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Meta Analysis of Quality Teaching Action Learning Project

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2003-2009

Meta Analysis of

Quality Teaching Action Learning Project 2003-2009

INTRODUCTION: SETTING THE SCENE

ROBYN EWING & DANIEL BROOKS

In 2000, the former Department of Education Science and Training (DEST) now Department of Education, Employment and Workplace Relations (DEEWR) in developing the Australian Government Quality Teaching Program (AGQTP) clearly stated that their aim was “to raise the quality, professionalism and status of Australian teachers and school leaders”. Since the program began 240,000 teachers and school leaders have participated in professional development opportunities in all Australian States.

There are three main objectives for the AGQTP. These are to:

1. equip teachers with the skills and knowledge needed for teaching in the 21st Century;
2. provide national leadership in high priority areas of teacher professional learning; and
3. improve the professional standing of school teachers and leaders.

There are three elements that make up the AGQTP program:

1. National Projects
2. AGQTP State and Territory Projects
3. Teaching Australia (formerly known as the National Institute for Quality Teaching and School Leadership).

The AGQTP through its 2005 – 2009 Client Guidelines recognises that in order for professional learning to be successful it should be underpinned by both strategic as well as operational principles. *The committee which oversees the projects should be cross-sectoral in nature and consider the following questions to ensure that the overarching goals will be met, and that it is holistic, relevant, focussed, engaging, collaborative and meaningful:*

Will the planned professional learning:

- contain content that focuses on what students are to learn and how to address the different problems students may have in learning the material?
- be based on analyses of the differences between actual student performance and goals and standards for student learning?
- provide learning opportunities that are meaningful and professionally empowering?
- involve teachers in the identification of what they need to learn and in the development of the learning experiences they will be involved in.
- be primarily school-based and built into the day-to-day work of teaching.
- engage teachers in concrete teaching tasks, based on their experiences with students.
- be organised around collaborative problem solving.
- be continuous and ongoing, involving follow-up and support for further learning – including support from sources external to the school that can provide necessary resources and new perspectives.
- incorporate evaluation of multiple sources of information on learning outcomes for students.
- provide opportunities to gain an understanding of the theory underlying the knowledge and skills being learned.
- be connected to a comprehensive change process focused on improving student learning.

(adapted from DEST, 2007: 17)

At an operational level, AGQTP funded activities should provide professional learning opportunities, be practical, encouraging, connected to teaching and learning and use technology where possible. The following principles should underpin and guide the implementation of projects:

- show teachers how to connect their work to specific standards for student performance;
- be based on teacher and school needs;
- address student learning needs;
- have clearly defined goals and outcomes;
- have practical relevance to teachers;
- provide a balance of curriculum and pedagogical issues;
- use techniques which model inquiry forms of teaching;
- encourage a whole-school focus on student learning
- involve stakeholder partnerships;
- consider whole school approaches and regional network activities;
- connect to other aspects of school changes focused on improving student learning;
- provide opportunities for reflection and sharing with peers;
- consider approaches that demonstrate the innovative use of ICT to support teaching and learning and whole-school reform;
- where appropriate, utilise online networking tools (eg discussion groups,

- extranets etc) to support collaborative activities, particularly, for
- rural/remote teachers.

(DEST, 2007: 17, 18)

Quality Teaching Action Learning

One AGQTP State and Territory Project which was conducted by AGQTP New South Wales has focused specifically on Quality Teaching and Action Learning since 2003. The project is known as *Quality Teaching Action Learning* (QTAL).

The project connects teacher professional learning needs to a comprehensive change process focused on improving student learning in the priority areas.

Up to sixty projects were identified in the initial phase. These projects focused on : some of the dimensions or specific elements in the NSW Department of Education & Training (DET) *Quality Teaching Framework (QT) (NSW 2003)*; support for early career teachers; and the priority curriculum areas of literacy, numeracy, English, mathematics, science/science and technology, environmental education for sustainability, information and communications technologies, health education, music, civics and citizenship and targeted learning needs (e.g. boys, Indigenous students, gifted and talented students, students with disabilities and learning difficulties, and NESB students).

Features of the project since its inception has been support from designated DET project officers who take responsibility for supporting the professional needs and activities of participating teachers and, an academic partner to support the school project team as an critical friend external to the participant school.

Projects aim to strengthen the currency and depth of teachers' pedagogical knowledge and skills and to encourage productive engagement in collegial networks that extend and support knowledge and skills.

Design

The professional learning strategy for this activity includes:

- school-based projects to engage teachers in workplace learning that is based on a cyclic model of continuous improvement
- provision for some clusters of schools to work in collegial networks
- workplace mentoring and coaching aligned to meeting the NSW Institute of Teachers *Professional Teaching Standards*
- flexible learning that includes components such as self-paced and facilitated online learning, face-to-face workshops, video and tele conferences, online mentors, and discussion groups
- local, regional and state workshops and conferences that enable participants to have their work publicly celebrated and critiqued
- onsite and offsite participation in knowledge building and skill-sharing activities

- partnerships with higher education institutions to provide expertise in the development, design and/or implementation of professional development activities.

Teacher professional learning can be organised and supported in many ways and through many avenues. The thrust of the AGQTP has been to enable professional learning as a result of engagement with action inquiry directed at addressing identified needs within a specific context. Among the many supportive strategies offered by the programme two are specifically designed to facilitate the inquiry by means of external advice of both an academic and managerial nature. As identified above each project within the program was to be supported by an academic partner, in almost all cases university based; as well each was assigned a project manager who would ensure that the system requirements were met and that the project was advised of relevant policies and procedures emanating from the NSW DET, particularly those in relation to the NSW QT.

Action Learning

An action learning approach (Revans, 1982) to professional development is based on the belief that professionals working together have the ability to ask meaningful and searching questions about their own practice and formulate answers to those questions.

Key characteristics of school-based action learning teams

1. Teams of teachers

A small group of colleagues (usually 6–8 teachers), with a shared responsibility for learning, form an action learning team to take effective action to address identified authentic workplace learning and teaching challenges, opportunities or issues.

2. Project-based learning

An action learning project addresses learning and teaching opportunities or challenges that are part of teachers' day-to-day practice, and for which there is no obvious, easily identified solution.

3. Participant direction

Teachers in the action learning team decide on the area of inquiry and take control of their own learning. They decide on the learning goals, set the pace, choose learning activities, judge the success of their learning and make decisions about future actions.

4. Cycles of Inquiry

Action learning involves teachers in cycles of developing an action plan, implementing the plan, sharing and describing the effects of the action and reflecting on and evaluating the action and the process. What teachers learn in each step of the process informs decisions and actions in subsequent steps and phases of the action learning cycles.

5. Discussion & Reflection

Discussion about and reflection on current classroom practice are essential elements of the action learning process in schools. Through discussion with colleagues and external critical friends and personal reflection teachers can begin to develop a set of principles or guidelines about teaching and learning. These principles or guidelines inform teachers' decisions regarding the implementation of pedagogical practices that are expected to lead to sustained improvements in student learning outcomes.

6. Learning Partnerships

School-based action learning teams often form partnerships with bodies external to the school, such as professional associations, universities and other tertiary institutions and consultants. They do this to access existing expertise in the field of inquiry to support their inquiry and learning and to obtain a perspective on their work and learning that is external to those in the school. All QTA L projects worked with an external academic partner. (AGQTP (2006) Quality Teaching Action Learning Project Handbook http://qtp.nsw.edu.au/ResourceDocuments/QTAL_Handbook_06.pdf)

Further detail about action learning can be found in Aubusson, P., Ewing, R., and Hoban, G. (2009) *Action Learning in Schools: Reframing Teacher Professional Learning and Development*. London: Routledge.

Scope of this report

This research project was designed to undertake a meta analysis of 135 school-based action learning team reports from QTAL projects conducted between 2003 & 2007 and 57 in 2008-09. The focus for the analysis of the 2008-09 reports was the additional information on the quality teaching model and the integration of ICT.

The research was designed to investigate the following aspects and explore the critical factors that impacted on the success of the teacher learning:

- Action learning
 - Formation of teams
 - Team learning processes – cycles of planning, action, sharing, reflection
 - Plans for sustainability
- The Quality Teaching model:
 - Approaches for using the NSW DET Quality Teaching model (2003) in school-based professional learning and development
 - Reported changes in practice
 - Changes in teaching practice and student learning
- The role of the Academic Partner
 - Reported changes in practice of the role/ uses by the project team
- The integration of ICT into teaching and learning in the 2008-09 phase as this became an additional Australian Government priority.

This document reports both first and second phase findings in the five chapters that follow and a conclusion. The report was edited by Daniel Brooks, Robyn Ewing and David Smith.

Chapter 1: **Professional Learning and Organizational Pedagogy** (Professor Susan Groundwater-Smith) Provides an overview of professional learning and organizational pedagogy

Chapter 2: **Action Learning Processes and Issues and Sustainability** (Dr. Tony Loughland and Dr. Nicole Mockler) Draws upon the action learning processes- i.e. formation of teams, action learning cycles and plans for sustainability across the range of projects.

Chapter 3: **Linking the projects to the Quality Teaching Model** (Associate Professor David Smith with Dr Ann Cheryl Armstrong, Dr Alyson Simpson and Dr Nicole Mockler) This chapter investigates the use of the NSW DET Quality Teaching Framework by QTAL projects and evidence for the use of the framework resulting in changes in teacher practice and the consequences of these changes increased student learning.

Chapter 4: **Facilitating Inquiry** (Professor Susan Groundwater-Smith and Dr Jenni Way) This chapter focuses upon the roles and responsibilities of the academic partner and the ways in which these have changed over time.

Chapter 5: **The Integration of ICT into Teaching and Learning** (Dr Alyson Simpson & Dr Jenni Way) In 2008, the NSW DET AGQTP management team issued a directive that all 2007-9 QTAL projects should incorporate an ICT element. This chapter provides the results of a quantitative and qualitative analysis of the 57 school reports from 2008 and 2009. The chapter reports on the ways in which ICT was employed in the projects, the types of ICT resources used and how engagement with ICT resulted in school-based change and increased learning for both teachers and students.

Conclusion: **Major findings, conclusions and recommendations** (Professor Robyn Ewing) Conclusions are drawn together and the major outcomes of the meta-Evaluation summarised. In addition recommendations are made in relation to the program and its success in creating conditions for professional learning and organizational pedagogy.

CHAPTER 1

PROFESSIONAL LEARNING AND ORGANIZATIONAL PEDAGOGY

PROFESSOR SUSAN GROUNDWATER- SMITH

Professional Learning

Learning to become a proficient, well-informed teacher is a career-long endeavour. It is not confined to initial teacher education nor to formal courses accredited through higher education. Neither is it only the result of being embedded in the workplace or attending in-service education modules. Effectively, the endeavour is a complex amalgam of all of these and the result, when fully engaged with, is the scholar teacher who welcomes many opportunities for learning that are critical and transformative.

Of course professional learning is also mediated by the learning dispositions of the individuals who engage in it. Hodkinson (2006) in her study of over one hundred people's life histories, as part of a Teaching and Learning Research Program (TLRP) in UK argues that the dispositions to workplace learning are "developed alongside the prior lived experiences of the person concerned" (p.19). She develops her position from an earlier study of teachers (Hodkinson & Hodkinson, 2005) where the claim is made that different provisions for training will have differing effects for different workers.

Differentiating professional learning in education, then, is a task that requires imaginative and subtle solutions. The "One Size Fits All" mentality cannot be justified, but at the same time it is clear that teachers need and deserve opportunities to develop and enhance their practice in a context that recognizes and understands their range of experience and their learning dispositions. The Australian Government Quality Teaching Action Learning Programme, as it is enacted in New South Wales, has this possibility. Developed in relation to the publication of the *Quality Teaching Framework* the programme has offered to teachers, working in teams, a means whereby they can identify a pedagogical concern and address it by way of innovation and change (Ewing, Hoban, Herrington, Anderson, Smith and Kervin 2005). The emphasis, in the programme's aspiration to action learning, is upon the professional learning that results from the various processes with which the teachers are engaged.

Action learning should not be taken to be merely a form of „self-study‘, where the focus is upon an examination of the individual self and the way that might interact with and influence personal growth in the context of a specific project. For, as Bullough & Pinnegar (2001:15) have observed, "tipping too far towards the self side produces solipsism". They argue that such a process may not have the capacity to enable making professional knowledge problematic. In an action learning project encountering

unpredictability, messiness and surprise is to be experienced as a member of a group. It is a process that encourages participants to identify, not only that which they know and understand, but also where their misapprehensions and uncertainties might lie. It is therefore a process that requires communication, risk taking, experimentation (of both procedures and ideas) and reflection. It goes beyond the „where’, „what’, „who’ and „when’ questions to investigate the more challenging „why’ question – why events occur in the way they do? Why participants typically react as they do? Why change is necessary but difficult? And so on. Indeed, Ewing, Smith, Anderson, Gibson & Manuel (2004:3) in their investigation of action learning for school teams argued:

One of the key issues in successful action learning is the ability of participants to ask insightful questions that stimulate new ideas and action.

Action learning goes beyond experiential learning in that there is a specific process of intervention. The team identifies a problem or challenge in their workplace, in the QTAL Project, a school. They assess the strategies that may be applied to address the problem. They act and consistently document their actions and they collectively review what has been learned.

All of this requires a willingness to work together. What is required is a collective intelligence that goes beyond the sum of the parts. MacGilchrist, Myers and Reed (2004) have argued for a kind of corporate intelligence that draws upon the notion of multiple intelligences and relates them to organizational thinking. Just as individuals have a range of intelligences so too can the school, or a subset of teachers within a school, be deemed to be intelligent, drawing upon a range of capacities to act and reflect on practice. MacGilchrist et al perceive that the vision of the enterprise draws upon both ethical and spiritual intelligence which in turn, through systemic intelligence, connects to contextual, operational, emotional, reflective and collegial intelligences. All operate in what Senge et al (2000: 52 – 53) call „systems thinking’:

(It) starts with the assertion that the fundamental nature of reality is relationships not things... Unlike machines, living systems continually grow and evolve, form new relationships and have innate goals to exist and to recreate themselves. They are neither predictable nor controllable like machines, though they have patterns of behaviour that tend to recur and their future development can be influenced.

A goal of this study has been to explore the learning of teachers, as they function as a team and draw upon their corporate intelligence to develop and enact plans that will contribute to improvement and growth. While this has been a primary goal it has also become clear that other kinds of professional learning are taking place within the program; that is the learning of those who have designed and managed the overall program and those who have assisted in the role of mentors and facilitators. We claim that the program has developed a kind of „organizational pedagogy’ that supports professional learning in a number of guises.

Organizational Pedagogy

Ordinarily there is a prevailing thinking about pedagogy as the intersection of the activities of teachers, learners, learning and the curriculum. It is seen as apolitical, a flat and undifferentiated terrain, devoid of value judgments and activism. It is merely method. We would argue instead that the concepts, in relation to *critical* pedagogy, are the more important when we start to build a picture of organizational pedagogy. Writers such as Giroux and Simon (1989) have long argued for a conceptualization that goes beyond the technical and argues that pedagogy is essentially a social and contextualized practice that involves an analysis of situations and seeks to identify the fallibility of assertions and arguments:

It (pedagogy) is a deliberate attempt to influence how and what knowledge and identities are produced among particular sets of social relations. (p.239).

In these terms organizational pedagogy is a practice that creates conditions for collegial professional learning through the analysis of puzzling and challenging situations. Knowing is connected to action. Built into this emergent definition is the European notion of pedagogy that is underpinned by an ethic of critique and justice and points to moral purpose (Ponte 2007). This position continually asks us “what is a good school?” “What is a good society” and most pertinent to this study “what is a good professional”.

These may be curious words, found as they are in the first chapter to what might otherwise be deemed a technical study that synthesizes the reports of a number of iterations of the QTAL Program in New South Wales. However, we would argue that the processes underlying the program have great potential for satisfying these emancipatory purposes. In each of the chapters that follow we take a particular trajectory that both reports the results but also foregrounds the issues and arguments.

CHAPTER 2

ACTION LEARNING PROCESSES AND ISSUES OF SUSTAINABILITY

DR. TONY LOUGHLAND AND DR. NICOLE MOCKLER

Introduction

This chapter explores the enactment of action learning on the part of *Quality Teaching, Action Learning* project teams across the three phases of the study, as represented in final reports submitted to the QTAL management team. The particular areas examined in relation to action learning were:

- formation of project teams;
- team learning processes – cycles of planning, action, sharing and reflection; and
- plans for sustainability.

After a brief description of the methods employed in the analysis of data, each of these three areas will be reported in a separate section of this chapter.

Methods

125 QTAL reports were analysed from the three phases of the project: 48 from Phase 1 (2003-4), 47 from Phase 2 (2004/5) and 30 from Phase 3 of the project (2006/7). The examination of action learning processes and issues of sustainability employed qualitative content analysis whereby data was read, re-read and coded by the researchers according to the themes and issues emerging from the data itself. Excel spreadsheets were then used to tally the results, and the discussion in the following pages utilises both tables and graphs developed as part of this process as well as extracts from the reports by way of illustrating themes and issues.

In relation to the formation of project teams, Part B of each school report (entitled „School Context’) was analysed to gain an understanding of the extent of change to project teams throughout the course of the project. Responses to this question were categorised according to whether, in the researcher’s assessment, there had been no change to the team across the course of the project, minor changes to the construction of the team or major changes in team membership.

Analysis of team learning processes examined two sections of the school reports. In the first place, Part C of school reports (entitled „Actions Taken’ in Phase 1 and „Collection and Analysis of Evidence’ in Phases 2 and 3) was examined to gain an understanding of the variety of evidence collected in the course of the action learning processes undertaken. Section D of each report (entitled „Extent of teacher professional learning

and changes in practice' in Phase 1, and 'Professional learning and changes in practice' in Phases 2 and 3) was then read in search of evidence for planning, acting and reflecting. Academic judgment was used to categorise phrases that did not specifically include the target words but may have had synonyms such as team teaching (for acting) and sharing and discussing (for reflecting). It is important to note here that the analysis conducted made it possible for some reports to have multiple citations in one, two or all of the categories whilst some reports may have had none. Another point of analysis was that the result had to make explicit mention of the process occurring rather than make general references to the benefit of these processes.

Issues of sustainability were examined via analysis of the 'Conclusions' section of school reports (Part H in Phase 1 and Part I in Phases 2 and 3).

Formation of Project Teams

Across all three phases of the project, the question posed in relation to construction of school teams made it difficult to draw conclusions about the initial construction of teams. In all Phases, reports asked schools to:

Comment on any changes to the membership of the project team and aspects of the school/s' demographics and/or social structure, that are relevant to the project, that have occurred since completing the progress report in [date of progress report]. If no changes have occurred please write "As per [date of progress report]".

Where changes to the construction of the project team had occurred, they were analysed by the researcher in terms of whether they had been 'major' or 'minor' in scale. In a limited number of cases, school teams reported themselves in terms of the perceived size and impact of changes, while in the majority of cases changes were reported without comment on the impact of the changes on the project. Changes allocated by the researcher to the 'minor' category included situations where one or two teachers had either joined the team or withdrawn from the team between the two reports. Other minor changes included the internal promotion of a member of the team to a new role within the school or the departure of the School Principal (where they were not a member of the project team or cast as significant to the life of the project). Major changes included a change in project co-ordination within the school, the departure from the team of a significant number of members and the departure of the School Principal or other key executive members (where they were either a member of the Project Team or reported by the Team to have been significant to the life of the project).

