in the area of teacher professional development around the world in the last two decades with four discernible phases as highlighted in Figure 1.

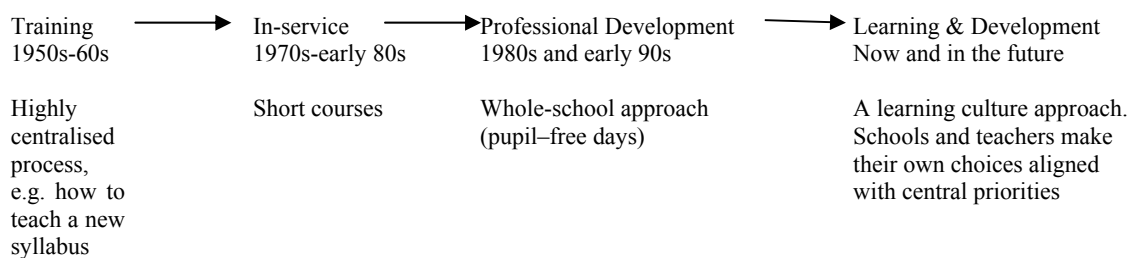


Figure 1 Teacher Professional Development worldwide

More recently, there has been ample research evidence that teacher professional development has been reconceptualised as experience-based learning (Andersen, Boud & Cohen, 1995), where teachers are encouraged to keep portfolios for self reflection (Retallick & Groundwater-Smith, 1996) and are encouraged to work in professional learning teams. Consequently, the teacher is placed at the *centre* of the change process (Sharpe et al, 1997). For example, when describing the teacher learning that occurred during the *Innovation and Best Practice Project* (IBPP), Cuttance (2001) noted that “strategies for teacher learning were embedded as a core element in the implementation of innovations themselves...In most innovations, the learning needs of teachers changed and evolved as the innovation was implemented” (p. 199).

Cochran-Smith and Lytle (1999) argue that within various teacher-change approaches there are fundamentally different conceptions of teacher learning, including “varying images of knowledge; of professional practice; of the necessary and potential relationships that exist between the two; of the intellectual, social and organisational contexts that support teacher learning; and the ways teacher learning is linked to educational change and the purposes of schooling” (p. 249). They state that these differing conceptions lead to diverse notions as to how to improve teacher education and professional development that drive many of the leading and widespread initiatives aimed to foster teacher learning. The three conceptions identified by Cochran-Smith and Lytle include *knowledge-for-practice*, *knowledge-in-practice* and *knowledge-of-practice*. When elaborating on these conceptions they point out that the acknowledgement of the importance of prior knowledge and learning over time are intrinsic in all three.

Knowledge-for-practice: This concept implies that to improve teaching, teachers implement, translate or put in practice the knowledge they acquire from experts

outside the classroom via pre-service and professional development experiences. Hoban (1997) notes that professional development based on this *outside-in* perspective has three strengths: (1) it provides teachers with new ideas on teaching practice that may be beyond their existing experiences; (2) it is a convenient and economical way to disseminate new knowledge; and (3) the topic addressed in the workshop may be in tune with teachers' own beliefs or of teachers' interest. Its limitations, however, he notes are "that in most cases teachers' existing practices and influential conditions of the school context are not taken into consideration, and in many cases there is often little follow-up support to promote sustainable change" (Hoban, 1997, p.5).

BELS Cluster reports generally indicated that the provision of professional learning workshops to support the project proved to be of great benefit to them, especially because they had the opportunity to share their understandings in the follow-up sessions that they had at their respective schools and in the cluster forums. BELS clusters conducted workshops or sent teachers to specific workshops to *learn more* about certain issues affecting boys' learning outcomes or sent teams of teachers to visit other schools to "assist staff to take ownership and feel real shared leadership by increasing their knowledge and awareness of alternate views and models" (Case A, Qld). Such a *knowledge-for-practice* (Cochran-Smith & Lytle, 1999) approach committed teachers in the same cluster to report their findings back at Professional Learning Community meetings, with teams selected across faculties and across schools so there is the opportunity for interaction and discussion that wouldn't normally occur.

