

## **Professional development for pedagogical impact**

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Much has been invested in the capacity of professional learning to support teacher growth and improve schooling outcomes (Vandenberghe, 2002). In relation to the NSW Quality Teaching reform, the view is that teachers must engage in professional learning activities that deepen their understanding of Quality Teaching, if Quality Teaching is to improve pedagogy (and student outcomes).

Drawing on survey and interview data from SIPA, we examine the range of professional learning experiences in which approximately 900 teachers have been engaged during the past two years, and examine the effectiveness of that professional learning as judged by the teachers. We also consider differences and similarities between schools and draw conclusions to guide ongoing efforts to conduct meaningful professional learning to improve pedagogy. We include quantitative analyses of the relationship between the amount, type, and level of satisfaction with QT professional learning and the quality of pedagogy found in SIPA schools. Qualitative data are also used to shed light on what it takes for professional development to have a positive impact on pedagogy. The research reported in this paper is designed to enhance our empirical understanding of the relationship between professional development and the improvement of pedagogical practice.

One of the central questions facing school systems and educational researchers alike is how to professionally develop teachers in a manner that improves classroom practice and student achievement. While there is wide recognition of the central importance that teachers' professional development plays in the overall endeavour to improve students' school experiences and outcomes (Marchant, 2002; Huffman, Thomas & Lawrenz, 2003; Scott & Bagaka, 2004), there is remarkably little research that provides a broad empirical basis for drawing inferences about the link between teachers' professional development and improved teaching practice (Loucks-Horsley & Matsumoto, 1999; Garet, Porter, Desimone, Birman & Yoon, 2001; Fishman, Marx, Best & Tal, 2003; Borko, 2004).

Much is invested, at least rhetorically and sometimes financially, in the capacity of professional development to support teacher growth and improve schooling outcomes (AERA, 2005; King & Newmann, 2001; Vandenberghe, 2002; Frampton & Vaughn, 2003; Sparks, 2004). In many cases, however, "professional learning" and "professional development" are poorly defined concepts, "teacher growth" is hoped for rather than measured, and improved outcomes are tenuously connected to anything done in the name of

teacher learning. In this paper, we directly confront the relationship between professional development and pedagogy through a detailed analysis of each in relation to the NSW Quality Teaching initiative.

With its focus on Intellectual Quality, Quality Learning Environment, and Significance, the NSW Quality Teaching model draws on the significant work of Newmann and Associates (1996) on Authentic Pedagogy, as well as other elements of classroom and assessment practice that have been linked through empirical research to improved learning outcomes for students across the spectrum of social backgrounds (See Appendix 1 for an overview of the Quality Teaching model and see [www.curriculumsupport.nsw.edu.au/qualityteaching](http://www.curriculumsupport.nsw.edu.au/qualityteaching) for more detail on the model and its research background). An aspect of the QT initiative involves professional development materials designed to support teachers in developing their understanding of Quality Teaching through dialogue about classroom and assessment practices built around coding activities for each of the three dimensions and 18 elements of the Quality Teaching framework (see Appendix 2 for a sample of the coding instruments).

### **The study**

The data for this paper are drawn from a large, multi-method, longitudinal study (2004-2007) that is exploring the relationships between teacher professional learning, the quality of pedagogy, and the quality of learning outcomes. The study, titled “Systemic Implications of Pedagogy and Achievement in New South Wales Public Schools” (SIPA), represents a major collaboration between a state department of education and university researchers.

Underpinning the collaboration is the system-wide attempt at pedagogical reform under the banner of “Quality Teaching.” The NSW Department of Education and Training worked with James Ladwig and Jennifer Gore, to develop its three-dimensional model of pedagogy. It is worth noting that New South Wales is the largest state in Australia, with all 2200 public schools (providing for 760,000 students) governed by a single state authority, the NSW Department of Education and Training. As such, the NSW Quality Teaching (QT) initiative is perhaps one of the world’s largest systemic attempts to improve the nature and quality of classroom practice through professional development.

The specific data used for this paper have been drawn from the initial base-line data points of the four-year longitudinal study. As such, this paper represents our initial, cross-sectional analysis of the relationship between Teachers’ Professional Development and Pedagogy. As measures of pedagogy, we employ the coded observations of 330 lessons and 199 assessment tasks using the same QT instruments used for professional development (See Appendix 2). To document professional development, we have drawn on approximately 178 interviews and

1000 surveys to gather information about teachers' professional development experiences and their perspectives on and understandings of pedagogy, professional development and support.

Of particular note for this analysis are seven scales incorporated into our survey. These scales are: 1) a measure of the teachers' estimate of the *importance of QT*, 2) a measure of teachers' estimate of the *effect of QT*, 3) a measure of the extent to which teachers' report that they have felt *support for engaging in the QT initiative*, 4) the extent to which teachers' *report satisfaction with and influence of their own PL*, 5) a measure of the degree to which teachers see their professional learning as *coherent with QT*, 6) a measure of the degree to which teachers see their professional as *coherent with the school culture and ethos*, 7) and a measure of the degree of *teacher responsibility* for student learning (see Appendix 3).

Four of these measures were included in the survey from a pragmatic point of view. That is, since the Quality Teaching initiative is a system-wide pedagogical initiative (meaning that it was intended for use K-12 and across all subject areas), the question of whether or not teachers believed QT to be important, whether or not they felt QT had a positive effect, whether or not they felt supported in their own efforts to understand and learn about QT, and whether or not they felt satisfied with their professional learning were all of pragmatic interest as a matter of programmatic interest. The idea that such perceptions would have a relationship to actual pedagogical practice is consistent with much research in professional development (which documents non-effect when these conditions are not met), but the main interest with these measures was a practical concern for the system.