Figure 2.1 below represents the extent of changes to Project Teams across the three project phases

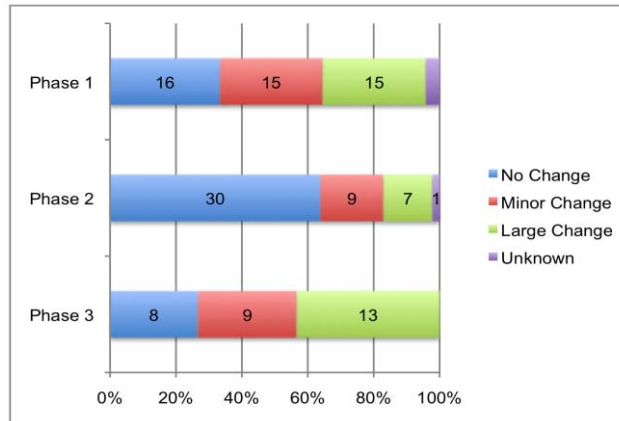


Figure 2.1: Changes to School Teams between Interim and Final Reports

In both phases 1 and 3 of the project approximately 30% of schools reported no changes to the project team were reported, while in Phase 2, over 60% of schools reported no change. The key to understanding this apparent discrepancy in the data lies in the varying timeframes accorded to each phase of the project, represented in Table 2.1 below.

	Start	Interim Report	Final Report
Phase 1	October 2003	December 2003	April 2004
Phase 2	September 2004	April 2005	June 2005
Phase 3	April 2006	November 2006	June 2007

Table 2.1: Timing of Project Phases

As Table 2.1 indicates, while the duration of projects increased from Phase 1 to Phase 3, an inconsistency exists in terms of the length of time between submission of interim and final reports for the various phases. Phase 1, which was 7 months in duration, incorporated 5 months between interim and final reports. In Phase 2, which was 10 months in duration, the length of time between interim and final reports was only 2 months. Phase 3 was significantly longer in duration, at 16 months, with 8 months between interim and final reports.

These differences in timing, particularly the significantly short time span between the interim and final reports in Phase 2, make it difficult to draw definitive conclusions about the comparative rate and extent of change to project teams. It is worth noting, however, that in the case of Phases 1 and 3, it is likely that the change of school year between interim and final reports had a significant impact upon construction of project teams via school staffing and movement between schools. Likewise, while there was relatively less change that occurred to project teams in Phase 2, taking into consideration that the period

between reports in this case was only 2 months, and indeed one school term, that 34% of school teams experienced some change during this time seems quite significant.

A number of firm conclusions can be drawn from the data in relation to team stability and movement:

- The majority of school teams across all three project phases were subject to some changes in construction (57%).
- A significant number of schools in Phase 1 and Phase 3 experienced what might be regarded as a ‚large change’ between the submission of interim and final reports (31% and 43% respectively).
- An additional respective 31% and 30% of Phase 1 and Phase 3 schools experienced what might be regarded as a minor change over the same time period.
- The relatively smaller number of school project teams reporting changes to team construction between the submission of interim and final reports in Phase 2 is likely to be a product of the short time span between these two events rather than indicative of significantly higher levels of stability in this Phase of the project.

Team Learning Processes

The evidence collected during the action learning process and processes by which school-based teams engaged in action learning were the subjects of sections C and D of the school reports, and will be reported here in two separate subsections.

The Use of Evidence

In all three Phases of the project, project teams were asked to list the various means via which they collected evidence over the course of the project. In Phases 2 and 3 they were also asked to indicate (in very general terms) what the evidence revealed. Figure 2.2 below represents school responses regarding the types of evidence collected, expressed as a percentage of schools within each phase.

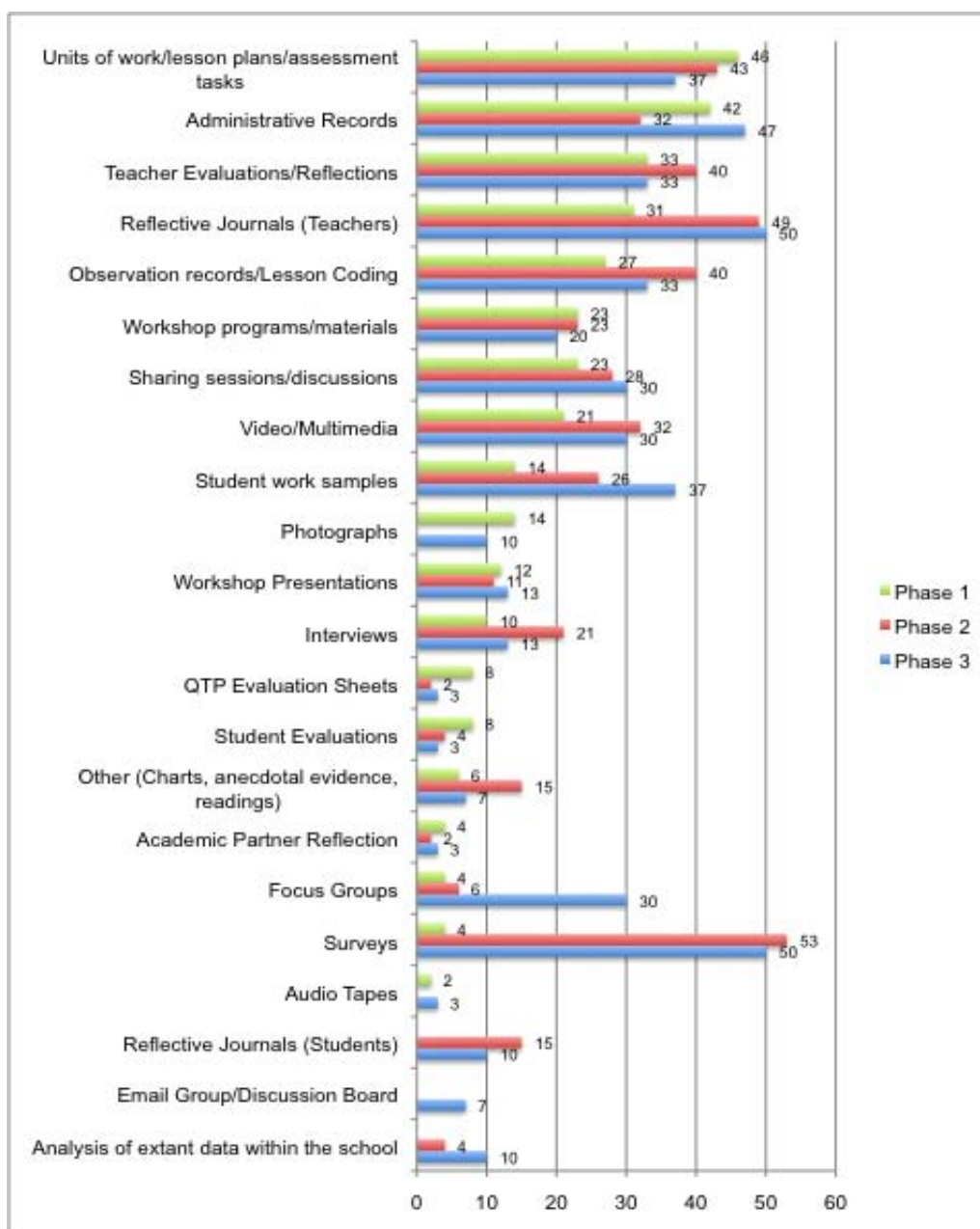


Figure 2.2 : Types of Evidence Collected

A number of types of evidence remained consistently popular across all three phases, including:

- units of student work, lesson plans, student assessment tasks developed in the course of the project (collected by 46% of Phase 1 schools, 43% of Phase 2 schools and 37% of Phase 3 schools);
- administrative records, such as team meeting agendas and minutes (42%, 32% and 47% respectively);
- teacher evaluations/reflections at specific points throughout the project (33%, 40% and 33% respectively);

- reflective journals completed by project team members (31%, 49% and 50% respectively); and
- classroom observations/lesson codings (27%, 40% and 33% respectively)

Conversely, a number of methods of data collection increased significantly in popularity across the three project phases. These were:

- the use of surveys (predominantly with students, but also with teachers and/or parents) (4%, 53% and 50% respectively);
- the use of focus group interviews (predominantly with students and teachers) (4%, 6% and 30% respectively); and
- the collection of student work samples (14%, 26% and 37% respectively).

This data highlights an increase across the three phases of the project in the use of data collection methods which are arguably more systematic and aim to incorporate student voice. It is possible that this increase was encouraged by the exemplars provided at planning conferences held in preparation for Phases 2 and 3 of the project, but further research would need to be undertaken in order to draw any firm conclusions as to the contributing factors to this phenomenon.

The data also indicated that across the three phases of the project there was an increase in the number of different types of evidence collected by project teams. Figure 2.3 below represents the average number of types of evidence collected per school in Phases 1, 2 and 3.

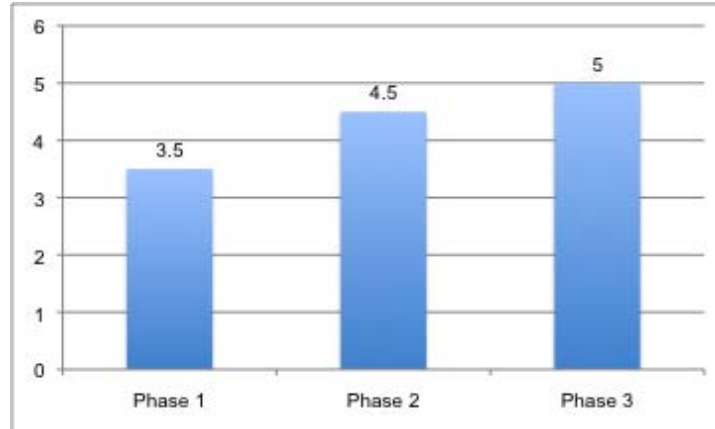


Figure 2.3: Average number of types of evidence collected throughout the project per school

This increase could be indicative of increasing understanding of and professional support in engaging in inquiry-based professional learning. Alternatively it could be merely representative of the extended period of time allocated in Phases 2 and 3, which presumably afforded more time for the collection of evidence. Again, further research would need to be undertaken to gain a comprehensive insight into the contributing factors and circumstances.

As noted above, in Phases 2 and 3 school teams were asked to briefly indicate what the evidence they had collected revealed to them. Due to the brevity of the response required and the significant amount of evidence collected by most project teams, responses to this question generally came in the form of a brief and fairly celebratory summary of the „findings’. Responses typically centred either on the „content’ of the project or the processes used, in some cases combining discussion of both.

Many project teams discussed the enhanced knowledge and understanding of their project focus on the part of teachers that had been revealed by the evidence collected:

*An improved understanding in teachers of the ‘gaps’ that exist for students as a result of the transition from Year 6 to Year 7, and a better understanding of how these gaps may be overcome. Teachers developed knowledge of the ‘landscape of learning’ for students, and applied a range of strategies to ensure continuity in learning, including mapping of the curriculum and application of common literacy strategies.
(Merrylands HS, Phase 2)*

Perhaps the most powerful realisation was that, instead of trying to aim high and cover all aspects of literacy, our greatest success came when we were brave enough to let go of the ‘we have to achieve well in all areas of literacy’ attitude and began to zoom our focus in on particular aspects of writing. An example of this is where we moved from writing units that focussed on text type, to utilising 6 Traits of good writing and then zoomed in closer and focussed on one of the six traits. By choosing the concept of ‘voice’ from the traits on offer we began to write units that offered much more specificity in the writing process and by combining this with the attention to Background Knowledge, Deep Understanding and Engagement, we started to really hit the mark. Teachers were excited about the lift in student performance and could clearly see the link between well-planned, specific teaching that incorporates the Quality Teaching Framework that supports this lift. (Floraville PS, Stage 3)

This evidence has demonstrated that there has been a shift in a number of areas relating to the teaching of number at Wingham Public School. Teachers are now communicating in a more shared language when discussing mathematics. The evidence from surveys shows that there has been a shift in teacher thought in relation to the teaching of mathematics. This is a movement in the direction towards a higher level of understanding of connectedness, higher order thinking and problematic knowledge. The greatest movement has been in the area of higher order thinking. (Wingham PS, Phase 2)

For many teams, this increased level of knowledge and understanding was seen to have contributed to increased teacher confidence and willingness to take pedagogical risks with students:

The evidence revealed extensive teacher learning and teacher growth in risk taking and in confidence. Teachers who felt very hesitant about using ICT in the classroom have developed new programs, which they are trialing, incorporating ICT and QT principles. They feel that they have begun on a learning journey which will not finish with the end of this project. They are now willing to embrace the technology available in the school to enhance student outcomes. They have learnt new skills in using a variety of software programs across a range of technologies, for example, Photoshop, Powerpoint, Cool Edit, Pinnacle Studios, Movie Maker 2 and Dreamweaver. They are much more confident in the use of hardware such as digital and still video cameras. (Hornsby GHS, Phase 2)

The evidence revealed that teachers are feeling more confident in teaching Science and Technology. Students are more engaged and motivated during Science and Technology lessons now that they have more input into their learning and there is more flexibility in what they are learning. Students are demonstrating that they have a deeper understanding of the “big” ideas in Science and Technology. (Darcy Rd PS, Phase 3)

For others, the evidence was seen to have revealed a significant shift in terms of professional learning and the power of professional discourse to contribute to a culture of professional learning within the school:

It's improved the learning culture at our school, particularly for those in the project team, but has already had impact on other staff. It has helped us develop more personal motivation when it comes to our professional development. (Crown St PS, Phase 3)

Furthermore, for some, these opportunities themselves had provided something of a catalyst for further learning in relation to the Quality Teaching Framework and pedagogy more generally.

Staff appreciated the opportunity of working together on the action learning cycles as they had time to observe, reflect and evaluate the elements of the Quality Teaching Framework. Having the time to do this during the project was seen as a major learning experience in developing an understanding of the Quality Teaching elements and how they could be used to improve student engagement and learning outcomes. (Meadowbank PS, Phase 2)

Because of the vastly varying responses to this question, and a tendency on the part of project teams to discuss the project outcomes in very general terms, it is difficult to draw strong conclusions about the ways in which evidence was employed across the projects. It may be advantageous to gather some additional data on this from Case Study schools at a later point in the meta-analysis project.

Action Learning Processes

The action learning cycle is made up of three processes, that of planning, acting and reflecting. Accordingly these three processes were used as a framework to examine the QTAL reports. The chart below shows the results of the content analysis that analysed the reports for citations of evidence of planning, acting and reflecting. The next section uses a selection of quotes taken from the report that illuminate the participants' reported views on these processes.

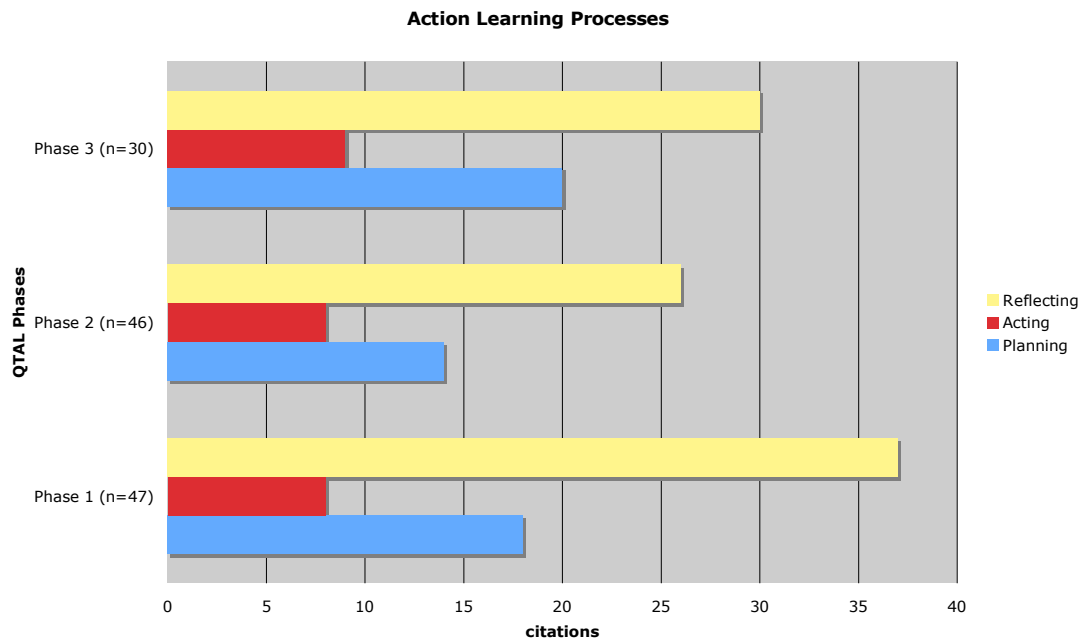


Figure 2.4 Evidence of planning, acting and reflecting

Planning

According to the chart above, planning was the second most cited process in the QTAL reports. The following quotes from the report suggest that there were reported changes in the duration and type of planning conducted in the QTAL projects.

There was an increase of time devoted to planning as a result of the QTAL funding:

The most important aspect of the project was the resourcing of teacher time to work together in a cooperative and agreed purposeful manner (West Wyalong PS, Phase 1).

The time was used for collaborative planning which led to more thoughtful planning:

There was discussion during lesson preparation and more thought was put into lesson preparation.

This collaboration occurred with colleagues from in-school as well as from outside sources:

Time away from face-to-face teaching is invaluable in promoting significant professional learning through thinking, writing, reflecting, refining, examining new resources, collaboration with and assisting colleagues and collaboration with visiting experts (West Wyalong PS, Phase 1).

Another positive outcome in planning reported from the QTAL projects was the increased use of planning strategies such as backward-mapping as an aid:

Backward-mapping is now an important part of most planning from Early Stage 1 to Stage 5 within the school.

Finally, there was strong mention made of the increasing use of the QT model in the planning process:

Teachers are beginning to use the language of QT as a normal part of their professional discourse.

There has been a willingness by staff to use the QT Model in both the planning and implementation of lessons.

Furthermore, some schools reported that the planning using the QT model was becoming embedded as part of the school practices:

Reflection on the dimensions and elements of the NSW Model of Pedagogy is gradually becoming a core practice in unit development. This occurs at our fortnightly meetings in Secondary and our planning days in Primary.

The cycle of collaborative planning, teaching/observation, reflection, adjustment to plans and then teaching again proved an invaluable tool as we were able to expand “the horizon” into more complex tasks. We now have teachers who are programming quality teaching elements into other areas of the curriculum – a real change to the school culture.

A content analysis of the QTAL reports from Phase 1-3 demonstrates that the funding produced positive outcomes in the form of collaborative, thoughtful and focused planning in schools. Another positive outcome was the reported use of the QT model in this planning.

Acting

Acting was the least cited process in the QTAL reports. The action most reported was „team teaching’ as defined in the following quote:

Teachers involved in the project team taught, usually during their 'free periods', on a regular basis (particularly when students were preparing their assessment task). Students came to view this collaboration as quite 'normal' and would often seek clarification or direct their questions to teachers other than the one timetabled for that lesson.

It was not only the students who came to see collaborative teaching as a normal practice. Two reports mentioned the teacher transition to becoming more comfortable with sharing their practice in this fashion:

Teachers becoming more confident at observing their colleagues' teaching, being observed and reflecting on lessons with their colleagues.

A number of staff noted that initially they were very wary of being watched by other staff members when teaching but they later become comfortable with it. A number of schools just spent time in reflection and planning and did not go to the lesson observation step.