Eight teachers from the lighthouse schools have attended three days of Rock-Water-Training. Each teacher will be expected to train other teachers within their school in 2005, incorporating the Rock and Water Strategy into the Student Welfare Component of their School Management Plan and implementing the programme. The implementation of the program will seek to diffuse behaviour problems by increasing confidence and delivery of strategies to appropriately deal with various situations. (Case A, NSW)

Knowledge-in-practice: This concept is based on the idea that knowledge comes from reflection and inquiry *in* and *on* practice. The *inside-in* perspective described by Hoban, (1997) appears to use this concept. Hoban argues that the perspective's strengths lie in it being consistent with a constructivist perspective and because it helps teachers to value their ideas based on evidence they collect within their own school or classroom. The only limitation he notes is that teachers may interpret their experiences based on the way they already frame practice. He adds that this is more likely to occur if teachers work in isolation where there is no collaboration with other teachers to provide them with alternative perspectives. The concept of *knowledge-in-practice* (Cochran-Smith & Lytle, 1999) is demonstrated by teachers who have increased their knowledge about boys' education by reflecting on their practice:

Teachers, through their reflective practice, have noted areas in their teaching practice that are working well and those areas that require attention. This has proved to be very useful for individuals. More importantly, when staff have shared their experiences with others, there has been group learning. Teachers seem to enjoy sharing their classroom experiences with others and benefit greatly from the experience. (Case A, SA)

Knowledge-of-practice: This concept implies that both knowledge generation and knowledge use are seen as inherently problematic; where teachers play a central role in generating sites for inquiry; where teachers link their work in schools to larger issues and take a critical perspective on the theory and research of others; where teacher practise demands an increased responsibility to children and their families, altered relationships with teachers and other professionals in school settings, and deeper and changed connections to communities, community organisations, and school-university partnerships. The *inside-outside* model of professional development (Hoban, 1997) appears to stem from this conception. Hoban notes that its possible limitations are a dependency on the needs of various groups if they have different agendas, and the length of time and effort taken to maintain discussions. This *knowledge-of-practice* (Cochran-Smith & Lytle, 1999) concept provides teachers in the BELS project with the opportunity to learn from professional colleagues within and across clusters, all of which have the same overarching agenda—to improve learning outcomes of boys.

The recent literature on teacher professional development (Wenger, 1998; Sergiovanni, 2000) also calls on the need for *Learning Organisations or Learning Communities* which was advocated in the early 1990s in the context of industrial organisations (Senge, 1990; Sergiovanni, 1994). Mitchell and Sackney (2001, p.2) note:

In a learning community, each individual works with others in a spirit of experimentation and risk taking to improve the educational experience of all individuals in the school. This is the task component. Furthermore, each person deserves the support and care of other school members, and people come together in a spirit of trust and mutual respect. This is the affective component. The conjunction of the cognitive and affective aspects adds heart and passion to the work of teachers and students alike.

For continued professional learning, Wood (2003) suggest that “there is a broad agreement in research and government policy that teacher research, and evidence-based practice, should be an integral part of continuing development and should contribute to school improvement” (p.366). To meet the methodological requirements of such an approach, Davies (1999) suggests that evidence based practice in education operates at two levels: (1) utilising evidence from worldwide research on education, and (2) establishing sound evidence by systematically collecting information about particular phenomena. In order to use evidence to improve practice, a school needs to do both (Groundwater-Smith, 2000). In addressing how research is used in a teacher learning community, these two issues are embedded in the BELS project since the environment of using an evidence-based approach has enabled government, school administrators, teachers, and members of the wider community to develop quality strategies that allow for measurable outcomes and community ownership, as described in detail by Thompson, Imms & Godinho (2005).

Theoretical underpinnings of the BELS project

The BELS project will run for 18 months and funding through new Commonwealth projects (for example, *Success for Boys*) will continue to enhance the learning of boys. The duration of the project allows for *personal development* of each individual BELS teacher, as each teacher has the opportunity to construct, evaluate, accept or reject for

themselves the new socially constructed knowledge about what it means to be a teacher “of boys” (Bell & Gilbert, 1996).