The issues of coherence and teachers' responsibility built from the important work on these issues developed out of the Centre on the Organisation and Restructuring of Schools, from the early 1990s. That is, the question of coherence has largely been documented through the work of Fred Newmann and Bruce King, who have clearly shown the importance of getting teacher learning programs to be consistent with a school's pedagogical reform attempts (see Newmann, King & Rigdon, 1997; King & Newmann, 2000). In addition to a replication of the scale developed by Newmann and his colleagues, which here is named as the 'coherence within school' scale, we added a measure more specifically estimating teachers' perceptions of the coherence of their professional learning with the QT model of pedagogy, noting that professional learning was not confined to QT.

The issue of teacher responsibility has its origins in the work of Louis, Kruse and Marks who began a substantial line of research documenting, in the US school restructuring context, a significant link between the degree to which teachers individually and collectively adopt a

sense of responsibility for student learning and subsequent pedagogy and student achievement (e.g., Louis, Kruse & Marks, 1996; Louis and Marks 1998; Lee & Smith, 1996). Here, we have incorporated a replication of the original teacher responsibility scale developed by CORS and reported by Louis, Kruse and Marks (1996) and Louis and Marks (1998).

The SIPA survey also included a series of individual items designed to allow teachers to report the amount, mode and focus areas of their professional development. For this paper we analysed the items reporting amount of time spent on specific focus areas, including Quality Teaching, pedagogy (non-QT), curriculum, assessment (non-QT), welfare and discipline, administration and leadership, technology and any other. We also asked for estimates of amounts of time dedicated to common non-direct teaching tasks, by asking the number of hours per month spent on lesson planning, curriculum development, guidance and counselling, evaluation of programs, planning assessments, marking and reporting, preparing student reports, and collaborative work related to curriculum, instruction and/or assessment. (These were non-exclusive categories.) Each of these more direct estimates of professional learning activity were also analysed in relation to the quality of pedagogy we measured.

In addition to individual teacher data on professional learning and the quality of pedagogy, we also considered differences and similarities between schools' professional learning initiatives as noted in our field studies and drawn diagnostic conclusions to guide ongoing efforts to conduct meaningful professional learning in relation to the QT initiative. We should emphasise that the survey from which these data are drawn was administered mid 2004, approximately one year after the first Quality Teaching support materials were sent to schools. As such they represent base line indicators. In subsequent years we will be examining changes over time at both the teacher level and at the school level.

The specific research questions guiding this paper were:

1. What professional learning experiences did NSW teachers have in 2004 in the name of Quality Teaching?
2. How effective was that professional learning as judged by the teachers?
3. What are the relationships between amount and type of professional learning, teacher satisfaction with professional learning, and the quality of pedagogy?
4. Does professional learning have any impact on pedagogy?

These analyses have broader implications for both professional learning and pedagogical reform initiatives elsewhere in Australia and beyond, which we will explore in the final section of the paper.

## **The professional learning context**

The Quality Teaching initiative for NSW public schools was first publicised to schools in May 2003 when all schools were sent copies of the Quality Teaching Discussion Paper, a video in which James Ladwig and Jennifer Gore explain the QT framework and its research background, and a document titled “Starting the Discussion,” outlining how the materials might be used in schools. At the same time a Quality Teaching website was developed which included an annotated bibliography for QT written by Ladwig and King (2003). In December 2003, the second “phase” a QT support materials were made available to schools. These materials consisted of the Quality Teaching Classroom Practice Guide, a video and DVD of lesson extracts, and a document titled “*Continuing the Discussion about Classroom Practice*,” outlining how the Phase 2 materials might be used.

These two sets of materials entered schools just prior to the implementation of a new Professional Learning Policy (2004) through which schools were to make many more decisions about their professional learning needs than had previously been the case, and were provided with considerably more funding with which to develop appropriate programs and experiences that would contribute to professional learning. Priority areas for Professional Learning were specified in the policy and QT was explicitly named as one of seven such priority areas.

Our data for the first year of the SIPA study were gathered during the second half of 2004. At that time, some QT materials had been available for school use for just over a year, while the Classroom Practice materials, at most, would have been used during a period of six to nine months. The Assessment Practice resources, The Quality Teaching Assessment Practice Guide and its companion “Continuing the Discussion about Assessment Practice,” including sample assessment tasks, were sent to schools mid 2005.

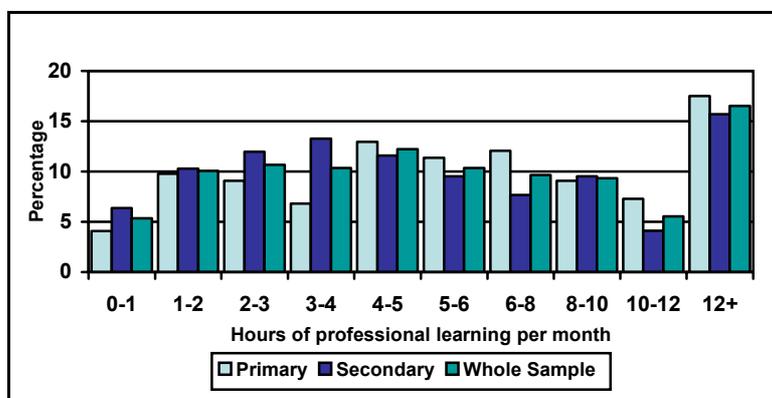
The professional development opportunities provided by the QT initiative (materials plus resources) align with many of the widely accepted principles of effective professional development including teachers working to refine their own practice, in collaboration with colleagues, with a clearly articulated framework to guide their efforts, with a focus on student learning, and with ways of gaining evidence about improvements (Borko and Putnam, 1995; Darling-Hammond and McLaughlin, 1995; Hawley and Valli, 1999; Supovitz and Turner, 2000).