The distinction between observations and team-teaching might be worth exploring in closer detail in further studies. The following quote suggests that it is the collaborative nature of team-teaching in combination with collaborative planning that is the key:

Team teaching and collaborative planning is non-threatening

Indeed, one report argued strongly that the actual observation of teaching through team-teaching was an integral part of action learning:

Teacher collegial classroom visits were a highlight of teacher learning and collegial respect. Action learning thrives in a high school setting through team teaching. The collaborative nature of action learning is lost when teaching is independent and only reflections, rather than experiences are shared.

The emphasis on team-teaching and observation is interesting given the current interest in the lesson study model of professional learning in NSW. The following quote captures the essence of what it is that makes this form of professional learning effective:

Action learning lifts the screens so we can all see clearly and truly share the journey, in that we have time to authentically analyse professional learning and spend time with each other, in observations, professional discussions and in less formal situations. Action learning feels so much more 'real' than any other type of professional development because it allows teachers to interact as human beings, to share feelings and be honest. The impact it has on practice is real too, as one teacher stated about her partner...'once she saw how those strategies can lift engagement, and the power of metalanguage in a lesson, her scores jumped from 2's and some 3's to mostly 4's. She has made that much of a

shift after only two observation lessons, imagine what she'll be like by the end of the program."

Although citations of the process of acting did not appear as often as planning and reflecting in the QTAL reports, the data cited above suggest that it is a process worthy of further critical examination in research on action learning. In particular, a fine-grained examination of the distinctions evident between team-teaching and observation in practice, as well as their relationship with collaborative planning and reflection, would be most interesting.

Reflection

The process of reflection was the most cited in the QTAL reports. In Phase 1, reflection was cited at a ratio of 2:1 to planning and almost 5:1 to acting. This ratio decreased a little in Phase 2 and again in Phase 3 but reflection still remained the most reported process. It is easy to speculate as to the reasons for the dominance of reflection but probably not as productive as examining what aspects of reflection that the schools found useful. Happily, one school reported that reflection was enjoyable as well as efficacious:

Teachers in our team have learnt that developing a formalized collaborative structure enables better sharing of planning, problems, successes, deeper understanding of what it is we are trying to achieve and in lots of cases more enjoyment, both for the teachers and the students.

Reflection was regarded as the most powerful process in the following quote:

Teachers are more prepared to reflect upon their achievements and areas for improvement with other members of the team and other teachers within their faculties. Members of the team all agreed that the reflection stage of the Action Learning Cycle was the most powerful part of the process. They were engaging in deep professional discussion based upon their own teaching and the learning of their students.

The last sentence of the above quote alludes to the importance of reflection focusing on teaching and learning:

Professional discussion focuses around the teaching and learning rather than the management of student behaviour.

This point is made strongly by the following school with the classic phrase in upper case:

Positive changes from everyone - 'WE TALK PEDAGOGY' eg; now, even at visiting performances such as, you will hear colleagues from the team discussing the performance in terms of engagement, background knowledge and deep understanding!

The phrase, *we talk pedagogy*, is expressed in more formal prose in the following quote that reads as a strong endorsement of the QTAL model for professional learning:

Involvement in this project has led to much professional reflection. It has led to increased willingness and ability to engage in professional dialogue using quality teaching terminology to explain, analyse and reflect on teaching practice.

Reflection is cited as an integral aspect of the QTAL process. Importantly for the sustainability of the model it is most often critical reflection that utilises the quality teaching model as a framework for honest and open teacher discussion.

Issues of Sustainability

Project schools were asked to nominate those dimensions of their project which had worked well and should thus be sustained, to indicate what they felt needed to be refined or built upon in order to ensure continued improvement, what would be the next steps for the project team (2004 and 2005 cohorts only) and, finally, whether they anticipated the project continuing beyond the funding period (2005 and 2007 cohorts only).

Elements Worthy of Being Sustained

Most project teams recognised the time for teachers to engage in reflection on their practice, collaborative planning and sharing of their work with each other to be a most valuable dimension of the project worthy of being sustained within their schools:

Collegiality and the time to be able to share teaching practice and undertake professional development in a practical and worthwhile environment. (Kyogle HS, Phase 1)

We need to continue to provide opportunities for reflection, written and verbal, in professional development meetings as an opportunity for teachers to discuss and celebrate new learning, knowledge, practices and student outcomes. (Queanbeyan West PS, Phase 2)

Members of the team particularly valued the collegiality and collaboration between members of different faculties. Professional discussion in an environment of trust. (Crestwood HS, Phase 3)

It was observed by some teams that there had been a range of positive flow-on effects from this professional learning opportunity in terms of increased teacher morale and a sense that their learning was valued within the school community:

*Staff morale increased as a result of:
developing relationships
breaking down some of the isolation between Key Learning Areas*

*breaking down some of the cultural barriers between staff
allowing for beginning teachers to demonstrate best practice and have that
confirmed by university partner
beginning teachers got to see themselves as the “experts” rather than the
“novice”
teachers felt supported and valued (Thomas Reddall HS, Phase 1)*

The focus on the NSW Quality Teaching model, which enabled teachers to engage with and learn about the model in the context of improving classroom practice, was seen by many project teams as an aspect of the project worthy of sustaining. There was a sense from a significant number of schools that this focus had been quite instrumental in assisting the school community to come to terms with the model and begin its practical application in classrooms. Furthermore, it was observed by some that this focus had helped to create a shift toward linking pedagogy with improved student learning outcomes:

The dialogue concerning quality teaching and learning particularly in numeracy, being generated in the Professional Learning Teams about teacher practice and effective teaching strategies that can be used to improve student outcomes. There has been a shift away from just focussing on student’s numeracy skills to talk that encompasses literacy and technology skills as well. (Chifley College, Phase 2)

Teams across all three cohorts appear to have valued the systematic framework for inquiry into and reflection upon their work provided in the action research/action learning processes, with schools recognising the usefulness of these processes in terms of contextualising teacher professional learning within classroom practice. The quote below exemplifies the comments common from the reports of the three school cohorts:

Use of the action learning process to focus on teaching practice as the context for teachers’ learning (Mosman HS, Phase 2)

The opportunity to work with an academic partner was seen as a significant dimension of the project worthy of being sustained by many project teams. This dimension was mentioned more frequently by teams in the 2005 and 2007 cohorts, perhaps reflecting the way in which the extended duration of these phases allowed for greater contact with the Academic Partner.

The development of links between cluster schools was nominated as an element worthy of being sustained by almost all of the project teams that had worked as a „cross school cluster’. This was despite some of the acknowledged logistic and other difficulties that this presented to schools: the vast majority of these project teams saw that the benefits of the professional learning community that had been established far outweighed any difficulties they had experienced.

Finally, the opportunity to engage students in the project and for teachers to listen to student voice emerged as an element worthy of being sustained, albeit more frequently in

the 2005 and 2007 data. This perhaps reflects the increase in these phases of the systematic collection of data from students via focus group discussions, surveys and interviews, as indicated in the data reported above.

Plans for the Future

Areas which project teams indicated they would like to further refine and build largely related to the „scaling up’ of projects within their schools to develop a whole school approach. This was particularly the case where projects had been conducted by one or two Faculties or a single Stage Team within the School. In secondary schools in particular this was seen to involve the development of mechanisms for systematic communication and sharing of information across KLAs, such that the project could be effectively „scaled up’ over time.

Further and greater opportunities for teachers to engage in this kind of collaborative work, to systematically and regularly reflect on their work and to engage in action learning processes were also nominated by a large number of project teams as a prospective „next step’. Likewise, the processes they had begun to use in the project to gather evidence from students and incorporate student voice into teacher decision-making about teaching and learning was seen as a key area for further refinement. This generally was seen to involve the development of further knowledge and understanding of how best to gather evidence from students, interpret data and respond to the voices of students in relation to teaching and learning.

Expansion of teachers’ understanding of the Quality Teaching model was seen by many project teams as a key area for further refinement and building. Many schools across all three cohorts had chosen to focus their action learning project on a small selection of elements or a single dimension of the model and, while the depth of knowledge that this approach provided was valuable, it was seen that there was a need for further expansion and development across the model in its entirety.

A number of schools across all three cohorts expressed a desire for the current project teams to engage in further „rounds’ of action learning in relation to the project focus, with further refining and implementing the units of work and teaching and learning strategies that had been developed throughout the course of the project.

Phase 1 and 2 project teams were asked to nominate what the next stages would be for the project team members. While there was a great deal of overlap between the nominated areas of refinement and building for most teams, it was clear from responses to this question that in many schools project team members were engaging in leadership of professional learning amongst their colleagues, through such activities as presenting their work at School Development Days, mentoring other teachers, and facilitating similar projects for new teams within the school.

Across both Phase 2 and 3 schools, strong support was indicated for the continuation of the project in some form beyond the funding period. While some schools indicated that they intended to contribute a significant portion of their TPL or Priority Schools funding

to expanding the project as a professional learning priority other schools indicated that, while they would like to continue, in the absence of externally-provided funding it would be difficult. A number of schools indicated that, while the project in its current form would not continue, they would build on the learnings and expertise developed in new projects mooted for the following school year, in some cases incorporating an action learning approach to professional learning more broadly.

Conclusion

The QTAL funding can be seen as seed-grant funding for the purpose of promoting action learning in schools using the QT model as a language for professional learning. As such, an analysis of the reports would expect to find mention of successful action learning and productive use of the QT model. We can claim that this is indeed the case with the reports from Phases 1, 2 and 3 of the QTAL funding.

Furthermore, a claim could be made that there seemed to be a trend towards more complex forms of professional learning from Phase 1 through to Phase 3. Some of this complexity can no doubt be attributed to the longer time-frame available to both Phase 2 and Phase 3 of the project. It might be argued that the longer duration of the latter projects allowed for the implementation of more time-intensive models of professional learning such as lesson-study or team-teaching. As well, it might have enabled the action learners to engage more deeply with the QT model. A second factor in the evident increase in the complexity of professional learning may well be the opportunity for schools in each succeeding phase to have the benefit of reports from schools in the preceding phases of their professional learning strategies and experiences at the orientation and sharing conferences for each phase. Overall, the reports demonstrate that the QTAL schools have developed a more sophisticated model of professional learning as a result of their seed-grant funding.

CHAPTER 3

QUALITY TEACHING ACTION LEARNING AND THE QUALITY TEACHING FRAMEWORK

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(DEVELOPED FROM AN EARLIER DRAFT BY DR ANN CHERYL ARMSTRONG, DR ALYSON SIMPSON AND WITH ANALYSIS OF PHASE 2 DATA BY DR NICOLE MOCKLER)

This chapter reports on an investigation into the use by the QTAL project teams of the NSW Department of Education & Training (DET) Quality Teaching framework (QT) and its impact on classroom practice and student learning.

The results of the investigation presented in this report, however, are somewhat problematic, particularly those for phase 1 (2003-4) reports, for a number of reasons. First, the Discussion Paper outlining the QT, its three dimensions (Intellectual Quality, Quality Learning Environment and Significance) each with its six Elements, its rationale and the research underpinning its development was not released to schools until 2003, the year beginning the first phase of the QTAL program. The paper was released in May during term 2 and the first phase of QTAL began in September. Second, and related, the documents that supported the QT and strategies for teacher professional learning about the QT and its application in classrooms were not available until later in 2003. This meant that while the action learning of school-based teams in all phases of the QTAL program, including the first phase schools was expected to include professional learning based on the QT, those teachers in the first phase schools, and their academic partners, introduced to the QT framework at the phase 1 Orientation Conference, had less opportunity for learning about and engaging with the QT than those teachers in the latter three phases of the program. Teacher teams in the latter three phases of QTAL also benefited from hearing how school teams in previous phases had employed the QT in their action learning programs at the Orientation Conferences for phases 2, 3 and 4 of the program. Third, the length of time for the first phase QTAL projects (7 months) was shorter than those of the second (10 months), third phases (15 months) and fourth (18 months) phases, thus allowing less time for participating teacher teams in phase 1 to engage with the QT in their action learning.

A fourth reason for making the findings from the investigation reported in this chapter problematic relates to the written reports required from school project teams that form the data for the investigation. In the reports from schools in the first three phases (2003-4, 2004-5 and 2006-7) there was no direct question that asked for information regarding the use of the QT by school teams in their action learning or its impact on teacher practices and/or student learning. The question providing this specific information was only included in reports from fourth phase (2007-9) schools.

Given these caveats the investigation, through both quantitative and qualitative analysis analysed the written reports of the 182 QTAL participating schools. Initial analysis revealed that there was minimal useful evidence from the reports of the 2003-4 cohort schools, probably for reasons already provided above. Reports from the schools for this first phase were thus excluded from further analysis and it is the reports of schools engaged in the second (2004-5), third (2006-7), and particularly fourth phase (2007-9) of the program that form the data set for the findings presented in this report.

The focus of the investigation was to attempt to identify evidence for and trends in:

- approaches to using the QT by action learning teams;
- changes in teacher practice influenced by engagement with the QT; and,
- changes in student learning attributed to teachers' engagement with the QT.

The analysis revealed that there was minimal explicit evidence related to these three issues in the majority of reports, particularly those of the second and third phase schools, for reasons outlined above. Much of the evidence from reports from schools included in these two phases had to be inferred from other information. For example, as will be seen from Fig 5, there was strong evidence of both the incidence of „observing, coding and recording' and the increased use of these in the reports of schools in the 2006-7 cohort. It is reasonable to infer that the „coding' reported is directly related to the Elements of the QT. Coding templates for the QT were included in the documents supporting QT and coding was suggested as a useful professional learning activity in many of the Orientation and Sharing Conferences of QTAL and by both the DET project managers and academic partners. It was reports from the 57 schools included in the fourth phase (2007-9) that provided the strongest direct evidence to draw conclusions concerning the three issues examined.

The QT framework is designed to present teachers with a way of examining their practices through a new lens. It does not insist on formulaic scripts or skills based prescriptions. Rather, it offers opportunities of holistically perceiving particular school contexts in ways that highlight possibilities and options that are appropriate for the particular contexts. The research that underpins the framework draws on learning theory enriched by concepts such as „authentic' and „productive' pedagogy (Gore 2001, Newmann, King and Young 2002, Ladwig 2007).

The three dimensions of the NSW QT model of pedagogy, Intellectual Quality, Quality Learning Environment and Significance have been identified because of their meaningfulness and importance to effective teacher pedagogy and enhanced student learning. These dimensions can be more precisely explained through their 18 Elements which have been specifically chosen and defined on the basis of:

- ◆ a sound and reliable research base linking the practices or qualities of the element to improved student learning outcomes; and,
- ◆ the practical capacity of each element to act as an indicator of the underlying dimension. (NSW DET, 2003: 9)

The framework is represented as capable of supporting teachers with pedagogy that has meaning in everyday classrooms, can be sustained organisationally by schools and has demonstrated effects on learning outcomes for students of all backgrounds and ability

levels. For every QTAL project teachers, under the guidance of team leaders, wrote final reports referring to dimensions and/or Elements or the whole QT framework. These reports provided the data that demonstrated teachers applied the pedagogy, attempted organizational change and planned to improve learning outcomes. Each report commented in some way about professional learning and changes in practice, however, for reasons already explained, it was impossible to verify the report claims made as to teachers' use of the QT, its impact on teacher practices or on student learning.

Methods

A mixed method using the strengths of quantitative and qualitative approaches was employed to investigate the information provided in the written reports from phase 2, 3 and 4 schools. Representations of the quantitative data in this report are provided in Fig. 1 and 1a, QT Element Choice Across Projects and Figs. 2 and 2a, QT Element Choice Across Literacy and Numeracy projects. Representations in qualitative data originate from content analysis of the texts of the written reports presenting the recurring themes. Figs 3 and 3a identify factors reported as enabling the use of QT as an agent for changed practices, Fig. 4, factors that were perceived to hinder or detract from the use of QT for change and finally Figs 5 and 5a present evidence of reported changes in teacher practice.

Findings

One way of gauging schools' involvement with the QT was to ascertain how the meta-language of the QT dimensions and Elements was used in the written reports. As all project schools were asked to identify in their reports the QT Elements that had been selected as the focus of their action learning this was judged to be one reasonable indicator of the use of QT in the QTAL projects. The incidence of each Element appearing in the written reports was determined and the results of this analysis are presented in Fig 1. Those reports recording „the Quality Teaching framework' without identifying specific Elements have been excluded from the data presented in Fig.1.

Unfortunately, although most schools from phases 2 and 3 identified several Elements, some named only one and some did not name any at all. In addition, there was no requirement for report writers to reframe the words of the Elements in their reports to demonstrate that any accurate and/or common understanding of the Elements had been reached. There were a small number of examples where terms were redefined in context but these were distinct in their rarity.

I tried to use Narrative in this lesson when I spoke about what it is like to be a Mahout in Thailand, out of work and desperate. They listened but had no response. Maybe it didn't work so well because I didn't combine my Narrative with Connectedness. Perhaps they couldn't empathise. (Taronga Zoo)

Further, no examples were required of the teams to provide evidence of the connection between the reported use of the metalanguage and teachers' practice. The reports treated the metalanguage as self-explanatory. This led to difficulties when trying to measure any evidence of change, particularly that derived from the use of the QT.