Parsons and Brown (2002) suggest that the teacher as practitioner-researcher must include a number of basic ingredients if they want to increase the validity of their research and practice. These include:

- Defining the problem
- Reviewing the literature
- Stating the hypothesis
- Developing and implementing a design
- Collecting and analysing data

To guide their decisions on methodology and data collection during a research study which examined early childhood teachers’ theories and their relationship to practice, Bennet, Wood and Rogers (1997) developed a diagrammatic framework to represent the conceptual model of teacher thinking and classroom practice. The authors argued that changes in theories and practice occurred in a three stage process which is consistent with Fenstermacher’s (1994) framework: *reflective consideration*, *problematizing practice*, and *changing theories and practice*. A similar model of teacher thinking and practise appears to be evolving in the BELS clusters.

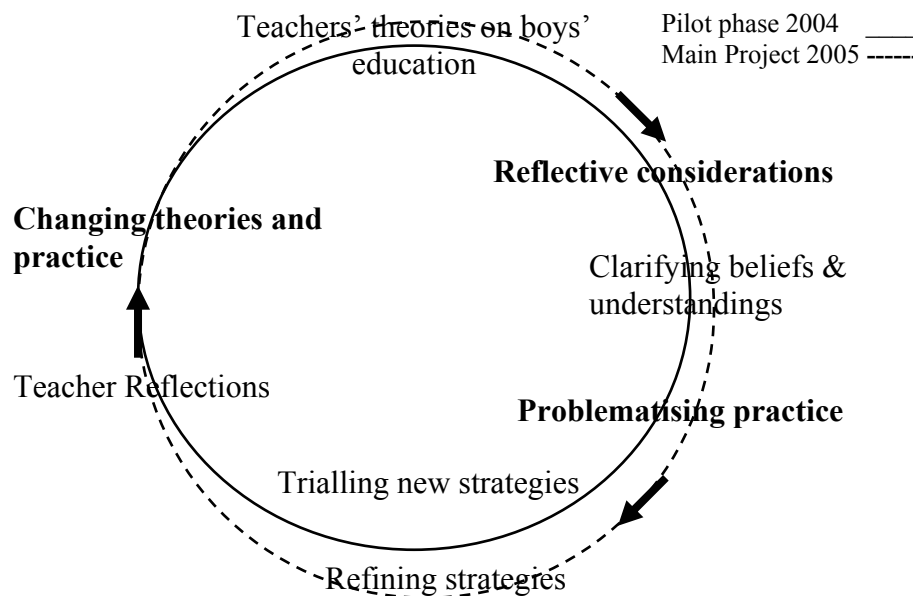


Figure 2 Teacher learning in the BELS project

The cyclic process represented in Figure 2 is hypothetical as the BELS project is in progress and the various clusters’ programs are at varying stages of development. The reporting procedure involves the writing of four Your School Reports (YSPS) by each School Leader in the cluster and four Your Cluster Reports (YCPS) written by the Cluster Coordinator at key stages of the project. The reporting process by each cluster demonstrates the learning that is taking place. In the BELS pilot project, teachers

undertook a literature review on boys' academic and behavioural performance in schools to clarify their ideas and problematise their practise (YCP1). As a cluster, they then decided on specific strategies to address the issue (YCP2) and trialled these for a term (YCP3). The cluster then reflected on the progress made (YCP4) through refining their strategies and for changing their practice in 2005.

One cluster explained the process this way:

As this is the pilot stage of the project, there has been a great deal of trial and error, implementation and adaptation. Initially each school was conducting quite a separate project but the need for professional support and the value of shared learning has meant that over the six months, projects have morphed into variations that are largely paralleled in the different schools. No doubt this will continue to happen but to a far lesser extent as the pilot stage has served to settle the project and refine it into a much more explicit format (Case C, Vic)

Whilst the majority of schools conducted a trial project in 2004, a few did not. Those that did reported changed practice in some of their classrooms as expressed by this cluster:

The project to date has contributed to our cluster team's understanding of effective practices for teaching and learning. Our team approaches each stage of the project with a reflective and critical eye. This has ensured that we continually develop our understanding of teaching and the learning needs of students. (Case A, Tasmania)

Teachers try new teaching strategies in the classroom, and during team meetings (within and across schools) share, and clarify their new beliefs and conceptions about the strategies used. Working in teams, made up of teachers across the schools in the cluster, impels *teacher social development*. It is this development of ways of working with others that enables teachers to enter into transactions that foster renegotiation and reconstruction of what it takes to enhance boys' learning and well-being (Bell & Gilbert, 1996).