### The professional learning reported

In order to address the relationship between professional learning and pedagogy, we needed to first establish how much time was spent on what topics in the name of professional learning.

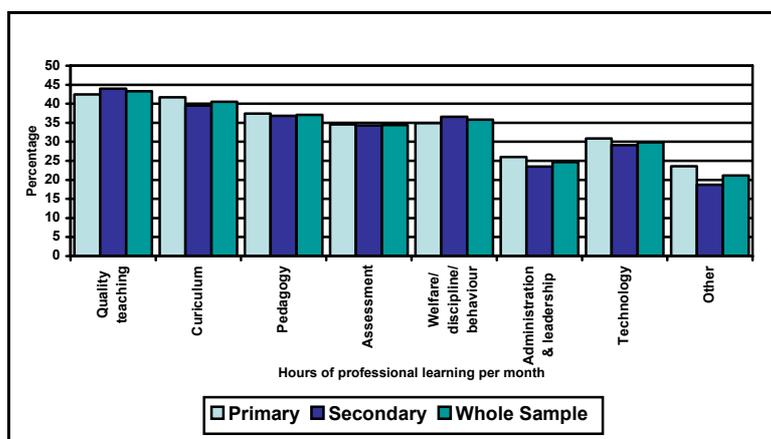
In terms of the total time per month teachers report spending on professional learning, the data yielded a fairly normal distribution with an average of 5.8 in the selected categories (which would translated into between 5 and 7 hours per month, depending on how high you assume more than 12 hours to average), except for a substantial group of teachers who report spending more than twelve hours per month (See Figure 1). ‘Professional Learning’ was defined very broadly on the survey as occurring in staff meetings, staff development days, personal professional reading, professional associations, post graduate courses, in-service courses, and so on – that is, in any context which teachers see as contributing to their professional learning. Putting these results in context then, if teachers believe that they are getting professional learning at every staff meeting and they have one staff meeting per week for one hour, staff meetings can account for four hours of the professional learning reported here (just below the average of 5-7 hours per month). We acknowledge that limitations associated with issues of interpretation of survey questions and self-report need to be taken into account with these data (Burstein, McDonnell, Van Winkle, Ormseth, Mirocha, and Guitton, 1995; Mayer, 1999; Supovitz and Turner, 2000). For instance, this specific item produced a much lower average in our pilot survey where teachers were asked to write the number of hours without a given set of categories. Here it seems many teachers took the option of ticking the top box. Nonetheless, there is clear evidence that the vast majority of teachers in this sample believe that they are engaged in professional learning.

**Figure 1. Hours of professional learning per month**



Teachers were also asked to indicate the percentage of the professional learning time spent on different focus areas (Figure 2). These data show, at this early point in time for the QT initiative in schools, Quality Teaching was indeed given more time than any of the other focus areas, (where Curriculum, Pedagogy, and Assessment were defined as not including Quality Teaching). On a similar survey conducted with NSW and national teachers in the mid 1990s, issues of pedagogy and assessment were by no means that high (Ladwig, 1995). Over time, it appears that there is a shift going on with increased attention to pedagogy, which aligns with the renewed emphasis on pedagogy at the system level.

**Figure 2. Average percentage of time spent on PL focus areas**



Descriptive Statistics were run for each of the scales introduced above and are reported in Table 1, below. Each of these scales was rated by teachers to be positive to strongly positive (as can be noted by comparing the scale midpoints with the obtained mean scores).

**Table 1: Descriptive Statistics for Professional Learning Scales**

Scale	Scale Range	Scale Midpoint	n	Min	Max	Mean	Std. Deviation
Importance of QT	4-24	14.0	866	4.00	24.00	21.27	2.03
Effect of QT	9-54	31.5	750	10.00	54.00	36.62	7.96
Support for QT	3-18	10.5	769	3.00	18.00	12.51	2.80
Satisfaction and Influence of PL	7-42	24.5	805	7.00	42.00	30.45	5.21
PL Coherence with QT	6-36	21.0	595	11.00	36.00	27.10	3.68
PL Coherence within school	7-42	24.5	742	12.00	42.00	30.50	5.50
Teacher Responsibility	7-42	24.5	831	10.00	42.00	29.59	5.45