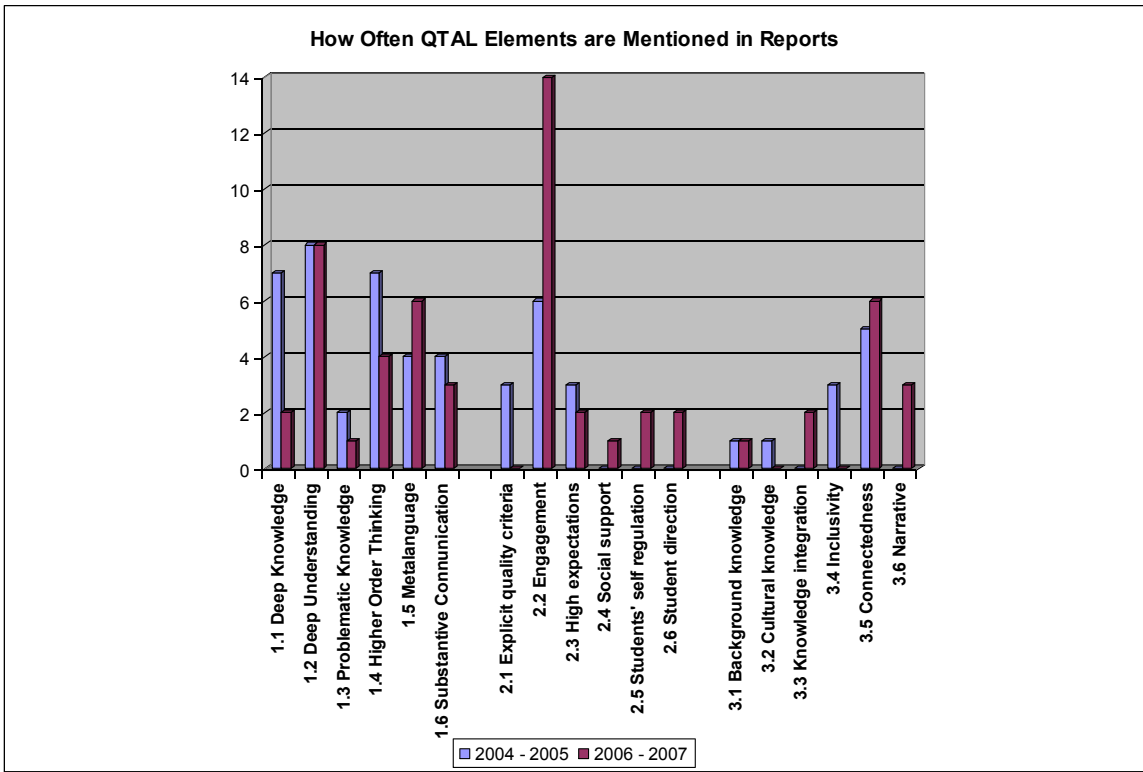


Figure 1: Frequency of Mention of QT Elements Across Projects, 2004-7

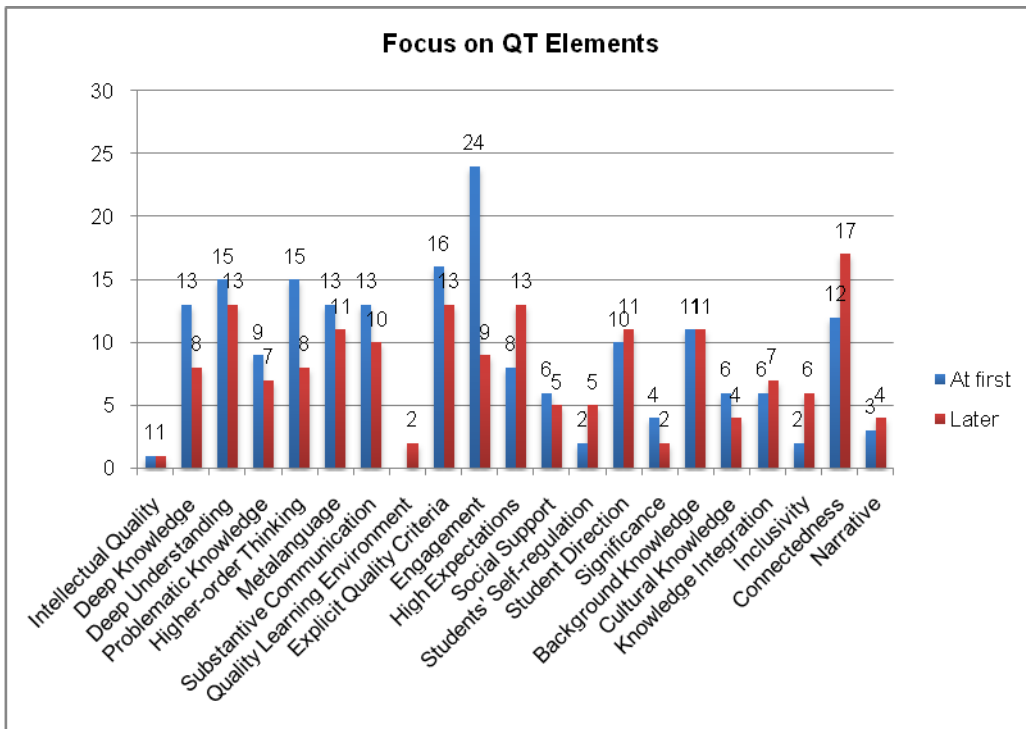


Figure 1a Frequency of mention of QT elements, 2008-09 data

There are several results displayed in Fig.1 and Fig 1a that should be noted.

First, there are increases in the 2007-9 reports in every one of the QT Elements and these increases are in the order of 200-400%. While such strong increases might indicate a significant increase for teachers in final phase schools to have engaged with the QT framework and use QT in their action learning, they may also be a result of an increased explicit emphasis on QT and its use in action learning in the reporting format for 2007-9 cohort schools. It is also important to note that the figures in Fig.1a include the total identification of QT Elements. There was, except for four Elements (High Expectations, Student Self Regulation, Inclusivity and Connectedness), an important general pattern of decrease in the identification of all Elements from school interim to final reports. This finding could be interpreted as the aspiration and intention was greater than its realization.

Second, as a general pattern it appears that Elements from Intellectual Quality are more frequently reported than those of Quality Learning Environment and, correspondingly, Elements from Quality Learning Environment are more frequently reported than those from Significance, except for phase 4 schools in which there is as high or higher an incidence of Elements from Quality Learning Environment, particularly Engagement, and Significance dimensions as there is for those in Intellectual Quality. The figures, problematic as they are, suggest most projects over the four-year period investigated were more strongly focussed on the Elements of Intellectual Quality than Quality Learning Environment and Elements from Significance were least identified with the exception of some Elements from these two latter dimensions from schools in phase 4.

This finding of high reported incidence of Elements from the Intellectual Quality dimension could be interpreted as a strong result for two reasons. First, the Elements from this dimension have been identified in the research that underpins the QT framework and its derived pedagogy as some of the most important in enhanced student learning: the high expectations and intellectual challenge of this dimension as well as the central role of language in powerful learning have been identified as central to increased student learning. Second, what this research also reveals is that the Elements of this dimension are those that are often missing from teachers' classroom practices. However, while this overall pattern of the identification of Elements from the Intellectual Quality dimension is pleasing if the data represented in Fig. 1 is examined more closely there are some concerns about this general pattern as indicated below.

One explanation for this general pattern of emphasis on the Elements of Intellectual Quality lies in the antecedent conditions in a number of the QTAL schools. Schools with low SES, indigenous and NESB students, particularly those who have been participants in innovations such as the Disadvantaged Schools Programme or Rural Schools Program, because of the ideologies of these programs and their demands on participating schools, may well have already begun to address, or believed they have addressed, a number of the key Elements of the dimensions, Quality Learning Environment and Significance.

As might have been expected with greater opportunity for professional learning about QT by the phase three teams, Fig. 1 does not show a pattern of increasing mention of

Elements in the reports from phase 2 to 3 schools. While there are some important exceptions to this, i.e., Engagement, Metalinguage, and Connectedness, there are just as many Elements that have decreased in frequency of mention from phase 2 to phase 3 reports (i.e., Deep Knowledge, Problematic Knowledge, Higher Order Thinking, Substantive Communication and High Expectations) and some that do not appear at all in phase 3 reports, Cultural Knowledge and Inclusivity (Significance dimension). While accepting the caveats already indicated for the reliability of this data, if Fig.1 is an accurate picture of the incidence of use of the QT Elements by action learning teams a concern would be that four of the six key Elements of the Intellectual Quality dimension, the dimension that arguably may be most important in enhanced student learning, were those that were indicated less in the phase 3 reports. A further concern is the lack of any mention of Explicit Quality Criteria in the phase 3 reports. This is one of the central Elements identified in the application of the QT to assessment practice that was the focus of QT supporting documents in 2005. Explicitness of assessment criteria is also one of the key practices identified in a number of evaluations of QT pedagogy as contributing to decreasing the gap in student learning outcomes between those students having high majority cultural capital and those with low majority cultural capital (indigenous, low SES and NESB students). Report data from fourth phase schools does demonstrate an increase in all Elements of the Intellectual Quality dimension and Explicit Quality Criteria.

Third, a second pattern that should be noted in Fig.1 is the absence of a number of Elements in the phase 2 reports and their appearance in the analysis of the phase three and four reports. These Elements include, Social Support, Student Self Regulation and Student Direction (Quality Learning Environment) and Knowledge Integration and Narrative (Significance dimension).

Fourth, while every Element was selected in the reports at some time, the most commonly selected Elements across the report data analysed included:

- Engagement, Deep Knowledge, Deep Understanding and Higher Order Thinking. A trend in increase in focus on Engagement was noted across the years from 2004-2005 to 2006-2007 and this increased even more for the fourth phase (2007-9) school reports.
- The mid range selected elements across the data analysed included: Metalinguage, Substantive Communication and Connectedness, although the latter Element increased in its frequency of mention by 500% in the fourth phase reports.
- The least commonly selected elements across the data analysed from the second and third phase schools included: Problematic Knowledge, Background Knowledge, Cultural Knowledge, High Expectations, Social Support, Student Self Regulation, Student Direction, Knowledge Integration, Explicit Quality Criteria, Narrative and Inclusivity. All of these latter Elements, particularly Background Knowledge, High Expectations, Student Direction and Explicit Quality Criteria increased their frequency of mention markedly in the 2007-9 reports.

A second quantitative analysis was completed on the data from the 2004-2005, 2006-2007 and 2007-9 reports. This cross-classification plots two of the KLA areas of the projects (Literacy & Numeracy) against Elements chosen. It should be noted that the numbers

involved are very small, particularly as the possible focus areas for QTAL projects increased. However, there is an interesting indication of contrast related to KLA focus matched to Element choice. Figure 2 shows Elements mentioned in reports focussed on Literacy for the 2004-5 and 2006-7 school cohorts. Figure 2a shows elements mentioned in the same phase two and three reports focussed on Numeracy. Note the spike for Engagement in Literacy-focused projects, although it should be noted that this spike was also present in Fig.1 across all projects. There are corresponding spikes for Higher Order Thinking and, although smaller, Connectedness in the graph for Numeracy-focused projects. Both of these spikes are not evident in Fig. 1 presenting the results from all of the reports.

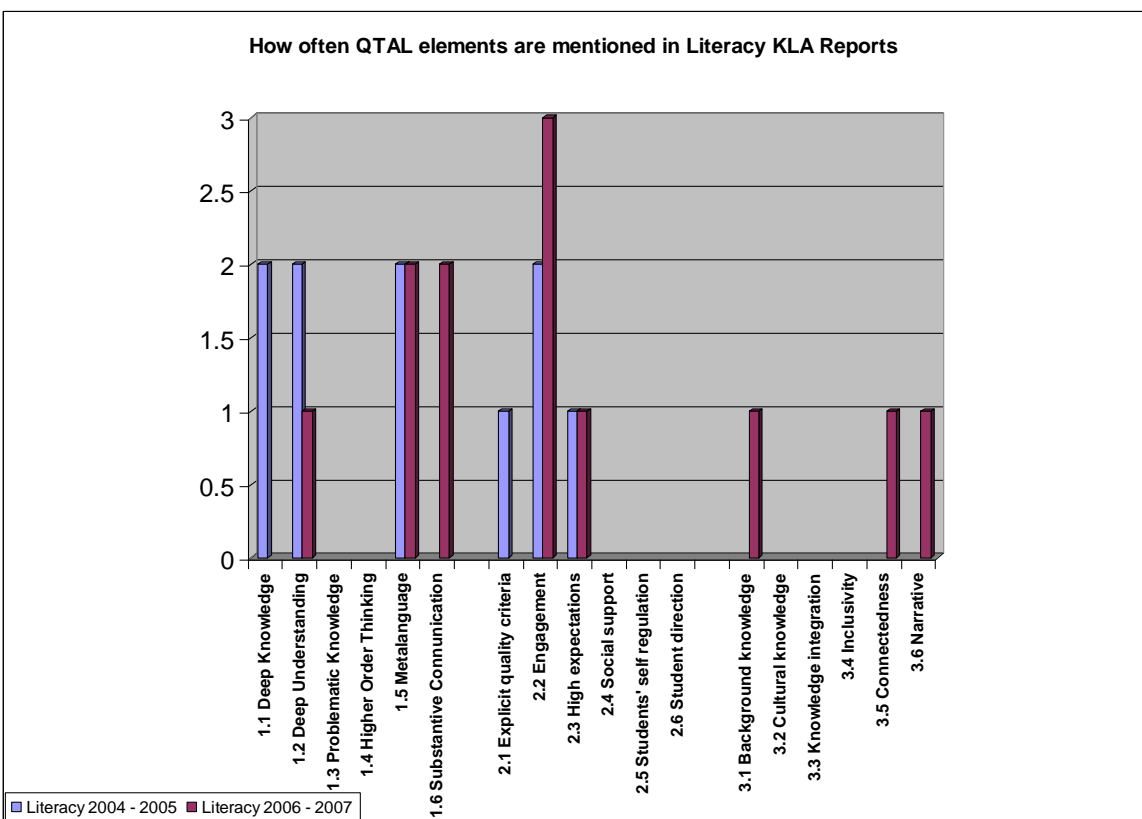


Figure 2: Element choice across literacy.

The reports of the fourth phase (2007-9) schools that focused projects on Literacy and Numeracy were also investigated. Findings from this analysis do not provide any strong evidence of difference in the selection of Elements for the two different focus areas. First, there were only 8 of the 57 projects that focused on Numeracy as compared to 19 that focused on Literacy. Further, four of the 8 included a focus on both Numeracy and Literacy and two more had a mathematical literacy focus. Thus any comparison between the two focus areas was not useful. What is apparent is the continuing strong reporting of the selection of Elements from the Intellectual Quality dimension, particularly Deep Understanding, Substantive Communication and Metalinguage. In addition, the two most frequently identified Elements were Engagement from the Quality Learning Environment dimension and Connectedness from the Significance

dimension. Explicit Quality Criteria was reported in all but two of the Literacy reports and 50% of those focused on Numeracy.

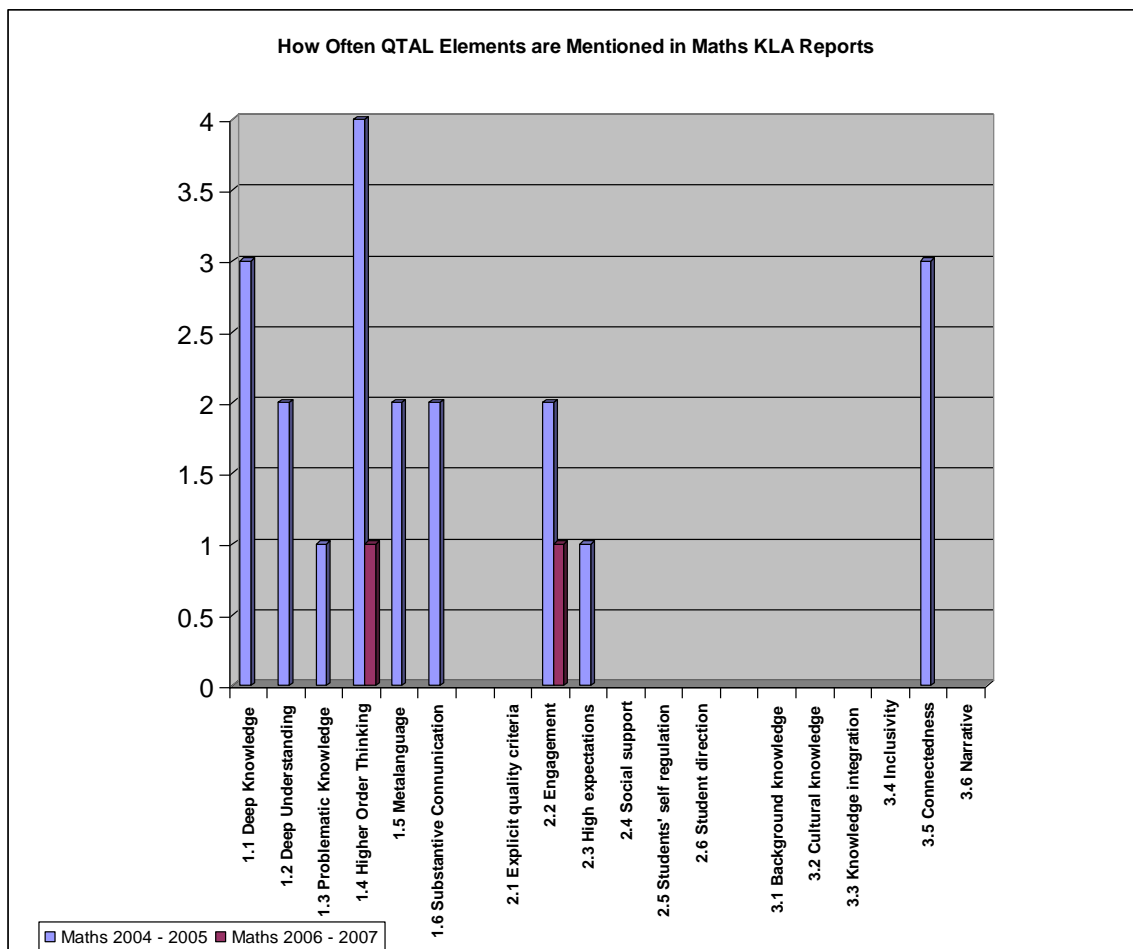


Figure 2a: Element choice across numeracy.

From the quantitative analyses the findings indicate that all Elements of the QT were reported by at least one of the projects over the four phases of QTAL and there was a significant increase in the identification of all Elements in the fourth phase (2007-9) reports as compared to the reports of previous QTAL cohort schools. Elements of Intellectual Quality were those reported most often although the numbers for the interim reports were higher than those in the final reports. There was some evidence, based on small numbers of projects of difference in Elements chosen for the focus areas of Literacy and Numeracy. This initial evidence for the use of the QT framework by QTAL teams was strengthened by the findings from the qualitative analysis.

Qualitative Content analysis of emerging themes

A content analysis was completed of the themes that emerged from amongst the formal requirements of the report. While schools in the first three phases were asked in their reports to comment on how action learning and the QTAL model supported change, they did not have to remark specifically on the role of the QT or on other conditions that made changes possible or

stymied good intentions. It was only schools in the final phase (2007-9) that were asked specifically to comment on the use and role of QT in changes related to pedagogy and student learning.

The semantic significance of the comments related to the QT in the reports from schools in the second and third phases was interpreted as high because these were the statements that were not elicited as a result of prompting through the use of leading questions about the use of the QT but were contributions that teachers felt compelled to share from their project experience. The emerging themes were grouped under the headings „enablers’ of change and „detractors’ from change. While it was not possible to accurately claim that there is clear evidence of the link between the QT and changes in teachers’ practice quality it is possible to make some inferences from the data presented in Fig.3 below.

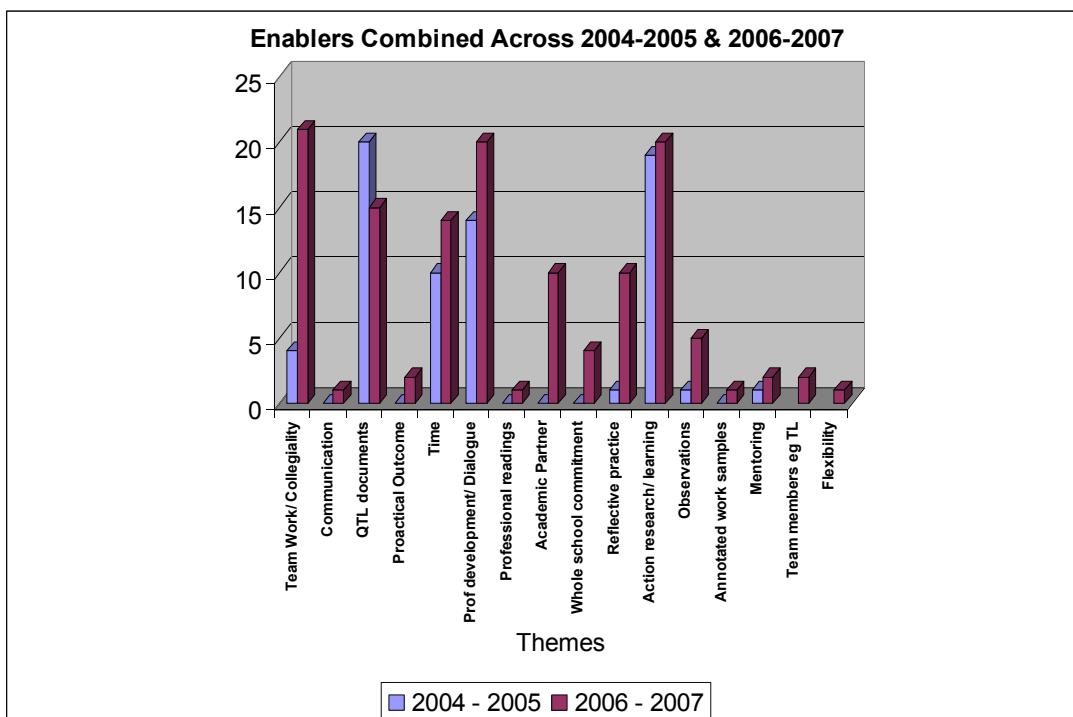


Figure 3: enablers emerging from teacher language

In summary the most significant enablers for both phases 2 and 3 schools identified were:

- QTAL documents
- collegial / collaborative / team work,
- professional dialogue / development,
- processes of action learning and research
- the purchase of time for release from teaching and for action learning.