The strategies used by a large percentage (98%) of BELS clusters are aimed at promoting teacher social interactions via both, online and/or face-to-face communications. These strategies impel shared problem solving, that "bridge the gap between old and new knowledge and between partners' differing understandings of the values and tools of the culture, which itself is revised and recreated as they seek a common ground of shared understandings" (Hennessy, 1993, p.15).

The BELS National Project Network provides full decentralisation of decision-making at the local level within a nationally coordinated framework, and ensures that schools are supported directly and online within and across States. The organisational structure of the National Project Network provides support at each level. The Project Advisory Committee (an extensive team of university staff, peak body representatives and policy officers) is part of this project and brings to it an expansive field of expertise in both research and school-based practice. Each state within Australia operates as a node with Node Managers (university staff) overseeing the progress of all clusters in the node and coordinating the project across clusters in their node. Cluster Consultants (educators and university staff) are in regular contact with cluster schools discussing proposed projects, identifying strategies for each school within the

cluster, revising aspects of the report documents, discussing baseline data, sourcing assessment needs, quality assuring reports, and managing the schedule for submitting cluster plans including reports such as YSPs and YCPs.

Using Research Evidence To Increase Teachers' Knowledge Base Of Boys' Issues

A report on the study: *The Impact of Educational Research* by the Australian Higher Education Division of the Department of Education Training and Youth Affairs (2001) found that whilst seeking resources was an individual process for teachers, there was an increase in involvement in research from its design to its conduct. This study also found that teachers believed that engaging with evidence helped them make a difference with what occurred in the classroom. This school-based research experience also showed how teachers were encouraged to try out and test new strategies and to make use of other research by evidencing improvement in learning.

Similarly, in the BELS Project a crucial concern for each cluster at the commencement of the project was to establish the need for their project based on evidence. There were five common approaches to establishing the needs of the project:

- Schools in the cluster used evidence from prior projects to guide the implementation of the current BELS projects. For instance, Case B in New South Wales already have a highly successful boys programme called 'Boys' Own'. Much of this programme focuses on helping raise boys' self-concept by valuing who they are and the skills they possess. The 'Boys' Own' programme has been further developed to embed the objectives of the current project in a more sustained and systematic manner within the formal school curriculum (Case B, NSW).
- Schools in the cluster collected performance data from school records. One cluster used data from the Achievement Improvement Monitor (AIM) supplied by primary schools, along with AIM data from secondary schools, to indicate that it was the area of writing that needed to be addressed as boys scored least in comparison to like-schools, all schools and girls (Case D, Vic). Another cluster used "results from Basic Skills Tests, standardised tests and school assessments across the clusters" to make judgements about boys' performance in literacy compared to girls (Case C, NSW). Another cluster reported that it would be collecting quantitative data such as ACT Assessment Program, Tests Of Reading Comprehension Hawthorn (TORCH), reading benchmark levels, and qualitative data such as student, teacher and parent reflections, video footage, and student interviews (Case A, ACT).
- Teachers read literature, housed in the Resources area on the National Quality Schooling Framework (NQS) website. There are approximately 1000 references on the site which include journal articles, school reports, and weblinks to other article or sites. In their report, one cluster records that "there has been extensive use of the NQS Framework Statements and other internet research documents" by their cluster (Case B, Qld]. Another cluster in the Northern Territory details the assistance they received from using the website:

The NQS website, particularly the resources section has also been extremely valuable in assisting us with packages to make full use of our network within the cluster to support each other in the development of our individual schools,

working together to create greater outcomes for all of our students. (Case A, NT).

- Teachers also use tacit knowledge to frame their research projects. Whilst the major emphasis of this cluster's project is on literacy, it uses teachers' understanding of classroom behaviour in outlining the project, since "teachers continually talk about the other part of the curriculum they engage with – the 'Social Skills' that they integrate throughout their learning areas" (Case B, SA).