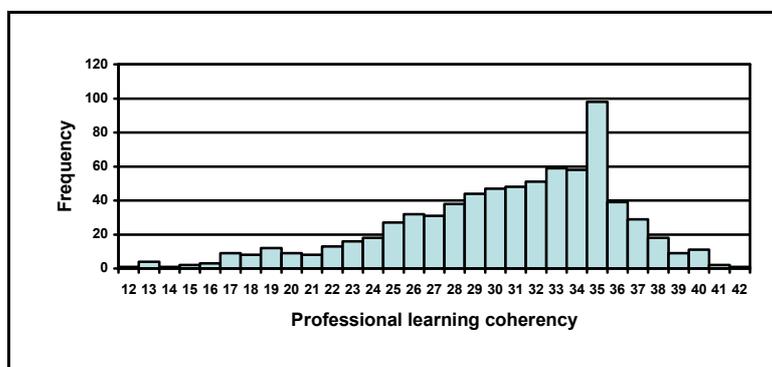
Each of the pragmatic questions, addressed in the first four scales listed in Table 1, was generally quite positive. For example, in terms of reported satisfaction with their professional learning experiences, our scale consisted of seven 6-point Likert scale items, where 1 = strongly disagree and 6 = strongly agree (see Appendix 2 for the specific items within this scale), giving a possible range of 7-42 with a mid-point of 24.5. The mean score for the sample of 805 teachers who answered these questions was 30.45 (see Figure 3). By implication then, when a major portion of their professional learning focussed on Quality Teaching (Figure 2), we can assume that a substantial number of teachers were reasonably satisfied with their QT professional learning.

**Figure 3. Reported satisfaction with professional learning experiences**  
 (from a scale with range of 7 – 42 and a midpoint value of 24.5)



Similar positive trends were also noted among the theoretically developed scales (see Table 1). For examples, as with the other measures reported thus far, reported coherence of professional learning within the school was generally very positive (see Figure 4).

**Figure 4. Reported professional learning coherency within school**  
 (from a scale with range of 7 – 42 and a midpoint value of 24.5)



Therefore, with at least some hours spent on professional learning by the teachers in this sample, a substantial portion of those hours spent on Quality Teaching, and teachers reporting both reasonable satisfaction with their professional learning and a view of their professional learning as coherent within their schools, these data suggest that, to some extent at least, teachers reported that conditions were in place that might facilitate an impact on the quality of pedagogy of the QT initiative. Before examining the direct relationship between professional learning and the quality of pedagogy, and in recognition of the importance of substance, in the following section, we provide more detail on exactly what was done in the name of Quality Teaching professional learning.

### **The substance of the QT professional learning**

The types of professional learning that teachers reported doing in the name of Quality Teaching included everything from simply having been handed the initial support document, the *Quality Teaching Discussion Paper* (NSW DET, 2003), through to observing and coding each others' classroom and assessment practice using the detailed QT materials. Despite the expressed interest of all SIPA schools in engaging with QT, if they were not already using the framework and materials, our interviews with teachers indicated that some schools had been slow in making QT a professional learning reality for their teachers. Others had forged ahead.

According to teachers in some schools, "Quality Teaching" professional development sessions had been conducted by external consultants whose presentations bore little resemblance to the Quality Teaching framework. At other sites, all of their QT PD had been conducted by their own staff members, some of whom had limited knowledge and understanding of QT. It is not at all surprising to us then, to find interpretations of QT among some teachers that are partial, ill-informed or sometimes simply inconsistent with the model (see Griffiths, Gore & Ladwig, 2006 for a detailed analysis of understandings of QT among teachers at these schools).

Many of the SIPA schools reported having organised stage (2 grade-level) groups, or various other teams of teachers, which are focusing sequentially on elements or dimensions of the QT model at weekly or fortnightly meetings. In one school, the school executive members reported that at these meetings they began the year by just talking about an element, but have since moved to planning a practical activity in relation to the element, which they feel is working much better. This point introduces an emphasis on "the practical" that emerges in relation to the QT professional learning initiative and in teacher professional learning in general.

A strategy used in one school has been for staff to begin with discussions of “lessons they’ve been proud of” and then identify aspects of the QT model that might have contributed to a lesson’s success. This type of professional learning strategy is common and works from the premise that teachers will be more responsive to an initiative that they find affirming rather than overly challenging. A similar approach is to ask ‘What are we already doing that is good?’ These approaches raise an important question about how the shift is made from affirmation to reflection and challenge. They also highlight the role of a skilful ‘facilitator’ who can ensure that the potential of a reform initiative like QT is not squandered in sessions that never go beyond helping each other to feel good.

Other schools are more directly embracing the challenges and the professional learning techniques proposed within the QT support materials. Teachers in some schools, for instance are making use of the version of traditional curriculum questions that are listed in the QT materials to guide their planning. The questions are: What do you want your students to learn? Why does that learning matter? What are you going to get your students to produce? And how well do you expect them to do it? One of the interesting observations about this approach is that it seems to be viewed as a “slightly indirect or less overwhelming approach” [T294007] than asking teachers to use the eighteen elements of the QT framework. When understood in this way, unless the questions are used skilfully and with the QT framework clearly in mind, they have the potential to water down the intent of the model. If used as the *only* strategy to engage teachers in professional learning about QT, it might also account for misunderstandings, since the questions themselves neither address the comprehensive range of elements that shape the QT framework, nor limit the range of plausible answers to be answers that are consistent with QT.

In yet other schools, teachers are engaged in coding and re-designing units of work and /or examining student work samples in relation to the QT framework. More boldly, there are a few schools in which teachers are engaged in some observation and coding of each others’ classroom practice. This professional learning strategy runs counter to the classically noted privacy that most teachers cherish and protect when it comes to opening their classroom doors to colleagues (see *inter alios*, Lortie 1975; Louis, Kruse & Marks, 1996). Interestingly, however, close to fifty percent of teachers in SIPA schools reported that they had visited another colleague’s classroom or had someone come into their classroom for the purpose of observing and discussing teaching. A similar survey completed around 10 years ago (Ladwig, 1995), found that approximately two-thirds of teachers reported *never* having a colleague visit their classroom to discuss their teaching in that year. Our result therefore indicates a significant shift during this time period in terms of teachers’ openness to having colleagues

come into their classrooms for purposes related to pedagogy. Beyond this strategy, we also found a small number of teachers who are going to other schools and forums to present what they are doing on Quality Teaching. One teacher commented that this “is professional development for me since it requires you to gather your thoughts to do it. It’s part of what we are reflecting on, to be able to put it together.”