Significant increases in the reports of the roles of academic partners and reflective processes for the 2006-7 cohort of schools should also be noted.

It is no surprise and supportive of the efficacy of the QTAL model of professional learning that the most important „enablers’ identified were those that were central elements of the QTAL program (QTAL documents, and time for collaborative action learning and professional dialogue). While there is no direct mention of the role of QT some evidence of its importance as an enabler, particularly in the 2006-7 schools, can be inferred from the findings related to „Observations’. At least some of these observations may well have been linked to a teacher attempting to implement some identified Elements of the QT.

Fig. 3a provides the results of the content analysis of the responses to the question that specifically addressed the use of QT from the reports from the 57 phase 4 (2007-9) schools.

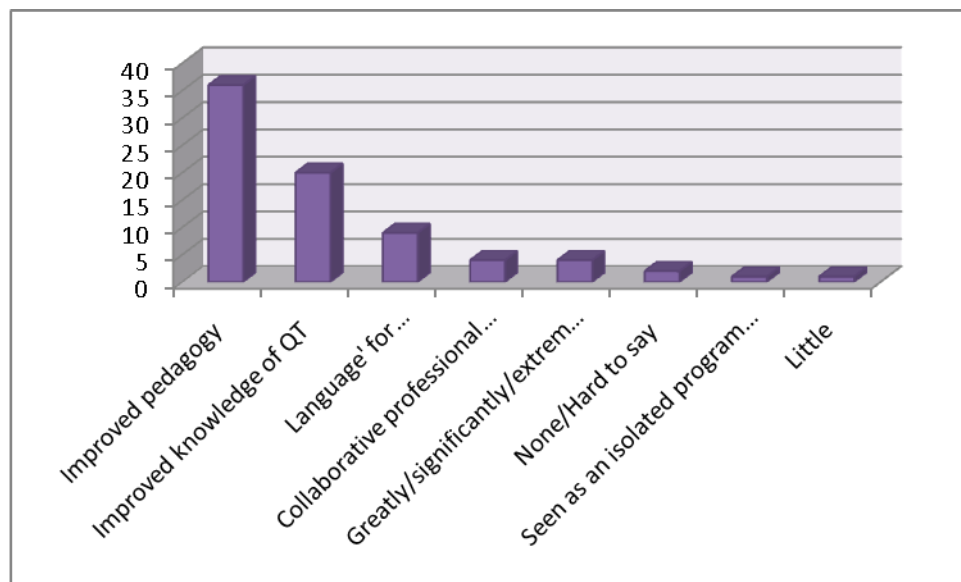


Figure 3: Success in Incorporating the Quality Teaching Model, 2007-2009

Fig. 3a reports on responses to the question „To what extent have you been successful in incorporating the QT model into classroom practice?’. Fig. 3a shows that only three of the 57 schools reported that they had not been successful. Most schools answered the question by referring to specific perceived impacts of the QT. As can be seen, while only 20 schools claimed an improved knowledge of QT 36 schools claimed that the use of QT had resulted in improved pedagogy. While the high frequency for „improved pedagogy’ is not surprising since this is the main aim of the QT the rest of this finding is somewhat puzzling since it might be assumed that using QT to improve classroom practice would depend on an improved knowledge of QT. Nine schools also reported that the use of the QT had resulted in the development of a shared language for thinking and talking about classroom practice. In summary these findings do suggest strongly that the QT was perceived to have an important place in school-based change in the phase 4 schools, however, the reports do not also provide evidence for the claims made in them. The data displayed in Fig.5b further reinforces the evidence for the role of the QT in school-based change in the phase 4 project schools.

Fig.4 below provides the results for the „detractors’ from potential school-based change that were identified from the reports of the 2004-5 and 2006-7 project schools. In summary the most frequently reported detractors emerging from the data analysed included:

- Lack of time
- Conflicting demands on time

Other mid range frequency themes include:

- unrealistic goal setting,
- resourcing issues especially with technology
- changes in the project team and
- access to academic partners.

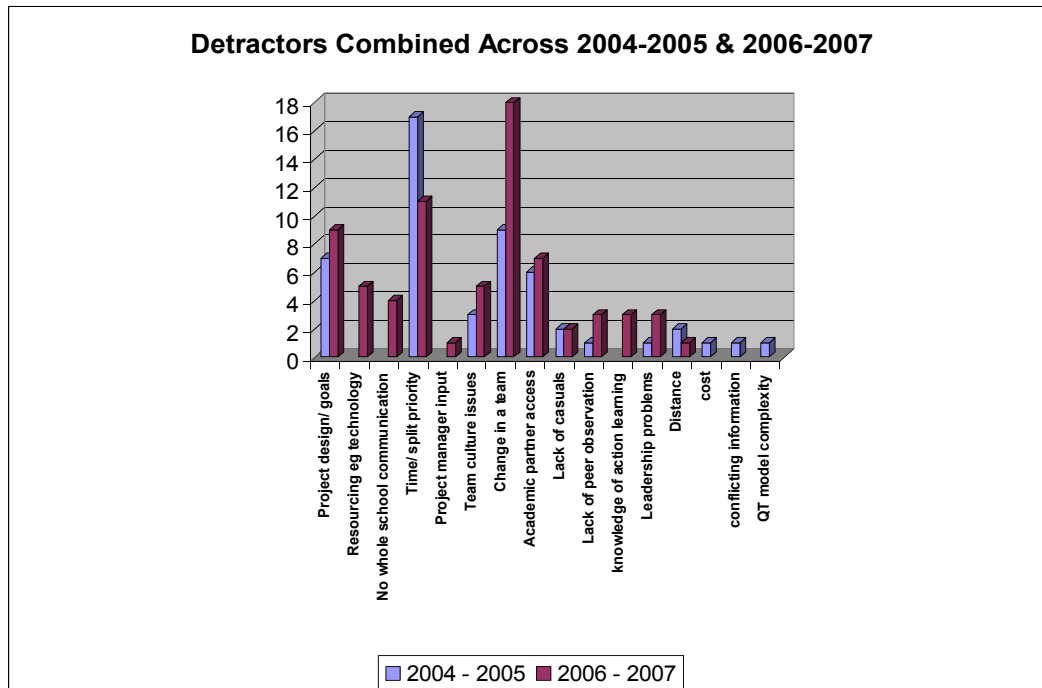


Figure 4: Detractors emerging from teacher language

Reported changes

The data set for the second content analysis was taken specifically from Section D of the reports and is grouped under the heading “Reported Change” in Fig.5. When the data was analysed for emergent themes a similar trend emerged as above. That is, the teachers spoke about what was significant to them but their comments were not often couched in terms of the quality teaching framework.

For example: *All high school participants have shared their knowledge with the whole staff through presentations at School Development Day, and many primary participants have conducted professional*

learning within their school communities. All team members are facilitating groups at our Combined School Development Day for seven school communities (over 200 participants). Most have never presented to the whole staff prior to their involvement in this project.

In summary the most frequently reported themes on reported change emerging from the data include:

- Reflection (remained constant across period)
- Increase in risk taking and confidence (rise in theme from 2004 to 2007)
- Observation and coding (NB: a new focus not mentioned in any other area of the report)
- Collegiality / team work
- Professional dialogue / development.

There are three results displayed in Fig.5 that provide strong inferential evidence of the role of QT. These relate to „observation/coding’, shared language’ and explicit teaching’. In relation to the first two mentioned it would be difficult to conceive how these results do not directly reflect the QT. The only proformas provided to teacher teams for coding lessons was that based on the QT. Similarly it was the Elements of the QT and their meaning that provided the basis for the development of a shared language to talk about teaching and learning. In regard to „explicit teaching’, this is one of the key principles of authentic and quality teaching leading to enhanced student learning. From this interpretation, then, there is quite strong evidence of the role of QT in school-based change, even when the schools were not asked to reply to a specific question dealing with the role of QT in their projects.

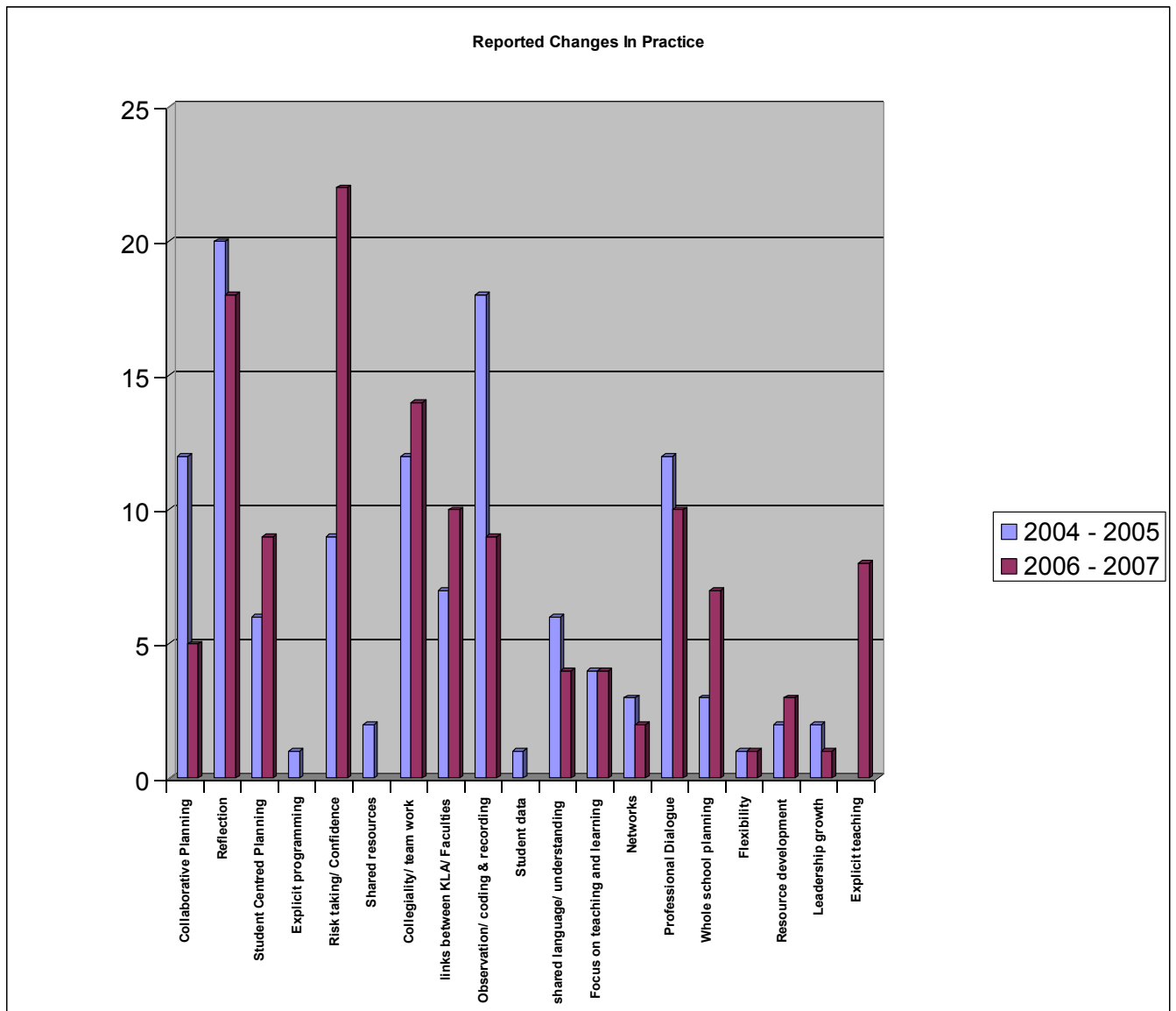


Figure 5: Reported change emerging from teacher language in Section D

Fig. 5b below displays results of the analysis of phase 4 (2007-9) school reports regarding the specific question related to the school-based changes that had occurred as a perceived result of the use of the QT. As might be expected, Fig 5b provides more specific data than Fig.5, however, this data provides further strong evidence of the role of the QT in reported change in the phase 4 schools.

As can be seen there are three main reported strategies for the use of QT that presumably has resulted in the improved pedagogy. These three are:

- using the QT Elements for planning in units, lessons and learning tasks
- engaging in professional dialogue and action learning using the QT
- selecting and focusing on specific Elements of the QT for planning and teaching

It is clear that the dimension of Significance featured strongly in nine of the schools with reports of the use of QT in developing „real life’ activities and learning tasks. This implies strongly the use of „connectedness’ (Significance- dimension) in the work of these schools and is one of the most important Elements related to increased student learning identified in the research supporting the QT and evaluations of the use and impact of QT in school classrooms. The result for „coding’ linked to „observing’ is further evidence to support the claim of inferred evidence made from the data in Fig. 3.

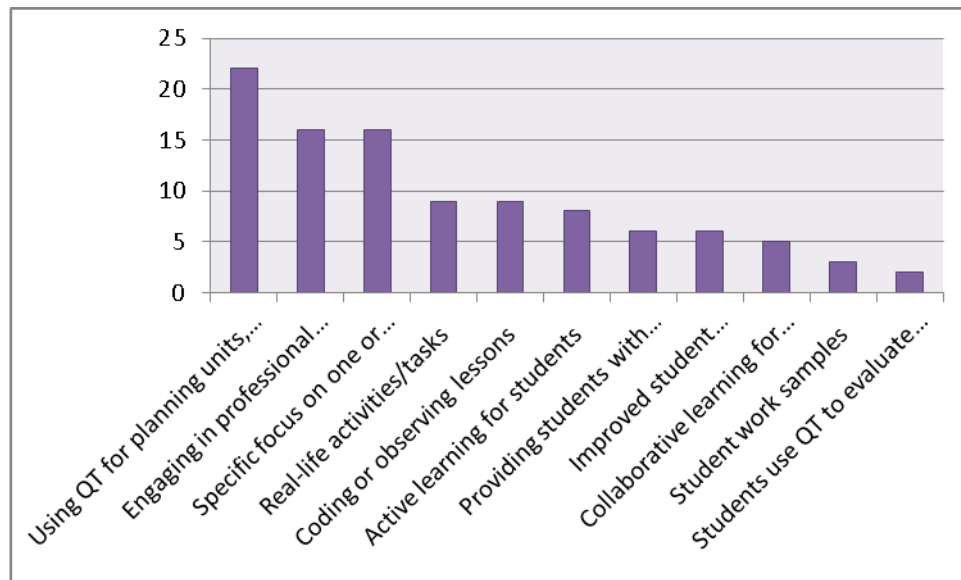


Figure 5b: Strategies Employing the Quality Teaching Model

In conclusion, if all of the evidence regarding the reported use of QT is combined then it suggests that the QT and the different ways it was employed in the action learning teams of the QTAL schools has played a significant role as a focus for teacher professional learning that has resulted in school-based change related to improved teacher pedagogy and teaching practice. The strongest evidence emerges for this claim from the reports of the 2007-9 schools. There is limited evidence of enhanced student learning. The only evidence supporting improved student learning had to be inferred from reports of small numbers of schools in the 2007-9 fourth phase. Of these 57 schools, 8 reported „active student learning’, 6 ‘providing students with explicit quality criteria’, 6 ‘improved student engagement’ and 5 „collaborative learning for students’. While all of these factors reflecting Elements of the QT could contribute to improved student learning, there is no actual evidence in the reports of the schools that this change has occurred.

CHAPTER 4

FACILITATING INQUIRY:

THE ROLES OF THE ACADEMIC PARTNER AND PROJECT MANAGER

PROFESSOR SUSAN GROUNDWATER AND DR. JENNI WAY

It may be argued that when engaged in inquiry teachers seek for and gain knowledge at two levels. The first of these is the knowledge that is gained through the inquiry itself, the second is learned at a meta-level and relates to the processes and procedures that have been applied in the conduct of the inquiry including data collection, analysis and interpretation. The task of the academic partner is to systematically assist in the latter, although also attending to the former. Ponte et al (2004) see that the facilitation role can act to both monitor the inquiry and be quite directive in supporting it.

The larger part of this chapter will examine the feedback that participating schools provided with respect to the work of the academic partner, but will also attend to the ways in which, in later reports, schools noted the salience of the work of the project managers.

In many ways we will suggest that school-based practitioners and academic partners have been engaged in co-inquiry (Yorks & Nicolaidis, 2007) in that each has an opportunity to learn from their engagement with the project. The school-based practitioners are gaining insight and understandings about their practice and about methods of inquiry, the academic partners are enabled to add to their own store of both professional knowledge and have a more reflexive appreciation of approaches to field-based research. While this study does not explicitly explore the perspectives of the academic partners it is clear that they too had much to gain; in other words professional knowledge is an asset that accrues to both parties and is not exclusively owned by one or the other.

The knowledge that has been gained about the roles and responsibilities of both the academic partners and the project managers, acting as inquiry facilitators, has been rich and complex. This study of project reports has also opened up a number of dilemmas and conundrums. It has not always been smooth sailing with a number of practical, ethical, philosophical and institutional challenges contributing to the mix. This claim is best illustrated by turning to the multiple roles, particularly those played by the academic partner and the ways in which they have contributed to the various projects with which they have been involved. Each of the roles, set out below, can be seen through a number of lenses that bring different and varying perspectives into play. The chapter will also consider those attributes that have been cited as contributing to the profile of the „outstanding’ academic partner and some of the causes of dissatisfaction where the relationship has not been a profitable one. The chapter will also pay specific attention to the role of project managers as facilitators of inquiry and will trace changes that have occurred in relation to all who have participated over the various program iterations. Finally the chapter will conclude with the significant learnings that have been produced.

In drawing together these components of the chapter it is important to understand the ways in which the members of the evaluation team, responsible for this section, collected and collated the data upon which the results are based.

Analysis Method

In *Section E Role of the academic partner* of the project reports, schools were asked to respond to three questions.

- Are you satisfied with the support you received from your academic partner?
Yes/No
- In what ways did your academic partner support your project?
- How could the academic partner's role have been more effective?

A content analysis (Babbie,2007) was applied to the written responses to these questions for all reports from schools in the first three phases of the QTAL program (2003-4;2004-5;2006-7). As a consequence of the positive form of the second question and the negative form of the third question the responses included statements about the roles academic partners *actually played*, while others described roles they *would have liked* the academic partner to fulfil. With the general question „What roles do academic partners play?’ in mind, the two researchers independently implemented a process of open coding to the text from about one-third of the project reports, allowing themes to emerge. Comparison of the results of this initial analysis led to the conceptualisation of categories and sub-categories that encompassed the range of activities attributed to academic partners. These categories and sub-categories then provided the framework for gaining a deeper understanding of the content of Section E of all the project reports.

The combination of independent and collaborative analysis by the researchers was important in terms of validity and reliability because the analysis went beyond attention to the *manifest content* (the immediately obvious surface content), to include *latent content* (underlying meaning) and therefore required the considered judgement of the researchers (Babbie,2007). For example, in searching the reports for references to the role of critical friend, the term „critical friend’ may appear explicitly (manifest content) a small number of times, yet the role might be described or alluded to (latent content) on many more occasions. It is therefore appropriate to report the results in a descriptive manner, enriched and illustrated by direct quotations, with emphasis placed on understanding the nature of the role rather than the frequency of its occurrence.