A hallmark of the BELS project is the involvement of teachers in designing and conducting their own practitioner-research projects. The schools in each Cluster have either (a) collaboratively designed one project which is being implemented by all schools in the cluster, or (b) designed individual projects with a central theme running across the cluster schools. This flexibility in encouraging schools to design and conduct such research projects allows teachers to "own" the research they are investigating and to develop professional learning opportunities they think best fit with the research requirements. For example, one cluster described the rationale for their internal professional development program as follows: "participating teachers need to be informed, involved and have ownership of the project. Hence, a professional development program addressing Financial Literacies and Learning that is fully accessible to all schools in the cluster, is necessary for the success of the project" (Case B, Vic).

To ensure the BELS Project results in improved learning outcomes for boys, each cluster and all schools within each cluster developed a rigorous improvement program based on:

- baseline data on boys learning outcomes;
- key milestones;
- evidence about the implementation of the program;
- a monitoring schedule to ensure the program stayed on track;
- assessment of impact over the period of the program; and
- reflection on lessons learnt and suggestions on how to strengthen the program on the basis of these lessons.

During the implementation of the pilot stage of the BELS projects, schools used reporting templates posted on the NQSF website. There were four stages of reporting: *Stage 1: Cluster Project Plan and Focus*; *Stage 2: Cluster Evaluation Plan and Matrix*; *Stage 3: Implementation and Strategies* and *Stage 4: Analysis of Impact*. The reports provided details of how the clusters designed and developed their projects.

Key features of a typical report from Cluster A in South Australia is showcased below to highlight the design and developmental stages of the project.

Identification of Needs: "The (Case A) cluster believes that the first step on the path to improving student learning outcomes is to build teacher capacity, so that teachers are better equipped to include a range of teaching and learning strategies into their classroom practice" (YCP1).

Theoretical assumptions: “Teachers, and teaching, have more influence on student outcomes than any other factor. As a result, the development of teachers and teaching approaches seems to be integral to improving educational outcomes for both boys and girls” (YCP1).

Goals: “The cluster's project, then, is divided into three clear, distinct goals: (1). To develop teachers' capacity to teach using five pedagogical approaches that have been identified in empirical research as having a positive influence on boys' academic intrinsic motivation” (YCP2).

Data and evidence: “The cluster has sought to develop teachers in the five pedagogical approaches: (1) structured teaching; (2) incorporating positive reinforcement and rewards in the classroom; (3) differentiated and inclusive curriculum teaching; (4) using cooperative learning strategies in the classroom; and (5) team teaching). It was necessary, therefore, to gather baseline evidence about the teachers' capacities in each pedagogical approach” (YCP2).

Measurement Tools: “The cluster adapted and modified a teacher reflection rubric from another cluster. The rubric addressed a teacher's understandings-knowledge, confidence and capacity to teach each pedagogical approach. The rubric was completed initially at the beginning of Term 4, 2004, and again at the end of Term 4, 2004” (YCP3).

Data analysis: “In all five pedagogical areas, results indicate that teachers have improved in terms of their understandings-knowledge, confidence and teaching capacity” (YCP3). The authors have condensed data from the report (YCP3 Appendices A-F) as follows:

Table 1: Comparison of pre and post test rubric ratings: Pedagogical Strategies by teacher skills and knowledge

Pedagogical Strategies	Structured Teaching		Cooperative Learning		Praise & Positive Reinforcement		Differentiated Curriculum		Team Teaching	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Understanding Knowledge	2.35	3.53	3.23	3.81	3.41	3.80	3.06	3.69	2.29	3.50
Confidence	2.35	3.60	3.18	3.5	3.12	3.80	2.65	3.31	2.29	3.36
Teaching Capacity	1.59	3.20	2.41	3.44	2.59	3.27	2.47	3.23	1.82	3.15

Table 2: Comparison of pre and post test rubric ratings of leadership capacity and confidence

	Pre	Post
Leadership Capacity	2.18	2.69
Leadership Confidence	2.47	2.85

Reflection of the pilot study: “In 2004, the major focus has been Goal 1. That is, to develop teaching capacity, according to the five pedagogical approaches. To some extent, teachers have also moved towards fulfilling part of Goal 2, namely to provide leadership to staff, because...using the five pedagogical approaches have led to improved confidence and capacity to lead. To this stage, student involvement has been limited to experiencing the five pedagogical approaches in action, and recording their frequency” (YCP4).