In summary then, in the name of Quality Teaching professional learning, teachers in our study report a wide range of activity, from having done almost nothing at all, or something that is not really QT, through to observing and coding each others’ practice and presenting their accomplishments to colleagues beyond their own schools. Given at least some substantive engagement in QT at some schools, our analyses to this point still left us optimistic about the potential of QT professional learning to impact on pedagogy. However, the effectiveness of those experiences also needed to be considered.

### **Perceived effectiveness of the QT professional learning**

Teachers were asked in interview to comment on the effectiveness of their professional learning experiences in relation to QT. In general, judgements of effectiveness were linked with professional learning activities that were seen as practical, that engaged teachers in close analysis of their own practice and/or that brought some external perspectives to the school. The following statements made in interviews illustrate these points.

#### *Something practical*

Doing the practical hands of activity (coding videos) was where most of the teachers started to get on board, saying ‘okay, we can see it in practice, this is how we can use it.’ It was probably the most beneficial thing we tried. [234011]

I think watching a lesson and having a go at actually coding it rather than just reading and talking about it is really, really useful. I found that helped me a lot more. And I think it got people starting to think a bit more. [794050]

#### *Own practice*

I think from a teacher’s point of view, just having the opportunity of having lessons observed and being coded and having that debriefing session is the thing that they’ve talked about as the best thing for them, particularly the reflection on a lesson and getting feedback from other teachers. [P184022]

addressing actual materials used in their teaching and using the model to re-think them in order to lift students' achievement of outcomes. [144007]

At first I was a bit daunted by the thought of other teachers watching my lesson but it really is brilliant – especially when you teach a good lesson. I got over that feeling of being daunted when I realized the focus was on becoming a better teacher and that people weren't out to criticize me. It is great to talk with other teachers and share their ideas. [184013]

I have had other colleagues, of my choice, observe and code my lessons and then debrief with me. Observing other teachers' lessons and debriefing has been the PD activity that has had the most significance for me this year. The teachers give great feedback and are very supportive on ways to improve your coded score on an element for a particular lesson. I am much more relaxed about the observations this year as I have made QT much more part of my daily routine, rather than doing special QT lessons. [184020] (teaching 16-18 years)

.The experiences [other teachers] have recounted make me enthusiastic about it [QT], because we are talking about our craft on a different level. [814110]

### *External input*

having someone from outside coming in to provide support and advice, because I think that schools become too insular and you're only developing within that small group of people. I think you need some outside influences. (184022)

It's good to bring experts in to talk to people, it's good to send your people away . . . to try to get some cross pollination so that you don't become too insular yourself . . . even though the in-faculty and in-school [PD] is the most effective, that doesn't negate the value of having outside influences and other people giving ideas. [754025] (principal)

The **least effective** professional development, according to the teachers resulted from the inadequate knowledge of presenters, and from being left to make their own sense of the QT agenda or simply having other priorities.

### *Inadequate knowledge*

We had a consultant come out and I don't know if they were relieving or not, but this person didn't know the language of QT and it became very difficult because the teachers were sitting around me saying 'this is rubbish, why do we need to learn all this' and 'we've been doing it for years'. And it just became a negative thing and it fell. No-one in the school took it up. (different school from current SIPA school)  
[234011]

we are making things up [in terms of PD] as we go along. [754020]

### *Left to figure it out*

to start with, the view was "you've given us the book, but we don't know what it is, what's involved" [754014]

reading the booklet on my own was not helpful: "it just went in one ear and out the other" [814074]

### *Other priorities for teachers*

Teachers form groups and discuss each element . . . these sessions are a waste of time and hardly anyone takes them seriously . . . too many staff have survival on their mind. [754001]

Clearly, the range of professional development experiences reported by teachers in the SIPA schools was quite broad. While many teachers reported professional development they thought worked well in relation to improving pedagogy, others had experiences which were less clearly linked to the QT ideals.

### **Professional learning and the quality of pedagogy**

The central remaining question for our analysis then is, 'Does professional development have any impact on pedagogy?' To address this question, correlations between our measures of professional development and measures of pedagogy were analysed at both the individual teacher level and the school level. (A more advanced multi-level statistical model is planned for later analyses.)

### *Teacher level analyses*

Correlations were explored at the individual teacher level between each of the constructs addressed above and the quality of pedagogy, as measured both in terms of the quality of classroom practice and the quality of assessment tasks (see Table 2 below). Significant but moderate positive correlations were found between 1) the *effect of QT* scale and the Significance observed in their lessons and 2) *Professional Learning satisfaction and influence* and the Quality Learning Environment observed in their lessons. Significant but moderate negative correlations were found between coded Task scores for the Quality Learning Environment and two scales: *Effect of QT* and *Coherence within school*. More substantially, *Teacher Responsibility* was positively and more strongly correlated with *all* dimensions of observed classroom pedagogy. However, there were no significant positive correlations between any of these professional development scales and the quality of tasks.