Roles of the Academic Partner

To avoid the impression that the schools had clearly defined and stable expectations for the role of the academic partner in their projects, it should also be noted that it was common for schools to report multiple or changing roles, and sometimes overlapping roles for their academic partners. In the vast majority of reports it was possible to identify at least one role, but in a small number of reports the roles were indistinguishable.

The many roles of the academic partner are best assembled under three broad categories: expertise; critical friend; and enabler. Each in turn has a number of sub-categories that will be discussed in some detail.

A. Expertise

Clearly, academic partners were appointed to projects on the basis of their expertise in one area or another. The majority of schools mentioned more than one type of expertise in their comments about their academic partner's contributions, with only a handful of schools making no specific comment about any form of expertise. The analysis process revealed four sub-categories of expertise: subject matter knowledge; the Quality Teaching Framework; action learning; and appropriate inquiry methods.

i) Subject Matter Knowledge

Subject matter knowledge refers to understanding “the central facts and concepts of the discipline, how these ideas are connected, and the processes used to establish new knowledge” (Borko, 2004: 5). The depth of teachers' specific subject matter (or content) knowledge has been established as a critical factor in determining the learning outcomes of their students (for example, Hill, Rowan & Ball, 2005), and so becomes a key component of professional development programmes. Often, schools draw on the rich subject matter knowledge of *experts* to guide the development of deeper knowledge in the teachers.

In this study, the sub-category of subject matter knowledge accounted for 35% of the „expertise' comments, and captured expertise in curriculum and content knowledge and associated pedagogies, but also includes specialist fields such as special needs children, remote communities or ICT. The notion of „updating' knowledge was communicated in comments such as “Provided stimulating mini forums around current issues and topics such as „New Literacies' and multimedia (Sans Souci Public School 2006 -2007).

Comments often included the value of the academic partner's role in linking theory (knowledge) to practice (teaching strategies or learning tasks) and so extend beyond content knowledge to include pedagogical content knowledge (Hill, Ball & Shilling, 2004). Some schools used the specific terms „theory' and „practice', as shown by the following quotations; “Relating theory to practice has been strength of the academic partner” (Marayong South Public School 2003-2004); “... a problem solving workshop that provided both theory and practical suggestions” (Bonnyrigg Heights Public School 2004-2005), and “Making links between theory and practice and scaffolding teachers' understandings to see the importance of these links and how one aspect of practice supports the other” (Balgowlah Heights Public School 2006-2007). Sandy Beach Public School (2003-2004) valued “Having a mathematics curriculum specialist who could provide additional insights into Syllabus topics and approaches to teaching and student learning”. Other schools explicitly linked the sharing of knowledge to the outcome of teaching resources:

Deep knowledge was shared with us in a way which enabled us to develop effective resources to teach number in a practical way (Kororo Public School 2004-2005).

Taught members how to use software such as photostory. In-serviced members about aspects of literacy. Provided examples of rich tasks and assisted team to create our own” (Cootamundra High School 2006-2007)

Some schools emphasised the importance of being able to facilitate connections between specific content, for example in literacy, and particular elements in the Quality Teaching framework (QT), as illustrated by the comment from Epping West (2004-2005), “We felt it could also have been of benefit if she had been more familiar with the QT elements and able to demonstrate strong links between critical literacy and QT elements”.

ii) Quality Teaching Framework

Many of the reports specified the academic partner’s expertise in the QT and guidance in developing an understanding of the components of the framework, as being valuable contributions. However, note how the following extracts indicate the teachers’ needs go beyond understanding the framework components in „theory”:

Our academic partner provided a further insight into the Quality Teaching document and its implications (Bonalbo Central 2003-2004)

...introducing team members to the Quality teaching model and working closely with to develop their understanding of the model and its application in practice (Casula Public School 2003-2004)

In-serviced the team on QTP dimensions and elements as well as provided ideas and resources which enabled the team to discuss processes and products and to decide on how best to implement the QTP Model at our school (Wyong High School 2004-2005)

Supporting teachers to address elements of the QT framework that they were struggling to include as part of their practice (Balgowlah Heights Public School 2006-2007)

Significantly, the comments make it clear that understanding what is meant by each of the elements in the framework is necessary but not sufficient. The implication is that teachers need support to connect specific subject matter knowledge to the elements through specific teaching strategies. Support from the academic partner was expected for utilising the QT in lesson planning, resource development and in selecting appropriate pedagogies. This suggests that understanding and facility in the principles of the QT is domain specific and that knowing what quality teaching „looks like’ in one subject area is not necessary helpful for knowing what it looks like in another subject area.

iii) Action learning

The processes driving the project were a focus for schools not experienced in the action learning approach to professional development and change in practice, with the value of receiving support mentioned in about 20% of the reports. Academic partners appeared to address the teachers' action-learning needs in a range of ways, such as the provision of readings or workshops:

*Supplied pre-readings and background literature regarding action learning
(Ambarvale High School 2004-2005)*

*...the major input from him was to assist our team gain a greater understanding of the complexity of the action learning project as a facilitator of change in our school
....providing us with relevant findings from recent literature about successful school improvement strategies, helping us gain a greater understanding of our roles as change facilitators and the nature of our interventions (Scone Public School 2004-2005);*

...professional learning he conducted on action learning (2006-2007).

....contributed with ideas to promote further professional learning in order to improve our action research project He provided all teachers with a model of affective sustainable professional development and guided us through this process. (Rand Public School 2006-2007).

iv) Inquiry methods

Some academic partners supported the project teams in overall inquiry approaches, or more often, with the use of particular techniques for gathering data, monitoring progress, reflecting and evaluating. These inquiry methods influenced a variety of aspects of the project such as subsequent lesson planning, refining of processes, monitoring change and providing evidence for reports. The following quotations illustrate the variety of evidence-gathering methods employed and the applications of the resulting information.

*Utilise the academic mentor more in the collection of data and reflection on this
(Bennett Road Public School 2003-2004)*

... has conducted focus groups and has developed professional discussion (Sydney Secondary College 2003-2004)

He has greatly assisted in the collection and interpretation of quantitative and qualitative data through lesson observation and coding (Kyogle High School 2003-2004)

....development of questionnaire to measure team member prior knowledge to and subsequent engagement with action learning processes..... coded program and

student resources as measured by Quality Teaching dimensions (Ambarvale High School 2004-2005)

.... pair and individual interviews exploring attitudes and understandings of the QTP model, and the review of draft teaching & learning activities and units of work based on the QTP model. supply of self-reflective questions & principles to encourage and help structure professional development (Centaur Public School 2004-2005)

His knowledge of 'how' to analyse the different phases of the lesson was valuable (Floraville Public School 2006-2007)

B. Mentor and Critical Friend

Important as the role of the academic partner as „expert’ in all of its various guises has been, it was also seen by the schools that the academic partner could offer other forms of support in assisting them in facing the challenges of undertaking new different and often difficult tasks and responsibilities. In their discussion of Professional Learning Communities Stoll *et al* suggest “There are strong arguments that schools cannot ‚go it alone’ and need connections with outside agencies” (Stoll *et al* 2006:240) particularly as mentors and critical friends. A number of schools characterized the academic partner as mentor and critical friend. In the case of the former the term appeared to be used as a synonym for ‚partner’ and was little elaborated; whereas in the case of the latter, the role of ‚critical friend’ was referred to in much more specific contexts. The term was used on nine occasions and inferred in several others. But what are the attributes of the ‚critical friend’ who can both act in the nurturing, supportive role that is expected from the friend and also have an appraising, challenging, even confronting disposition? There is a tension here. MacBeath and Jardine (1998:41) see it as “a successful marrying of unconditional support and unconditional critique”.

For the team at Pittwater High School (2003-2004) a critical friend was one “who can assist with evaluating the worth being done”. It is sometimes difficult when participants are close to a project to have the capacity to detach themselves from the business of their activity to determine how worthwhile their efforts have been. As it was observed in a very different setting, “having a ‚critical friend’ external to the school context who works as a member of the team is vital to the success of action learning” Campbelltown PAHS (2006 -2007). Or in another case it was said, “It has been valuable to the project to have the support of ‚critical friends’. Our academic partners have been able to remain objective in their observations of our work within the project and as a result of their input they provide reassurance that we are progressing in the right professional direction. Wattle Flat Public School (2005 – 2006).

The academic partners in a number of cases were readily available and provided, “clear communication and supportive guidance in a friendly and professional learning environment” Speers Point Public School (2003 – 2004). Being the ‚expert’ as discussed earlier required not only expertise in being au fait with practices associated with the Quality Teaching Framework and Action Learning based upon inquiry; but also having a

deep and profound understanding of the ways in which schools, as educational, social, and political enterprises operate. Furthermore, the role can assist the project's participants in becoming reflective about their work, "(the) critical friend role (entails) challenging critical reflection and prompting deeper engagement with the quality teaching framework and its relationship to teaching practice" Murwillimbah High School (2004 – 2005). The suggestion here is that the critical friend assists in developing a context that not only ensures greater familiarity with the QT, but also enables the project participants to engage in a critical reflection of both its thrust and content.

However, as we have noted, not everyone was satisfied with the ways in which their academic partners offered them the kind of support expected of a mentor or critical friend. "We would have liked to have been able to work more closely with our academic partner. We were anticipating more of a critical friend rather than another member of the Project Team. Someone who took a more active role and guided our reflections and plans would have been invaluable." Bangor Public School (2003 – 2004). Causes of dissatisfaction are more fully explored towards the end of this chapter.

C. Academic Partner as Enabler

From the above discussion it is evident that the academic partner plays multiple roles in the support of the schools undertaking QTAL projects. All of these roles intersect and interact with one another.

We have chosen the term „enabler’ to signal the ways in which the academic partner can motivate, steer, and facilitate projects as well as provide additional resources that are not normally available to busy teachers in schools. In the section discussing the attributes of the outstanding academic partner we discuss a number of examples of ways in which partners assisted in schools in being strategic in terms of time management, communicating and knowledge building that bridged theory and practice.

i) Facilitator

While several schools referred to the academic partner operating as a facilitator, generally in the context of expertise, the elaboration of this role is best exemplified in the report of Hurstville Public School (2003 – 2004):

The on-going and predictable weekly presence of the academic partner has facilitated the learning in several ways.

- 1. kept the project on track*
- 2. helped with the adaptation of desired outcomes*
- 3. acted as a ‘critical friend’ and been able to identify more readily issues and concerns of teachers*
- 4. run professional learning experiences such as the powerpoint learning*
- 5. be available for teacher support, questions.*

ii) Resources provider

Access to resources was important to the participating schools. The following extended quotation gives voice to the enhancement lent to projects by academic partners able and willing to „go the extra mile’.

All schools appreciated the work done by Dr M. in Term 4 2004 developing Measurement Resource Guidelines for each school which they have been able to use to purchase appropriate resources for the teaching of measurement. Resources requested by the Project Team were supplied to the participating schools. The Project Team requested that there be clear lessons that reflected the identified Quality Teaching elements (student engagement, deep understanding and connectedness) that were to be considered by teachers when giving the lessons during the action learning cycles. These were provided by Dr M. She also designed the assessment tasks that were given to students to assess their measurement knowledge and provided evaluative information upon which further teaching activities could be planned using the framework. Meadowbank Public School (2004 – 2005)

Not only did academic partners provide resources they also encouraged schools to develop their own materials. “B. got our Project off to a brilliant start with motivating ideas based on current theories and practices. His deep knowledge was shared with us in a way which enabled us to develop effective resources to teach number in a practical way. His ongoing support has been invaluable and Stage specific. He has made us more professionally discerning about the quality of information we access.” Korora Public School (2004 – 2005).

A number of the many references to resources (15 in all) specified their provision in key learning areas and specific practices such as literacy development, numeracy, science and boys’ education. For example, Darcy Road Public School (2006 – 2007) reported, “He also helped with some team teaching/demonstration science lessons where he provided resources the school did not have access to (e.g. microscopes) as well as a wealth of knowledge”. As well, web based resources were nominated, “(the partner) introduced staff to the amazing resources, options and programs available on the web” Richmond River High School (2006 – 2007).

Attributes of the Outstanding Academic Partner

While the majority of academic partners satisfied these many roles and responsibilities, some contributed in exceptional ways that can assist us in learning how best to advise those in the future charged with developing programs of the magnitude of the AGQTP and the NSW QTAL programs.

We took the outstanding academic partner to be one for whom the school expressed a high level of satisfaction. For example, St John’s Park High School (2006 – 2007) claimed their academic partner was outstanding and supported this contention by outlining the extent to which professional learning was catered for, leading by example, being sensitive to the concerns and reservations of participants and a deep knowledge of the ways in which schools operate, “ultimately, N. helped to successfully steer the team through uncharted waters”. Similarly, the academic partner to Colyton High School (2006 – 2007) was described as “an outstanding man with an expert skill set and amazing

knowledge, we could not have achieved what we did without his help, encouragement, persistence and expert knowledge”.

While in most of the selected cases we consulted item 6 of the report, “If you have the opportunity to work with an academic partner again to what extent would you do things differently?” noting those instances where schools would not change any of the practices, we also found some schools who had only positive things to say about their partner but felt that they themselves needed to modify the ways in which the partner’s capabilities were utilised to the best advantage of the school. As an example Banksmeadow Public School (2003 – 2004) described their academic partner as a ‘godsend’ but believed that they would have benefited by spending more time with her. Balgowlah Heights Public School (2005 – 2006) similarly indicated that they would have like more time with their academic partner having listed the following ways in which the academic partner supported their project:

- Listening to initial teacher discussions in a way that valued teacher knowledge.
- Provision of professional reading.
- Ideas for picture books to explore with students.
- Encouragement of and a positive attitude towards participants.
- Asking questions of teachers to stretch their thinking.
- Making links between theory and practice and scaffolding teachers’ understandings to see the importance of these links and how one aspect of practice supports the other.
- Supporting teachers to address elements of the QT framework that they were struggling to include as part of their practice.

Broderick Gillawarna School (SSP) (2003 – 2004) indicated that they were VERY satisfied with the support that they received from the academic partner who had a well tuned understanding not only of the QT model, but also of students with high support needs. The academic partner was able to present training and development activities for the whole staff and made sound and cogent links between theory and practice. A similar level of satisfaction was noted by Kororo Public School (2004 – 2005) who stated that their academic partner provided them with a good headstart.

In a very different context Rose Bay Secondary College (2003 – 2004) described their academic partner as “an angel” who was readily available and active in overcoming (unnamed) obstacles in the school community.

A notable indicator was provided by Sandy Beach Public School (2003 – 2004) who valued not only the deep subject matter knowledge of the academic partner, but also the fact that he was not espousing any particular agenda related to either the dynamics of the school or the policies of the DET.

An indication of satisfaction was where the school had an interest in continuing the relationship with the academic partner beyond the life of the funded project (c.f. Epping Public School, Hurstville Public School, Parramatta Public School 2003 – 2004 Gynea

Technology High School, Coffs Harbour Public School 2006 - 2007). Such support was particularly noted by Marulan Public School (2006 – 2007):

We found B. to be very supportive and he has provided us with a lot of information. He gave demonstration lessons on the processes of writing and demonstrated some very useful strategies. He has also:-

- *Developed a sound understanding of our small school context;*
- *Listened and taken on board our concerns in regard to the teaching of writing, bearing in mind the demands of the Basic Skills Testing program;*
- *Helped us develop a deeper understanding and the importance of the processes of writing;*
- *Provided us with ideas to integrate daily writing to become an integral part of our Literacy Program; and*
- *Shared with us “little” ideas which have impacted hugely on the children’s performance in and the perception of writing.*

We are deeply grateful that B has continued to keep working with us. This is giving us the opportunity to review what we have learnt so far and how we can better utilise his ideas which in return will lead to the development of our own strategies and ideas.

These sentiments were echoed by Numeralla Public School (2006 – 2007) and again by Deniliquin South Public School (2004 – 2005) who also indicated that they would continue to maintain contact with their academic partner. Looking forward to ongoing support also raised some issues for schools regarding the extent to which an academic partner could be consulted. Sans Souci Public School (2006 – 2007) noted an emphatic “Yes” in terms of satisfaction and nominated *inter alia* the following reasons: support, the provision of demonstration lessons, access to current research, providing forums around current issues, deep knowledge of text types and attendance at relevant meetings. But also reflected:

Our academic partner’s role was very effective and she continually offered her support even after her time was up. However, I felt we needed some type of guidance as to what amount of time we could expect approximately from them for the money they were given. This would have helped in planning as we did not want to exploit them or on the hand, not get our values worth!

In some cases the academic partner was able to provide ongoing support by linking the school, or in this case Zoo Education (2006 – 2007) to a wider network:

S. has kindly offered us her services beyond her requirements as an Academic Partner. She has:

- *Compiled a summary report based on her observations of our learning and experiences during the project.*

- *Allowed us an 'honorary' day to provide assistance with the planning of the teacher focus group.*
- *Offered her advice on several occasions via email and phone.*
- *Accepted the Zoo Education Team as a member of the Coalition of Knowledge Building Schools (an long standing hybrid network of schools across sectors).*

Networking was also a challenge for those academic partners operating across several schools. The academic partner working with Merrylands High School (2004 – 2005) who was involved in middle years project with a number of primary schools and who was described as “exemplary” made an outstanding contribution in the design and implementation of the project, best summed up in the final paragraph of an extended description of his role:

Lastly, W. has acted as a critical friend throughout the project. He has supported the project coordinator and team members, providing feedback and suggestions for improvement throughout the process. He has developed a sense of shared ownership within the team and been guided by the needs of the team members. He has been supportive and encouraging at every step, and 'raised the bar' in every discussion. W.'s expertise, commitment and support have been invaluable.

These brief extracts from the many AGQTP QTAL projects over three iterations provide important evidence of the value that is offered by committed and experienced academic partners in providing sound advice, modelling good practice and supporting the professional agency of practitioners in the participating schools.

While this section demonstrates the positive roles played by outstanding academic partners there were examples of dissatisfaction that require attention.

Causes of Dissatisfaction with Academic Partners

Only ten (9%) of the school reports examined noted dissatisfaction with the work of the academic partner and three of those recorded only partial dissatisfaction. Although the concerns were to some extent unique to each school, three general types of reasons for dissatisfaction were identified:

- a) a mismatch of the partner's expertise and the project's needs,
- b) lack of availability of the partner and therefore insufficient time spent in the school, and
- c) the need to clarify or negotiate the partner's role in the project.

Several schools stated that they would have preferred the academic to take a more „hands-on' role, actively participating in classroom activities and teaching demonstrations.

Bangor Public School (2003-2004) words indicate a mismatch between some aspects of the academic partner's expertise and the project team's needs:

We feel there was very little strength to this aspect of the project. While our academic partner's mathematical skill is not in question, his knowledge of current teaching practice, particularly in primary schools was not sufficient to be of any real assistance to the teachers in the project who were all, in the main, very experienced practitioners. While our academic partner was congenial, willing to discuss aspects of the project with teachers and attended each component that was required we don't feel we gained much from our association. We would have liked to have been able to work more closely with our academic partner. We were anticipating more of a critical friend rather than another member of the Project Team. Someone who took a more active role and guided our reflections and plans would have been invaluable.