Community Building In and Across Clusters

The BELS clusters recognise the value of community building. For example as explained by this cluster: “This project recognizes that individual teachers in individual classrooms are at a disadvantage in bringing about change and that there is great advantage in working together to share ideas and expertise” (Case E, Vic). The term BELS community at a micro level includes all members within a particular cluster: teachers, students, parents, and consultants working together where their ideas are acknowledged and integrated. Another cluster notes:

Programs implemented in 2004 have demonstrated the importance of involving all stakeholders. The cluster has developed in 2004 strong leadership, collegiality between schools, principals, education leaders and teachers. To foster this into 2005, schools have included into their management plan combined staff development days, Boys’ Education Boys’ Outcomes Project program, Rock and Water and One-to-One tutoring. The overwhelming community support to develop positive relationship with boys and to improve learning outcomes, male role models are taking a more active role within schools (Case A, NSW).

At a macro level, however, the BELS community includes all 50 clusters, a Project Advisory Committee, a Project Team, Node Managers, Cluster Consultants, and external consultants. Several strategies have been used to establish and sustain the BELS community at a macro level.

- Virtual Communities of Practice (CoPs) have been created on Think.com to offer opportunities for collaboration based on shared interest rather than shared geography (Harasim, 1995). It was expected that the asynchronous nature of computer-mediated communication would allow participants to enter the discussions whenever convenient, rather than through scheduled availability, as in more traditional forms of professional development (Hawkes, 2000).
- Teleconferencing support to build teacher capacity is offered in two areas: (a) on how to use the NQSF website and think.com (the online learning environment), and (b) having guest speaks on their field of expertise. Theme programs on male role models included guests such as Dr Karl Kruszelnicki, and on specific topics such as Tsunamis with Dr Tim Costello. Other teleconference topics are also currently underway.
- Teachers in the cluster schools found that external conferences provided them with opportunities to commence building the process of collective reflection and professional conversation which would engage them in “critical dialogue about the actions, behaviours, craft and art of professional practice” (Mitchell & Sackney, 2005). Case A (NSW) cluster suggests that “the most significant external support to date has been in the form of the consultants we have used

for the professional development of staff” through, for example, a *Rocking with Reading and Writing Literacy conference* (Case A, Victoria). At another cluster a number of teachers attended the 5th Annual National Boys Education conference in Sydney which “was a particularly valuable and inspiring experience as it enabled members of our cluster to communicate with schools who have been involved in Stage 1 of the Lighthouse Project and to hear of best practice strategies in boys’ education being utilised nationally” (Case A, NSW).

- A more frequent avenue for building teacher capacity is through the use of workshops. Workshops take a number of forms—from a Cluster Consultant working intensively with the Cluster to assist them in the development of their project, to a senior member of the network providing a workshop for BELS schools and other schools in their locality. Rural areas, in particular, have been able to develop relationships with their more distant colleagues as expressed by this cluster:

This program assists schools to overcome the isolation and remoteness of the area by providing programs that other more populated areas have a more ready access to. The BELS program gives teachers access to resources and networks that they previously would not have been able to tap into. This is illustrated by the massive interest shown by teachers to the visit by [a senior BELS team member (Case E, Vic).

Issues in implementing practitioner-research projects

For many teachers, the concept of research conjures images of large samples, complicated designs, and sophisticated statistical analyses (Parsons & Brown, 2002). The same appears to be true for some of the teachers in the BELS project. Whilst many teachers provided positive feedback on their learning experiences, there were a number of issues that caused them stress and frustration.

One of the main factors hindering the development of a learning community with practitioner-research as a core practice has been the complaint by many teachers about the shortage of their time resources. Teachers thought that to implement the projects to their satisfaction they would have needed more time for planning together.