**Table 2: Pearson Bivariate Correlations, Professional Learning Scales v. Pedagogy Measures, *r* and N (pairwise deletion, teacher level aggregates)**

		<b>IQ - OBS</b>	<b>QLE - OBS</b>	<b>SIG - OBS</b>	<b>IQ - TASK</b>	<b>QLE - TASK</b>	<b>SIG - TASK</b>
Importance of QT	<i>r</i>	.076	.063	.059	-.060	.012	-.112
	N	106	106	106	93	93	93
Effect of QT	<i>r</i>	.113	.172	<b>.204*</b>	-.032	<b>-.247*</b>	.193
	N	97	97	97	83	83	83
Support for QT	<i>r</i>	.066	.077	.174	.045	-.065	.156
	N	96	96	96	81	81	81
Satisfaction and Influence of PL	<i>r</i>	.147	<b>.238*</b>	.064	-.068	-.192	.008
	N	97	97	97	84	84	84
PL Coherence with QT	<i>r</i>	.159	.069	-.038	-.031	-.165	.062
	N	79	79	79	66	66	66
PL Coherence within school	<i>r</i>	.116	.150	.040	-.160	<b>-.261*</b>	.006
	N	95	95	95	82	82	82
Teacher Responsibility Scale	<i>r</i>	<b>.212*</b>	<b>.346**</b>	<b>.299**</b>	-.072	-.083	-.045
	N	96	96	96	83	83	83

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Hence, while teachers' reports of the experience of professional learning were positive, few of our scales yielded direct correlations with the quality of classroom practice or assessment tasks. The only consistent pattern among the correlations is the positive relationship between *Teacher Responsibility* and the quality of each dimension of observed classroom practice.

Patterns of correlations among our professional learning scales are also of interest. As outlined in Table 3, below, each of our scales is positively and significantly correlated. These strong inter-correlations are of special interest as they may indicate indirect links between teachers' professional learning experience and pedagogy, with *Teacher Responsibility* as a mediating variable (this would be most strong in the link between coherence within the school and teacher responsibility).

**Table 3 Pearson Correlations – Professional Learning Scales, Teacher Level, Pairwise deletions, r / N**

	Importance of QT	Effect of QT	Support for QT	Satisfaction and Influence of PL	PL Coherence with QT	PL Coherence within school	Teacher Responsibility
Importance of QT	1						
Effect of QT	.285** 718	1					
Support for QT	.240** 735	.613** 657	1				
Satisfaction and Influence of PL	.285** 745	.571** 667	.492** 674	1			
PL Coherence with QT	.157** 579	.426** 527	.474** 531	.493** 544	1		
PL Coherence within school	.252** 702	.341** 631	.435** 639	.511** 671	.480** 514	1	
Teacher Responsibility	.190** 747	.180** 661	.113** 676	.190** 709	.165** 522	.338** 657	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

Interestingly, reports on how much and the nature of the professional learning also produced only a small number of statistically significant correlations with pedagogy. The only specific positive correlations were found between reported number of hours spent per month on curriculum development ( $r = .25$ ,  $p < 0.01$ ) and the quality of classroom practice and reported number of hours spent per month on preparing student reports ( $r = .33$ ,  $p < 0.01$ ) and the quality of assessment tasks. Uncorrelated with our measures of pedagogy were: number of hours per months spent on lesson planning, guidance and counselling, evaluation of programs, planning assessments, marking and reporting, and collaborative work related to curriculum, instruction and/or assessment.

#### *School level analyses*

Correlations at the school level revealed similar patterns as were found at the teacher level. With an overall sample of 33 schools, *Teacher responsibility* was strongly and significantly correlated with all three dimensions of observed pedagogy (coefficients for Intellectual Quality, Quality Learning Environment and Significance were .49, .61, and .54 respectively –

all with  $p < .01$ ). The correlation between *PL Coherence within School* and observed QLE was also positive and significant,  $r = .45$  ( $p < .01$ ). There were no other significant positive correlations at the school level.

Two significant negative school-level correlations were found between the overall quality of tasks and 1) the amount of professional learning dedicated to administration and leadership ( $r = -.40$ ,  $p < .05$ ), and 2) the amount of professional learning dedicated to technology ( $r = -.42$ ,  $p < .05$ ).

## Discussion

Returning then to the question of whether professional learning has any impact on pedagogy, which is the focus of this paper, what these initial statistics and the interview data suggest is that *some* professional learning is associated with the quality of pedagogy (as defined in the Quality Teaching framework), but the links between professional learning and pedagogy are not particularly strong or direct. That is, from our scales we can see inconsistency in the relationship between teachers' beliefs about the effectiveness of QT (which was positive on one dimension of classroom practice, but negative on one dimension of tasks), and partial relationships between pedagogy and *teacher satisfaction* (which was linked with only one dimension of classroom practice) and individual teachers' sense of the *coherence of PL within the school* (which links with only one dimension of tasks). The only consistent relationship between our broad measures of professional learning and pedagogy were the correlations between *teacher responsibility* and all three dimensions of classroom practice. Nonetheless, at the teacher level, we have some evidence that the hours spent on curriculum development and report preparation link to pedagogy as well.

Perhaps the most important finding at the individual teacher level comes from considering all of our remaining findings. That is, most of our analyses demonstrate **no** significant correlation between teacher perceptions and reports of effectiveness of professional learning and the measures of pedagogy drawn from observations in their classrooms and from coding of the tasks they set students to complete.