Beacon Hill Public School (2004-2005) declared partial satisfaction but listed quite specific actions that would make the role more effective:

- *Greater clarity of role*
- *Doing demonstration lessons with a class*
- *Engaging teachers in smaller groups*
- *Providing more resources*
- *Greater lines of communication and accessibility*
- *Give more hands-on activities*
- *Provide only one partner and double the time – greater value for money*

Although Cambewarra Public School (2004-2005) noted a range of useful contributions made by the academic partner they expressed overall dissatisfaction, saying, “The academic partner’s role could have been more hands on – like we use Department Consultants. He could have modelled teaching elements in the classroom to show us what the elements look like. The role could have been more effective if there was more communication”.

The concerns expressed by Great Lakes Secondary College (2004 -2005) centre around the lack of availability of the academic partner, who was also a late replacement:

The role of the academic partner has not been easy to manage. Action learning requires constant reflection and communication but, with the late start to our partnership due to a change in partner and the travelling distance between us, we didn't get together often enough to be able to align our purposes nor respond to changing needs as they naturally must emerge in the action process.....We did discuss her role and brief but there have been lengthy delays in contacting us and in essence, her role has not positively influenced or affected our project. The partner needs to be in the school more regularly.

Several of the schools, on reflection, acknowledged that the particular circumstances of their project or location made the role of academic partners problematic:

The role could have been more effective for us if he had been more connected to the school and the changes that were happening. The distance from the school was a factor as was his work load in other projects. Distance made it difficult but timing of any meetings and interactions and fitting schedules was an issue. The only

solution would have been to use someone closer.....A different model for support was probably more appropriate for us given our past experience in projects such as this. We tend to be a self-managing and supportive organization that does not require more than minimal support. In this case we should have negotiated more clearly the role of the academic partner, more clearly defining what we needed from him and when it was required. (Corowa High School 2004-2005)

Wattle Flat Cluster (2006-2007) reported quite a productive relationship with its team of academic partners, but offered suggestions for further improvement. Unusually, the academic partners seem to have been consulted for their point of view:

Academic mentors and participants require more information on the expectations of their role with examples on best 'supportive' practice.Academic mentors also may require a background briefing or training by Department of Education and Training staff on topics such as, 'COG's' and 'NSW Model of Quality Teaching' to better understand the full implications of these innovations in NSW schools.....From our academic mentors perspective, if they were doing a project of this nature again (ie a group of schools rather than one) they suggest that particular schools be allocated to each academic partner quite early in the project so that the relationship between the school and the partner can be well developed by the time the school visits begin...

It is clear, on balance, that the work of the academic partners contributed significantly to the ways in which the various projects could be enacted. Much also depended upon the role of the project managers who provided the necessary pressure and support.

Roles of the Project Manager

Reports from the first phase projects (2003-4) did not make reference to the role of the project manager; however, of the almost one hundred reports from the 2004 – 2005 and 2006 – 2007 projects only one registered dissatisfaction with the contribution made by the two project managers who had to spread themselves across the state. Below is a list of the forms of support that were provided:

- Coordination on a state-wide basis and fitting schools into the larger picture.
- Providing a broad perspective about other projects.
- Providing feedback during and after sharing conferences.
- Assistance in setting projects up.
- Availability by phone and email.
- Regular attendance at progress meetings (at some but not all schools).
- Coordinating the time line and keeping on task.
- Providing objective criticism.
- Developing reflection.
- Respecting autonomy.
- Using the consultancy protocol.
- Being aware of critical moments in the project's development.
- Coordinating with the academic partner.
- Emphasising professionalism.

Two of many examples have been selected to illustrate the effectiveness of the project managers:

- 1) *Q. 'IN WHAT WAYS DID THE PROJECT MANAGER SUPPORT YOUR PROJECT?'*
 - *Visiting the school and discussing the project.*
 - *Providing suggestions for resources and activities that could be undertaken for teacher Professional Development.*
 - *Providing quick feedback when requested.*
 - *Providing resources needed such as note proformas.*
 - *Being approachable and available when questions were asked.*
 - *Giving information, keeping us up to date through emails etc.*
 - *Being a non-intimidating manager, keeping distance and allowing us to go at our own pace.*
 - *Giving advice on how to keep things going without treading on toes.*
 - *Providing great experiences for everyone who attended the sharing conference. (Lithgow PS, 2004 – 2005)*

- 2) *The project manager has been very supportive of our project. He has supplied professional readings, direction and advice. He has also provided valuable feedback on every resource we sent him.*

The conferences were also a fantastic source of support. They 'modeled the model' with regards to teacher professional learning, allowing participants to engage in sustained dialogue about teaching and learning and critically reflect on their own work. They provided participants with relevant input from academics and through the provision of professional reading. They also catered to a variety of learning needs through varied learning strategies. Having the opportunity to hear from other teams, past and present, about what they were doing was also interesting.

Having conferences at the beginning and towards the end of the project was fantastic. It allowed teams to establish a thorough understanding of the process early on, and then re-focus if necessary two terms later. (Merrylands HS 2004 – 2005)

In discussing ways in which the role changed and became more effective it is worth considering the words of Floraville PS (2006 – 2007):

In our journey, in the first two phases (2006), team members were not adequately informed about the concept of 'action learning' and the possibilities of 'best practice' for this project. It seemed as if the project manager was communicating with the Team Leader, but the positive messages about the program were not necessarily getting through to the team members. This problem did seem to colour the effectiveness of this role but this has been turned around completely as the issue was confronted by the project manager and he and the new team work well together. We have found that the role of the project manager is vital in guiding

the direction of the program and that it is important for them to spend time in the school, to 'feel' the context of the school and the mood of the staff as some shifts require more energy than others.

Difficulties that were encountered, and they were few, were mostly related to those schools whose distance and remoteness made it a challenge for encounters to be regular and sustained.

We feel the project managers needed to be more visible to the team to give the project credibility. This would have ensured that all team players understood the enormity and importance of being involved in an AGQTP project and hence remain accountable. Not saying here that we were not accountable, but your presence would have helped project leaders to justify some to the actions from the plan and would have better helped the group understand the importance of visits to other schools to share quality teaching best practice (this was not really achieved). (Wattle Flat Cluster 2006 – 2007)

With schools now having increasing access to video-conferencing it is to be hoped that some of these matters will be resolved.

Looking to the Future

This chapter has systematically explored the feedback that participating schools provided in relation to the work of the academic partners and project managers in supporting and sustaining action learning projects. In this final section we wish to look to the future and suggest some of the learnings that have resulted from our analysis. Before detailing these we also would like to indicate what might be called a “silence” in the discussion; that is the absence of the direct voice of those who facilitated the enactment of the projects. Neither academic partners, nor project managers were provided with an opportunity to outline and elaborate their experiences, this we believe should be redressed in future projects. We now turn to specific learnings and the accompanying recommendations.

Learnings and recommendations:

1. Much of what has been learned about the facilitation roles has been formed in hindsight. We recommend that in future projects of this kind the roles are made explicit at the first sharing conference and time made available for an open forum with respect to the roles and the ways in which they may be played out. We note that this was done for phases two, three and four schools and academic partners.
2. We understood that schools that were more remote and isolated were less accessible and therefore were not able to receive the same quality of advice. We recommend that video conferencing be built in as a communication tool for such schools. This may require the assistance of regional offices.
3. We believe that the wide distribution of the academic partners across universities made it unlikely that they would be able to learn effectively from one another. We recommend that during the life of a series of projects a regular cluster

teleconference be held with project managers, enabling emerging issues to be quickly uncovered and strategies collegially developed.

4. Finally we perceive that the roles have not been static. They have developed and become richer over time. We recommend that, should there be follow up case studies, then one should be devoted to collecting systematic evidence of the ways in which the roles have changed.

Altogether, it is clear that the use of academic partners and project managers in facilitating inquiry to enhance teacher professional learning has been a powerful and worthwhile strategy.

CHAPTER 5

THE INTEGRATION OF ICT INTO TEACHING AND LEARNING

DR ALYSON SIMPSON & DR JENNI WAY

This chapter reports on the investigation of Section D of school reports regarding the use of ICT in QTAL projects in the final phase of the project (2007-2009). After providing the background to this issue because of changes in project specifications, the chapter reports on the particular ICT resources employed by project schools, the purposes for which these resources were employed and changes in teacher and student learning that were attributed to the use of ICT. The chapter concludes by identifying some of the key factors in the use of ICT by the project schools.

The role of ICT in supporting QTAL

The overall aim of the QTAL process was to support teacher professional development. Chapter one of this report raised the topic of how professional learning is linked to organisational pedagogy. One of the stated goals of the AGQTP guidelines by DEST (2007) was to encourage professional learning that would provide learning opportunities that are meaningful and professionally empowering. As part of the move to encourage the integration of ICT into schools, a change in organizational pedagogy was stimulated through the QTAL projects when technology was added in 2008-2009. The reports for these projects have been analysed as part of the evaluation study. The findings of this analysis suggest that one major benefit from the use of technology was cultural change and increased professional communication, which suggests the goal was met in part.

Background

The list of principles that guided the QTAL project design included the following requirements:

- a. Consider approaches that demonstrate the innovative use of ICT to support teaching and learning and whole school reform.*
- b. Where appropriate, utilise online networking tools (eg discussion groups, extranets etc) to support collaborative activities, particularly for rural/remote teachers.*

The impetus was signalled to drive a change agenda that supported collaborative practices. These principles clearly influenced the direction some schools took with their projects. The findings below discuss the levels of success that can be measured from the reported changes in practice.

Whilst there was positive influence on professional learning for some schools with the addition of ICT, there were also challenges for others. The addition of technology led to a change of focus for schools, as they were now required to blend the use of ICT into their projects. As most schools were already progressing with their use of ICT, this was a logical pairing, however for a few, it was seen as an imposition. The authors note that a small proportion of schools did not engage with ICT despite a directive to the phase four (2007-9) project schools from the NSW Department of Education & Training (DET)

personnel responsible for managing the QTAL program. In contrast the largest proportion of schools did include ICT in their projects and reported some important findings that go beyond support for literacy or numeracy or any curriculum area.

Because of the change to project requirements in Section D „Professional learning and changes in practice’ a new question was inserted into the 2008 and 2009 QTAL report formats that focussed on the introduction of technology. Section D Question 3 of these two QTAL reports read:

How have you integrated ICT into teaching and learning?

- a) *What ICT professional learning has occurred?*
- b) *What has been the impact of ICT professional learning on team members? How have you measured this impact?*
- c) *How has this professional learning been translated into classroom practice? (e.g. Quality teaching strategies.)*

A fourth question asked teachers to “list resources that have supported you in integrating ICT into teaching and learning”.

Methods

The data analysis of the reports from the 56 fourth phase project schools was guided by three themes of enquiry; the type of technology-related resources utilised, the purpose and motivation for using technology in the project, and the impact on both staff and students in terms of learning. The themes arose from the researchers’ concern to connect planning to outcomes in a manner that gave due prominence to the role of ICT. The organization of findings under these headings provides a multi-layered view of each project. As with any project, the whole picture is more complex than its parts. Resources are chosen according to purpose and learning is stimulated by the combination of both. The analysis needs to account for the inter-relation of all three themes. Accordingly, the results are organised under three key headings of Resources, Purpose and Change and Learning but reference is made to the impact of ICT across all three.

Analysis

The reports were divided into primary (34) and secondary schools (22) for analysis. The secondary school group also included several K-12 and special schools. The two groups were analysed separately and then the results were compared for similarities and differences, leading to an overall thematic approach to organising and interpreting the data. The data for Question 4, the *Resources* section, was often presented in the school reports as a list with minimal elaboration, so this prompted a quantitative approach to summarising the information. Successive readings of the school reports revealed several clear themes of purpose and, as the proportion of schools aligning with each theme was of interest, the results in the *Purpose* section have been presented using a mixture of quantitative and qualitative approaches. However, determining the nature of the learning that teachers perceived to be connected with the use of technology proved to be a much more complex task. Therefore, the results under the third heading, *Change and Learning*, reflect a purely qualitative interpretation of the teachers’ responses to the questions in the

report. A number of themes are described and supported by verbatim quotations to preserve the „teacher’s voice’.

Section 1: Resources

Four broad categories of technology related resources were identified in the school reports: equipment, web-based digital resources, software and the expertise of people. A further pair of sub-categories or „types’ for each of these categories was determined, namely, hardware and peripherals, web-based communication and digital content, generic software and educational software, and internal and external expertise. Further details appear in the first column of Table 1. A count of the number of schools that listed each type of resource provided the data for calculating the proportion of schools reporting according to type (see second column Table 1). The main observation to be made from examining these figures is that, with only a few exceptions, approximately half the schools utilised each type of resource.

Table 1: Resources – Percentages of schools specifying resource type, and frequency of each resource type (percentage of total).

RESOURCE TYPE		% OF SCHOOLS		% OF TOTAL RESOURCES	
		Secondary (n=22)	Primary (n=34)	Secondary (n=81)	Primary (n=128)
Equipment	Hardware computers, IWBs, laptops (incl. Yr9 DER), TV	55	59	15	15
	Peripherals digital cameras, webcam, data projectors, digital microscopes	36	18	10	4
Web-based digital	Web-based communication resources BOTH: wikis, blogs, YouTube, Connected Classrooms PRIMARY: Twitter, RSS feeds, pod casts, email SECONDARY: Brigit, Moodle	55	44	15	11
	Digital content BOTH: learning objects, TaLE PRIMARY: CLI, EdNa, EduWeb, Jenny Eather SECONDARY: ABS, MathsOnline	45	74	12	19
Softwa	Generic software Word, PowerPoint, Excel, Photoshop, Moviemaker	45	35	12	8

People	Specific educational software BOTH: Marvin, Notebook PRIMARY: Kidpix, Kahootz SECONDARY: Geogebra, Sketchpad, Comic Life	50	41	14	10
	External expertise & training people, including academic partner, online courses	45	59	12	15
	Internal expertise ICT specialists, talented staff	36	47	10	12

A second viewing of the same resource frequency data in relation to the total number of resource types listed in the reports, reveals a different view of the popularity of each resource type (see third column Table 1)). It shows that all schools reported the use of multiple types of resources. Although there was considerable commonality between the primary and secondary school data, some interesting differences in emphasis emerged. For example, primary schools made much greater use of digital content (such as learning objects), whereas secondary schools placed greater emphasis on the value of peripheral devices (such as digital cameras and data-loggers). (see Figure 1)

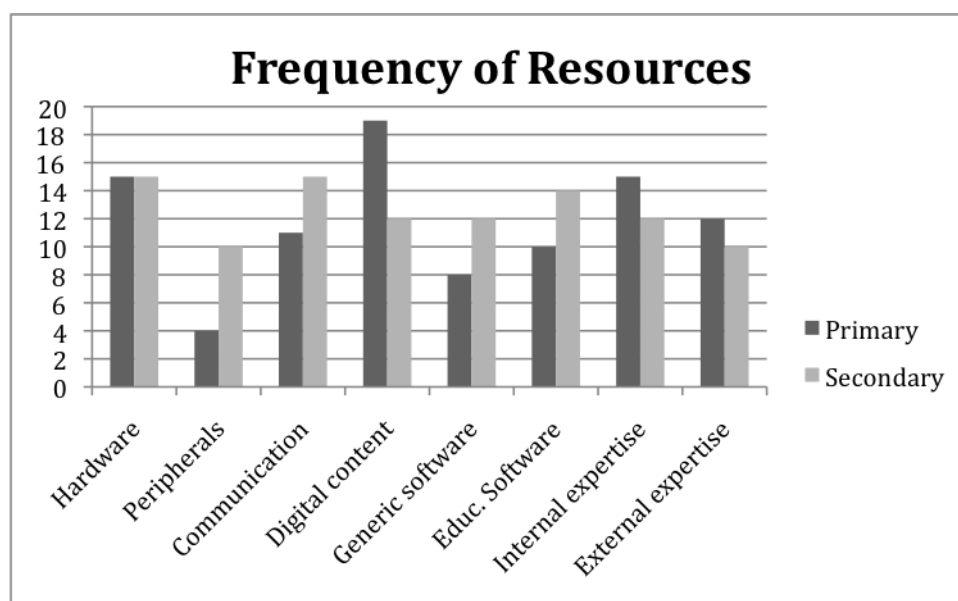


Figure 1: Frequency of resource types utilised by Primary and Secondary schools as a Percentage of total resources (Primary n=128, Secondary n=81)

The quantitative results do not communicate all of the information provided by the teachers and so several further comments are worthwhile.

IWB

Interactive whiteboards were the most commonly mentioned equipment resource by primary schools, with some IWBs only just installed in the schools. Directly related to this was the interest in developing skills with the SMART Notebook software. In secondary schools, the national government's Digital Education Revolution rollout of laptops to Year 9 students beginning in 2008 was an obvious cause for focus on this type of equipment.

Communication tools

Communication tools were as important to both primary and secondary schools as the hardware. Many schools mentioned using web-based communication such as wikis and blogs, email, local intranets and other tools. Some projects emphasised staff used communication tools for their own organisation and sharing rather than for teaching purposes, with several secondary schools valuing the use of programs such as MOODLE or LMS. However some schools listed such systems as tools to improve student engagement and facilitate provision of authentic learning contexts. The Connected Classrooms initiative begun by the DET in 2008 had a noticeable impact on secondary schools, and to a lesser extent, primary schools.

Learning objects

There was widespread use of online digital learning objects, particularly from TaLE, CLI and the Learning Federation. In secondary schools, multimedia production was used across a range of KLAs (except mathematics) as a vehicle for learning and to create a variety of products and publications - movies, animations, digital portfolios, websites, games, blog and You Tube material etc. Whereas, in primary schools discussion was more about improvement of lessons using an IWB or learning objects, using "rich assessment tasks" rather than creating a product.

Digital storytelling

MARVIN story-telling software was popular across primary and secondary, but as this was a special initiative of the QTAL team it is not surprising. Other older software, such as „Kidpix' (primary) and „Sketchpad' (secondary) was still popular.

Peer support

Most schools mentioned the importance of internal expertise or local school support from peers. This was almost as important as support from external providers.

Traditional print resources

Although not identified in Figure 1, print resources were also mentioned as important to some projects (e.g. QTAL material often in relation to assessment or planning).

Section 2: Purpose

Determining *why* schools incorporated technology into their projects was of interest to the researchers because, as highlighted in previous research (for example, Pintrich & Schunk, 2002; Way & Webb, 2007), the purpose and motivation has a strong influence on *how* the technology is used in schools. Although the technology section of the reports did not actually require schools to specify their reasons for choosing and using various technologies, many schools did communicate this „purpose’ while responding to the questions. In some reports, the purpose had to be inferred or clarified by examining the information contained in other sections such as the project title, for example “Integrating ICT and Literacy into Teaching Practice Using Cooperative Teaching Strategies With Year 7” or even the conclusions, as in “The focus will continue to be ICT, in particular using interactive whiteboards to improve student literacy”.

Five themes were identified across the reports, with all but one common to both primary and secondary schools. However, some distinct differences between the primary and secondary school projects became apparent, as highlighted by Figures 2 and 3.

Theme 1. Skills focus

A large number of schools (Primary 26%, Secondary 32%) emphasised the development of teachers’, and often students’ skills in using particular forms of technology so that the technology can be used as a tool to implement the curriculum more effectively and/or enhance engagement and learning. Although some impact on pedagogy might be inevitable, or even perceived as a future goal, it was not presented as a focus for the current project. Such schools specified purposes of professional development activities as being skill-based, for example: “ICT workshop which upskilled members in Wikis, Blogs, provided a range of useful internet sites, TaLE etc” (Bingara CS) and “...”skills using technology as a tool to engage their students in a more meaningful way.” (Edward PS).