The time commitment to projects such as these is enormous...Projects such as this one can only be successful if there is considerable goodwill from the staff and schools involved in the project. (Case C, SA)

Even though the NQSF website, teleconferences, and visits by cluster consultants and the BELS team provide valuable professional learning assistance, the geographically vast distances between schools in the cluster present difficulties in attending face-to-face meetings as expressed by this cluster:

Another difficulty that has resulted from having a cluster focus is the difficulty of getting people together for periods of time to write the necessary project submissions. All schools are busy, particularly this time of year and finding the time to prepare, write and consult together as a network has been difficult. (Case B, WA)

During the pilot phase, teachers also experience great uncertainty in taking ownership of the project as explained by this cluster.

The project has been both frustrating and rewarding...Advice to others undertaking such a project would be to set regular meeting times well in advance, where participants can take a sense of ownership of the strategies being undertaken to meet the issues. (Case A, Tasmania).

Other clusters describe the frustration with providing documentation to support their evidence base.

The project has been both frustrating and rewarding to date. We have learned a great deal about running projects such as these. We believed that the documentation required to win a place in the project would be sufficient to allow us to simply "get on with it". It has been a surprise the amount of writing and planning, and requirements to prove outcomes, that has in fact taken up much time during 2004 (Case B, Tasmania).

The project's reporting deadlines were often difficult to meet due to workload issues and this has put lot of constraints and pressures on coordinating teachers. This was especially the case in Term 4 when student reports were a priority (Case C, Vic)..

Finally, for this particular cluster, lack of understanding of methodological issues caused tension within the cluster.

If we were to start over it is likely that this cluster would choose to implement programs that have a clear trial phase and a second full implementation phase subject to indications of success at phase one. This suggested structure was not known at application writing stage and many of the programs are not naturally designed to meet this structure (Case A, WA).

Conclusion

In this paper we set out to link the BELS projects to the question of how research in the classroom is drawing teachers into developing a learning community. The BELS projects provide a common purpose for each cluster to collect research evidence to improve the learning outcomes for boys.

BELS is a project in action. It is past the mid-cycle point and schools are now undertaking the writing of YCPs for 2005. We have analysed the data for 2004 using a model similar to Fenstermacher (1994) where change in theory and practice is occurring as teachers are engaged in their cluster projects. The findings to date indicate that teachers' reflections on their pilot projects have resulted in an increased awareness of their own practices. Shared planning in the design and development of the cluster projects created an appropriate context for teachers' professional learning. The findings to date indicate that:

- teachers' reflections on their pilot projects have resulted in an increased awareness of their own practices,
- shared planning in the design and development of the cluster projects created an appropriate context for teachers' professional learning,

- The BELS project has given teachers across schools the opportunity to develop a learning community of ‘teacher research’ which, up to now, was constricted.
- Learning communities take time to develop and along the way we will see development with some clusters maintaining the network that has been established.

In line with Wood (2003), these findings emphasise the importance of research communities which empower teachers to improve their pedagogical practices. However, the emphasis upon learning as a process requires that teachers need time to: read and reflect on the literature on boys’ education; explore and trial new strategies without fear of failure; and organise and attend cluster and school meetings relating to boys’ education.

Acknowledgements: This project was supported by funding from the Australian Government Department of Education, Science and Training under the Quality Teacher Programme.