There are two important exceptions to this general finding. First, the links between, on the one hand, amount of time spent on curriculum development and report preparation and, on the other, pedagogy in classrooms and in tasks (respectively) suggest there is something of a direct link between the actions needed to change pedagogy and its quality. Each of these activities requires deep thinking about teaching: curriculum development engages teachers in

thinking carefully about how to sequence lessons and learning activities and how to organise content; report preparation requires careful thinking about evidence of student learning. It might be that we see more quality where teachers are deeply immersed in tasks that engage them in thinking about teaching. Second, there is also sufficient evidence of a possible indirect link between our measures of professional learning and pedagogy, through the underlying issue of teachers' sense of responsibility for student learning. At both the teacher level and the school level, teacher responsibility was linked with pedagogy. At the teacher level, there were strong inter-correlations between all our professional learning measures and teacher responsibility, particularly for our teacher reports of *PL coherence within the school*. This poses the theoretical possibility that professional learning may affect pedagogy *through* increasing the sense of responsibility teachers hold for their students' learning. One experienced teacher's comment on how QT has affected his understanding of what he is doing poignantly illustrates this possibility: "This is the first time since I started teaching that I am actually teaching, rather than just giving students work to do . . . it's a bit scary really."

At the school level, the teachers' reported sense of coherence between the professional learning and the school was also linked with school level measures for one dimension of observed pedagogy. Further, the message about coherence was reinforced at the school level with the negative findings about amount of professional learning time dedicated to matters un-related to pedagogy being negatively correlated to the quality of tasks teachers produced for students.

With these positive hypotheses outlined, it is also important to try to understand the general lack of relationship between professional learning and pedagogy found above. Here we suggest four plausible explanations for the overall patterns found.

*What is done in the name of QT PD is (so far) weak*

In a sense, the Quality Teaching initiative can be taken as a teacher level response to the now internationally recognised need to 'up the ante' when it comes to teaching. What the QT model asks of teacher is not easy. Consequently, it would be a mistake to expect that just because teachers experience some professional development related to QT it will necessarily produce better teaching. Smylie (1989), in a US survey, found that inservice training was ranked by teachers as their *least effective* source of professional learning. The type of professional development activity needed, if teachers are to adopt practices consistent with Quality Teaching, will have to differ from typical professional development experiences that provide teachers with information that they are supposed to interpret and use on their own.

Sustained, collegial activity focussed on practice, as we found in only a few schools, is more likely to produce change in practice. Supovitz and Turner (2000) found, for instance, that dramatic changes in teaching practice emerged only when professional development experiences were deeper and more sustained than is typical. In their study, the “big change in teaching practice came after 80 hours of professional development” (p. 976). While at this stage we have no measures of how much professional development in QT is needed to change teaching practice, it is clear that it will take work.

That many school level managers have not recognised the demands of the QT model is evident in the following interview excerpt from a school leader in one SIPA school in which the pedagogy measures were well below the sample mean:

I have outstanding teachers here. I can take prospective parents into any room without prior warning and know that quality teaching will be happening in the room and that’s pretty wonderful.

In such a context, it would be unlikely to find any connection between the professional learning of teachers and changes in pedagogy, as changes were simply not expected. A similar non-effect would also be expected, however, in school contexts where the nature of the challenge of QT might be recognised, but taken to be too great. For example, another SIPA school required each teacher to do prepare a unit of work with QT by the end of the year but, “only one, we don’t want to be too threatening.” In each of these contexts, it is plausible to expect teachers to be satisfied and believe their professional learning to be effective but, at the same time, lead to no substantial shift in the quality of their pedagogy.

*Teachers are resistant to either/both QT/this kind of PD*

There is no doubt that the QT initiative has asked teachers to directly examine their ‘core’ business. Not surprisingly, this imperative has met with at least some level of highly predictable resistance, for a variety of reasons. One of the reasons simply stems from an understandable insecurity, as put by one principal: “teachers’ biggest fear was that someone was going to sit in my room and watch me teach. People are team teaching and sharing ideas, but I have to be careful in encouraging them to do formal observations of each other with a buddy.” Comments reflective of an insecurity included:

People began to express concern that the model would be used to judge their teaching practice.

[It is] really important to get teachers on side, because teachers are the first to say ‘I don’t want anyone telling me how to do it’.

People's first reaction is always 'oh, what are they implying' and . . . very defensive. 'Does this mean that I'm not a good teacher?'

Part of this resistance, however, took on a particular quality, focused on the specific issue of the QT model's '*practicality*'. While this concern was not at all consistent in our data (sometimes not even consistently expressed within one interview), comments on how practical QT is were made directly in both positive and negative ways. On the one hand, some interviewees suggested their professional learning didn't provide what they needed, "Would like more practical ideas," "Would rather have been shown an example of how exactly to make a particular lesson a better quality lesson, instead of being critical of other people's lessons." On the other hand, the reason for wanting something more practical was often framed in a positive manner. Some teachers indicated that they would like to watch "good lessons as a guide to what should be done," or that they want to know "what would it look like if it was implemented on different levels and what changes would it make to the school?"