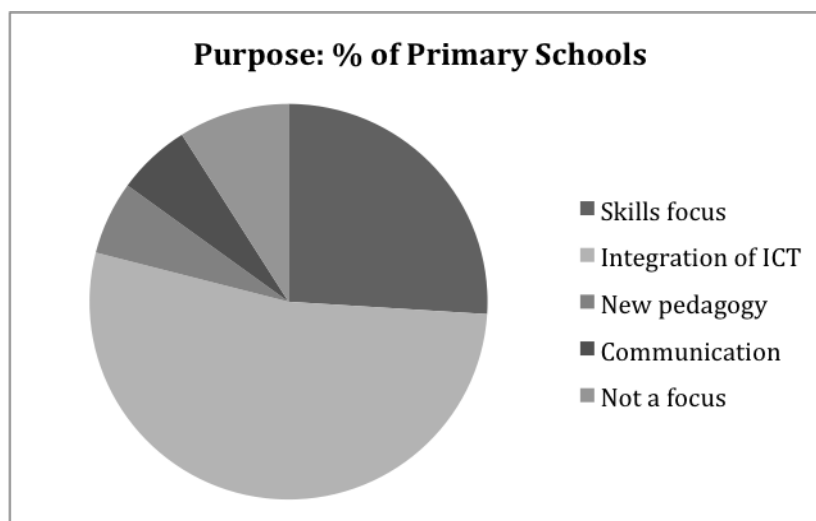


Figure 2: Percentage of primary schools with each ICT purpose (n=34)

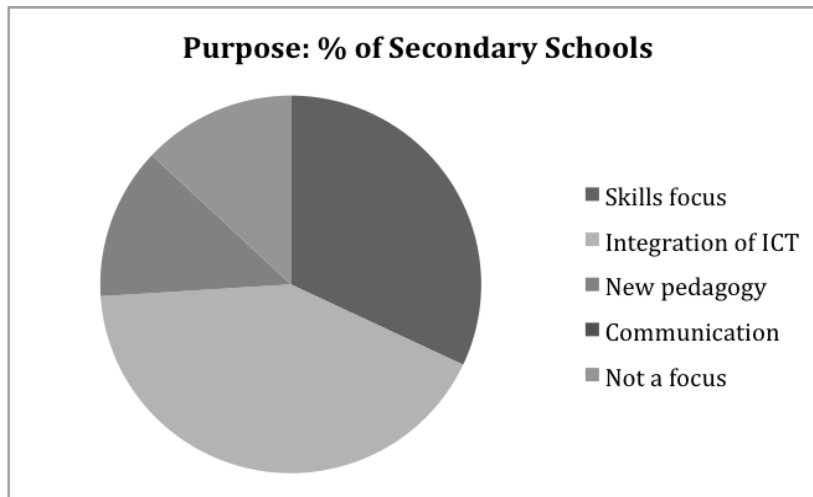


Figure 3: Percentage of secondary schools with each ICT purpose (n=22)

Theme 2. Integration of ICT into classroom practice

The largest group of schools (Primary 53%, Secondary 42%) made a link between increased ICT skills and changes in classroom practice and learning. These schools could already see the impact that the integration of new technologies could have on teachers and students in terms of changes in pedagogy and improvement in learning, and aimed to achieve these benefits during the project. Statements such as the following indicated this dual focus: "...incentive for team members to develop further their technical and pedagogical skills in the use of ICT in literacy" (Cowra PS), and "ICT was seen as a greater area of need by team members an emphasis was placed on professional learning around integrating ICT effectively into the classroom" (Chifley College).

Theme 3. Transforming pedagogies and learning environments

A small number of schools (Primary 6%, Secondary 13%) focused deliberately on the potential of ICT to transform pedagogy and create new learning environments. The students' approaches to learning were central to these developments. New ways of teaching, assessing, reporting and working with students and parents as part of a networked community were celebrated. "...actively involved in the transforming our learning environments to enhance the development of students to digital literacy" (Tuggera Lakes secondary), and "Teachers changing their teaching strategies to include more thinking skills, teaching to explicit criteria and using technology" (Kurri Kurri PS).

Theme 4. Communication focus

A very small group of primary schools (6%) focused on using technology as a means for sharing and communication of new ideas amongst peers as a key feature of their professional development outcomes. Although this type of ICT use was mentioned as an

important component or outcome in some secondary projects, it was not presented as a planned purpose.

Theme 5. ICT not a focus

A small group of schools (Primary 9%, Secondary 13%) declared that ICT was an incidental aspect of their project or not a focus at all, despite the request from the funding body and project leaders that it be included.

Section 3: Change and Learning

The data for this section was rich in information about both teacher and student learning, as it was drawn from two sub-questions that asked about a) the impact of ICT professional learning on team members and b) the translation of professional learning into classroom practice. To allow for multiple categorisations of the same data and a more direct reflection the voices of those who participated in the study, a fluid style of both analysis and presentation have been utilised for this section of data. For example, when teachers talked about how ICT had impacted on their work context they spoke about a range of points that covered personal through to professional challenges and/or achievements. As teachers' work is highly personalised, it is not surprising that the school reports contained many references to the varied responses of individuals to the ICT components of the QTAL professional development activities. Therefore, some of the quotations appearing as illustrations of the identified themes are generalisations about teams of teachers and the school in general, while others refer to the impact on individual teachers and their classes. As would be expected, the language of the Quality Teaching framework (QT) is often used to describe the pedagogical aspects of impact.

1. Individual confidence with ICT

A large proportion of primary and secondary school reported improved disposition towards using ICT and "*Greater confidence in using ICT's in teaching and learning*". The increase was often linked with greater awareness of what technologies were available and how they could be utilised, as well as technical skill development. For example, one high school noted that they were "...more comfortable and confident in using ICT strategies... Teachers have gained a better understanding of the ICT applications" (Sir Joseph Banks HS).

The evidence for increased confidence levels was often expressed through observations about increased use of technologies in classrooms, as illustrated in the following set of quotations; "more competent in using ICT in lesson planning - have observed greater use of technology" (Tumut HS), and "...it has been noted that teachers are more confident in using technology as a tool to aide them in implementing the syllabus" (Narraweena PS) and "Team members are now much more confident with the IWB technology. The IWBs are in constant use, for both whole-class explicit teaching, as well as for activities involving student participation and interaction" (Killara PS).

Some schools mentioned improved individual skills but others connected their improved confidence with those of their peers and explicitly identified the "...Importance of collegial sharing of expertise with ICT" (Coleambally Central) in their projects and that "Sharing and collegial support encouraged other teachers to use more ICT" (Great Lakes College). For example, "Teachers are using the technology with support from their peers and teaching buddies increasingly as their professional confidence grows, and their technology skills increase" (Ashtonfield PS) points to the importance of learning within a community. Indeed, several schools mentioned the value of using ICT networks to as "a means of sharing resources with other staff members" (Rose Bay Senior College).

It is interesting to note that one primary school reported on improvements in student confidence as well, stating that, "...the ICT teacher has commented on the students' broadening skills and expertise as they come to the ICT classroom" (Bowral PS). One secondary school noted yet another angle on change in confidence levels stating a project outcome for teachers to be "Confidence to accept students' expertise in technology and peer tutoring" (Inverell HS).

2. ICT as part of a Professional culture

Although some mention is made of increased communication and teamwork in some secondary school reports, an important outcome emphasised in the primary school reports was that the ICT projects had brought about a change in the professional culture of the school. One school comments about this in terms of provision of additional opportunities for conversations, e.g. "ICT professional learning has opened a new way for team members to communicate in our time-tight schedules via Wiki-Spaces" (Maitland PS). In these kinds of remarks teachers use words such as *sharing*, *networks* and *communication* which all underpin the affordances that ICT has to create asynchronous interactive learning spaces that support collegial behaviour. For example "the concept of being able to put information on the internet in a school wiki for everybody to share has been beneficial for professional dialogue and whole school planning" (Bowral PS). For secondary schools, when communication was mentioned, it tended to refer to the students and pedagogy as much as the teachers' communication and so has been included under other headings in this chapter.

3. Integration of various forms of ICT into teaching programs and practice

As already indicated a small percentage of schools did not make ICT a significant focus in their projects, but the majority of reports provided rich data on how they purposefully integrated technologies into their professional development.

Words such as *everyday*, *integration*, *incorporation* and *inclusion* all point to teachers being willing to embed ICT into their classrooms and to the impact it has had on planning for teaching. Comments such as "...the TaLe website has provided a motivating and stimulating avenue to include ICT into everyday teaching and learning" (Bowral PS), "ICT was incorporated into classroom practice, rather than being an end in itself" (Blakehurst HS), and "Teacher work samples showed ICT integrated into units and classroom activities" (Canterbury BHS), suggest that the teachers are becoming familiar

with digital resources and can see good opportunities to support their existing learning and teaching plans with ICT.

4. ICT led change in pedagogy and student learning

About half the schools make specific mention of changes in pedagogy beyond the integration of ICT into lessons, as mentioned in the previous theme. This notion is captured well by the following quotation: “Teachers have moved from using technology as a tool in the classroom with an instructional focus to a facilitating student creativity using the available technology” (Tuggerah Lakes SC). These teachers are not only adding ICT to the teaching practice, but have allowed the affordances of ICT to prompt a change in their practice, with the result that “...staff have made small but significant changes in their approach to the teaching of the subject ... stepping out of their comfort zones” (Tumut HS). Rather than talking about using technology resources to better implement the curriculum, shifts in learning focus, particularly towards more student-centred approaches, are described. For example, “Teachers have become more facilitators of learning increasing the possibilities of discovery learning in our students” (Eltham PS), and “ICT has enabled them to... extend the reach of mathematics beyond the classroom ...providing the students with more self-direction” (Swansea HS), or “Creating more student-centred activities” (Balgowlah BHS). One school relates how change flowed through from teachers to the students, “Before, we tended to use ICT for our own research purposes for a given topic prior to teaching lessons. Now, we have the students using ICT in our classrooms to enhance their learning. A distinction has been made where technology is used for specific purposes to enhance students’ learning” (Vardy’s Road PS). And another school explains how carefully selected digital resources were used to give students with limited literacy skills access to higher levels of learning: “Such intuitive software has enabled students to overcome limitations in their skills and experience success resulting in deeper learning and creative output” (Inverell HS).

The changes were often expressed in terms of QT Elements, giving a strong indication of the connection with the professional development process centred on the QTAL model and improved student outcomes. For example, “Through observations, teacher reflections and student results, the use of ICT in the classroom has proven to promote engagement, problematic knowledge, deep knowledge and deep understanding for all students” (Naraweena PS). And also, “...the use of ICT has brought about connectedness within the lessons to that of the student’s world.” (Sherwood PS).

A few schools indicated significant changes largely brought about by the focus on technology that are having a strong impact on the nature of teacher practice, on student learning and in some cases, on the operation of the school.

“...successfully using the school’s intranet as our major source of delivering information to students and staff, using wikis to collect student work samples and using a student forum to communicate and stimulate creative and critical thinking has allowed team members to apply their learning in a guided and assisted “team” approach....much greater use of multimedia to encourage creativity, student direction and connectedness” (James Ruse Agricultural HS).

“Students will use engaging technologies in collaborative, inquiry-based learning environments with teachers who are willing and able to use technology’s power to assist them in transforming knowledge and skills into products, solutions and new information” (Tuggerah Lakes SC).

5. Improved student motivation and engagement

While not featured in the primary school reports, about a third of the secondary schools specifically mentioned observed changes in student motivation, engagement, attitude and interaction levels (with each other and the teachers). The following four examples indicate the nature of these changes: “ICT became a motivational tool for stimulation and engagement” (Ashfield HS), “...greater positive interactions between the students and each other and also between the students and the teacher... less interruption & more productive work” (Moruya HS), “...using ICT as a tool to engage and challenge gifted and talented students” (Rose Bay SC), and “...a positive change in attitude...Students are more engaged if other resources are used instead of only textbook / chalkboard” (Tumut HS). The importance of incorporating the ICT skills and learning preferences that adolescents develop outside school into the classroom environment has been highlighted by research such as Spires, Lee, Turner & Johnson (2008).

Discussion

It is significant that in the 2007-2009 QTAL project schools, the integration of ICT was partnered with a strong focus on pedagogy and professional learning, because it has been well established that to effectively increase the appropriate adoption of ICT in schools, professional development for teachers must incorporate both technical skill development and substantive attention to pedagogy (for example, Cartwright & Hammond, 2007; Kennewell, Tanner, Jones & Beauchamp, 2008). This combination of skill development and teaching strategy is essential because it acts upon each teacher’s wider educational beliefs and personal qualities, such as confidence in their abilities to utilise technology effectively (BECTA, 2004; Jameison-Proctor, Burnett, Finger & Watson, 2006; Scrimshaw, 2004). The findings of our meta-analysis are consistent with this research as engagement with ICT did lead to meaningful learning opportunities for all teachers. It should be noted, however, that teachers’ movement along a cline of professional development were not equal. Because individual teachers started with different skill levels and professional learning needs, the outcomes were broad ranging.

It has also been well established that integration of ICT in ways that effectively utilise the affordances of the technologies leads to the creation of new learning environments that include features such as collaboration, student-centred activity, increased communication and connection to resources beyond the school (Hayes, Schuck, Segal, Dwyer & McEwen, 2001; Herrington, Oliver & Reeves, 2003). This type of change was clearly evident in the 2009 QTAL reports, with the teachers making use of the language of the Quality Teaching Framework to express their awareness of pedagogical shifts and the nature of learning made possible through ICT. In some cases, teachers identified the integration of ICT as a powerful catalyst for change, whereas in other schools, it seems

likely that the emphasis on ICT in the QTAL project served to illuminate changes in practice and learning that were already underway.

The specific mention by a number of primary and secondary schools of the need to develop both basic and higher order ICT skills in students, reminds us that not all students have equal access and motivation with technology and that students need to be carefully scaffolded to develop ICT knowledge that is appropriate to their context, needs and opportunities. In the *Digital Futures Report* (Ewing, Thomas & Schiessl, 2008) revealed that, although it has diminished over the past few years, the „digital divide’ still exists in Australia. Indeed, research cautions us against assuming the broad generalisation that all of our current students are „digital natives’ who are completely at ease with technology (Bennett, Maton, & Kervin, 2008; Kennedy, Krause, Judd, Churchward, & Gray, 2006).

Conclusion

This chapter of the evaluation study has investigated the impact on teachers and students of integrating ICT reported by the 2007-9 QTAL project schools. The analyses have shown that the role of ICT in supporting the QTAL goals is complex. The quantitative and qualitative investigation has identified how pedagogic change was enabled as schools incorporated ICT into their strategic planning with the goal of improving learning for all. This chapter notes that professional development was supported through the QT framework that underpinned the collaborative projects. Overall, the reports show outcomes relating mostly to the benefit of integrating ICT rather than the challenges. Key benefits included: raised awareness of the affordances of ICT, improved skills and confidence, innovative communication opportunities and increased opportunities for student centred learning. Challenges that remain include: equity of resourcing and resistance to change. However, the most important finding from the analysis was that the focus on ICT guided teachers’ professional development in a context of cultural change.

CONCLUSION

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As Groundwater-Smith identified in Chapter 1 of this report, collaborative professional learning is a careerlong imperative for all teachers. A one-size-fits-all centralised delivery of such professional learning is neither appropriate nor effective. Individual school contexts, demographics and the learning needs of both teachers and students are significantly different. It is school-based learning in which teachers collaboratively identify their learning needs and then work together to address these that is likely to be more effective and long lasting.

The NSW DET QTAL program over its four phases (2003-2009) provided the funded opportunity for a carefully developed and integrated school-based model of teacher professional learning using action learning processes based on the pedagogical framework of QT towards the potential for significant pedagogical and school cultural change. There is no doubt that the evidence provided in the reports of the project schools and in the investigations that provided the basis of the meta analyses forming this report demonstrate the strong success of both the QTAL program generally and the constituent elements of the professional learning model in particular that were clearly identified as „enablers’ of school-based change. The evidence for this success is even stronger for the longer lasting later phases of the program when succeeding school-based teams maximised their opportunity to learn of the stories and strategies of school teams in the previous phase(s). This is a strategy that should be strongly replicated in any future similar programs aimed at realising school-based change. The success of QTAL is even more impressive given that 1/3 or more of participating school teams reported what has been identified as „major’ changes to the constituency of their action learning teams between the times of their interim and final reports, often across school years.

There is also strong evidence that the funded opportunities for relief from face-to-face teaching provided by QTAL were mainly used for teacher learning and not so much focused on product. „Reflecting’ was identified as the clearly predominant reported activity of action learning teams, with lesser but significant time given to „planning’ and even less to „acting’. From the information provided in school reports it would seem that the majority of QTAL funded time was spent in collaborative professional discussion and investigation and evaluation of current practices. The learning that took place in such collaborative action learning was then transferred into changes in either individual teacher’s classrooms or in teacher pairs or teams.

One of the key elements of the QTAL professional learning model was the incorporation of the NSW Quality Teaching model. There is again clear evidence of the important role this framework played in the learning of QTAL teams. This evidence again becomes strongest in the later phases of the program. Elements from the Intellectual Quality dimension of the QT are those most frequently identified in the reports analysed. In reporting on the importance of the QT in realising school-based cultural change, project schools identify it as the basis for developing a shared language to talk about pedagogy

and classroom practices. Shared understandings were enabled through peer discussions, observations and collaborative coding of observed lessons and these then formed the basis of either revising existing planning, teaching and assessment practices or the development of new practices as the basis for school cultural change.

An important element of the DET QTAL professional learning model was the appointment of academic partners to each school-based team. Again, there is clear evidence in the project school reports analysed of the success of this strategy. School teams overwhelmingly reported satisfaction with and the importance of their academic partners to the success of their projects. Academic partners played many and varied roles but overall brought a voice to the work of the school-based teams that was external to and detached from the various interest groups in the school. Again, the success of the work of academic partners increased in the later phases of the project as academic partners became more aware of their roles and school teams were able to identify more clearly the sorts of roles academic partners might play.

It is strongly recommended that the use of academic partners be continued in school-based DET system supported programs. However, they should be selected carefully to match the cultures, objectives and content of the school project and the characteristics of the teachers with whom they will work. They should also be briefed in detail regarding the factors that contribute to and roles essential for an academic partner being most effective in school-based teacher learning programs. Both they and schools should be encouraged to negotiate the expected roles that the academic partner should play and the boundaries of their involvement early in the life of the project. It was attention to these things that increased the reported effectiveness of academic partners in the later phases.

One of the most important elements of the QTAL model was the employment of system-based project managers. Project school reports identified the managers as a very important link with system procedures but, even more important, their work in schools facilitating team action learning was reported as essential to the success of project schools and their achievements.

Questions relating to the specific use of ICT in QTAL projects were added to the final phase school project reports. Evidence provided in these reports demonstrates that different forms of ICT-based strategies were central to developing school-based change. More important, the employment of ICT in QTAL projects was strongly linked to a focus on pedagogy with explicit reference to the QT framework. Further, the reported increased confidence and engagement with ICT by both teachers and students was strongly linked to teacher professional learning, recognised in the latest research as essential for the successful integration of ICT in schools.

In conclusion, the meta analyses provided in this report demonstrate clearly the success of the QTAL model of collaborative professional learning for teachers in schools and as a basis for significant change in teacher pedagogy and classroom practices. It is a model that should continue to be employed in any system-based program to realise successful school-based change. Also important in this model is the incorporation of a clear focus for the action learning of school-based teacher teams. It was the QT framework that

provided an important focus in the QTAL project. Sustainability of those changes initiated during the different phases of the QTAL program and how long they will be sustained is a matter for which there is less evidence and more aspiration. A follow up study over the next three years would provide important information regarding this question.

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