References

- Andersen, L., Boud, D., & Cohen, R. (1995). Experience-based learning. In G. Foley (Ed.), *Understanding adult education and training*. Sydney, Australia: Allen & Unwin.
- Baird, J., & Mitchell, I. (Eds.). (1987). *Improving the quality of teaching and learning: An Australian case study - The Peel Project*. Melbourne, Australia: Monash University Printery.
- Bell, B. & Gilbert, J. (1996). *Teacher Development – A Model from Science Education*, London: Falmer Press.
- Bennett, N., Wood, E. & Rogers, S. (1997). *Teaching Through Play: Teachers’ Thinking and Classroom Practise*, Milton Keynes, UK: Open University Press.
- Cochran-Smith, C. & Lytle, S. (1999). Relationships of Knowledge and Practice: Teacher Learning in Communities, *Review of Research in Education*, 24, 249-305.
- Cuttance, P. & Stokes, S.A. (2001). Lessons for Practice. In P. Cuttance (Ed.), *School Innovation: Pathway to the knowledge society*, (pp. 185-206), Australia: Department of Education, Training and Youth Affairs.
- Davies, P. (1999). What is Evidence-Based Education? *British Journal of Educational Studies*, 47(2), 108-121.
- Department of Education Training and Youth Affairs. (2001). *Educational Research: In Whose Interests*. Australia: Higher Education Series, Report no.39.
- Fenstermacher, G.D. (1994). The knower and the known: The nature of knowledge and research on teaching. In L. Darling-Hammond (ed.) *Review of Research in Education*, 20, 3-56.
- Groundwater-Smith, S., & Hunter, J. (2000). Whole School Inquiry: evidence-based practice. *Journal of In-Service Education*, 26(3), 583-600.
- Hammersely, M. (2002). *Educational Research, Policy-making, and Practice*. London: Paul Chapman.

- Harasim, L. (1995). *Learning networks: A field guide to teaching and learning online*. Cambridge: MIT Press.
- Hargreaves, A., & Evans, R. (1997). Teachers and educational reform. In A. Hargreaves & R. Evans (Eds.), *Beyond educational reform: Bringing teachers back in* (pp. 105-125). Philadelphia: Open University Press.
- Hawkes, M. (2000). Structuring computer-mediated communication for teacher professional development. *Journal of Research and Development in Education*, 33(4), 268-277.
- Hennessy, S. (1993). Situated cognition and cognitive apprenticeship: implications for classroom learning. *Studies in Science Education*, 22, 1-41.
- Hill, J., Pettit, J. & Dawson, G. (1995). *Schools as Learning Communities: A Discussion Paper*, Sydney: NSW Department of School Education.
- Hoban, G. F. (1997). Opportunities for knowledge building in professional development models. In R. J. King, R. J. Hill & Retallick, J. A. (Eds.), *Exploring professional development in Education* (pp. 1-20). Wentworth Falls, NSW: Social Science Press.
- Lytle, S. & Cochran-Smith, C. (1992). Teacher Research as a Way of Knowing, *Harvard Educational Review*, 62(4), 447-474.
- McRae, D., Ainsworth, G., Groves, R., Rowland, M. & Zbar, V. (2001). *PD 2000 Australia – A National Mapping of School Teacher Professional Development*, Canberra, Australia: Commonwealth of Australia.
- Mitchell, C. & Sackney, L. (1999). *Building Capacity for A Learning Community*. Canadian Journal of Educational Administration and Policy, 19. [Online]. Available: <http://www.umanitoba.ca/publications/cjeap/issues19.html>
- Parsons, R.D. & Brown, K.S. (2002). *Teacher as Reflective Practitioner and Action Researcher*, Australia: Wadsworth Group.
- Retallick, J.A. (1997). Workplace Learning and the School as a Learning Organisation, in King, R.J., Hill, D.M. & Retallick, J.A. (eds.), *Exploring Professional Development in Education*, Social Science Press, Wentworth Falls, NSW.
- Retallick, J. & Groundwater-Smith, S. (1996). *The advancement of teacher workplace learning*. Canberra: Department of Employment, Education, Training and Youth Affairs.
- Senge, P. (1990). *The Fifth Discipline*, New York: Doubleday.
- Sergiovanni, T.J. (1994). *Building Community in Schools*, San Francisco: Jossey-Bass.
- Thompson, J., Imms, W. & Godinho, S. (2005). *From macro to micro: One model of implementing government policy into classroom practice*. Paper presented at the Australian Association for Research in Education (AARE), Cairns.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, identity*. Cambridge: Cambridge University Press.
- Wood, E. (2003). The power of pupil perspectives in evidence-based practice: the case of gender and underachievement, *Research Papers in Education*, 18(4), 365-383.
- Wood, E. & Bennet, N. (2000). Changing theories, changing practice: Early Childhood Teachers' Professional Learning, *Teaching and Teacher Education*, 16, 635-647.