*The system messages about the value of QT are not overcoming a culture of pedagogical inertia in schools*

Not without good reason, many school leaders and teachers have recognised the propensity for their systems to introduce changes and reforms on a regular basis, only to hold focus on any one of them for very little time. In a system, like many other systems around the world, where a substantial portion of the teaching force is very experienced in terms of years in teaching, a healthy scepticism about system initiatives has sometimes translated into simple rejection of QT based on a commitment to not change. In the words of one SIPA teacher, who has been teaching for more than 16 years, "I just looked at the [QT] book and said 'Not another NSW Department of Education thing again!'"

Given this reality in the NSW system, of experienced teachers, some of whom are tired and sceptical of change, it will be up to the Department to decide whether or not it intends to outlast this form of resistance to change in relation to improving pedagogy. It is important to keep in mind that, for many teachers, it is unlikely to be conscious inertia. Rather, there is likely to be a culture of inertia at play, with teachers going through the motions and appearing to comply with new requirements, whilst reshaping or ignoring those requirements within the privacy of their classrooms (Cohen and Ball, 1990; Wilson and Corbett, 1990). Some teachers believe that, like so many initiatives, QT will go away. For the system, it will not simply be a matter of *not* going away, of persisting, of keeping QT alive for longer, since that would leave the inertia unmoved. In our view, if QT is to make a substantial difference to the

quality of pedagogy, the Department will need to develop policies and strategies to support serious engagement in professional development in relation to QT. Significant developments in professional learning policy have occurred during the past 12 months, providing school leaders with the funds and scope to drive their own professional development pathways. However, given the amazing lack of relationship between, on the one hand, teachers' belief in the importance of QT, their view of QT's positive effects, and their belief that they have been supported to deal with QT and, on the other hand, their own pedagogy, *it is quite possible that school leaders and teachers simply do not recognise the quality of their pedagogical practice*. That is, they could well agree with and believe in QT and their professional learning about it, but be viewing their own pedagogy through rose-coloured glasses. The challenges for the Department in supporting schools to really shift the quality of pedagogy should not be underestimated.

*It's early days yet and it will take more time for the PD to impact on QT measures*

One final reason we have found few links between professional development and pedagogy might well relate to both systemic issues and questions about the data employed here. That is, as we noted in our introduction, the data for this analysis were collected very soon after the initial in-depth professional development material for classroom practice was distributed, and well before any PD material for assessment tasks was delivered to schools. Consequently, this analysis could simply reflect the reality of a system at the very beginning of a change process, before any significant shifts had occurred.

There are two ways this will play out in the overall trajectory of SIPA, one of which responds to an outstanding question for both research and systems. First, as SIPA collects data over time, tracking cohorts of students, we will also be collecting professional learning data from teachers which we can examine over time as well. This means that at a school and system level, SIPA will be able to track overall organisational changes. Second, however, and perhaps more importantly, wherever an individual teacher teaches students in our cohorts in multiple years, we will be able to match over time pedagogy measures by teacher, thus giving us some estimate of individual pedagogy change at the teacher level. Since SIPA was not designed for this later possibility, the extent to which we will be able to conduct this analysis is not yet known. It should be noted, however, that if SIPA is able to develop such data for even a small sample of teachers, it will be able to offer analyses that are, as yet, unreported and ever more needed. The international educational community has all too little data on the individual change of pedagogy for teachers in any form, much less at part of an overall professional development initiative.

## One final note

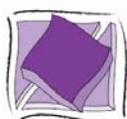
By way of conclusion, it is important to also mention one other plausible lesson from the above analysis. That is, it is quite possible that trying to measure what teachers say or believe or perceive about their professional learning may well not be the most direct way to go about improving pedagogy.

One of the interesting issues raised by analysing these data is the extent to which teachers are *required* to engage in professional learning experiences. Many principals and other leaders are treading very carefully with Quality Teaching saying ‘we don’t want to impose this too much on our staff’. ‘We can’t ask too much of them’... ‘we need to go gently, gently’. And yet it seems to be in those schools where they have really embraced QT and are pushing one another along (such as schools in which teachers are coding and observing each other’s practice and debriefing afterwards) where the teachers, even though they were daunted and challenged at first, are reporting very wide support for the benefits they have gained from that kind of process. This observation doesn’t mean we advocate that every school should force its teachers to observe and code each others’ practice, but it does raise the issue (applicable more broadly) of not just talking about a framework and handing out materials, but of finding ways to really engage teachers and to engage them in a collegial approach. Newmann’s work emphasises coherence at the school level of professional learning and its impact on pedagogy and we suspect that we will get those same sorts of patterns appearing more clearly as the study progresses over time. If teachers want students to engage in high quality tasks and lessons, if they want to raise expectations, teachers know that this is an agenda that they will need to guide, legitimate and probably stimulate. They will need to get on with the hard work involved if they want to seriously improve pedagogy, the core business of schools.

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### The NSW model of pedagogy

The model of pedagogy presented in the *Quality teaching in New South Wales public schools: Discussion paper* (NSW Department of Education and Training, 2003) has three dimensions that represent classroom practices that have been linked to improved student outcomes. These three dimensions are:

1. Pedagogy that promotes high levels of **intellectual quality**.

*Intellectual quality* refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas. Such pedagogy treats knowledge as something that requires active construction and requires students to engage in higher-order thinking and to communicate substantively about what they are learning.

2. Pedagogy that establishes a high **quality learning environment**.

*Quality learning environment* refers to pedagogy that creates classrooms where students and teachers work productively in an environment clearly focused on learning. Such pedagogy sets high and explicit expectations and develops positive relationships between teachers and students and among students.

3. Pedagogy that generates **significance** by connecting students with the intellectual demands of their work.

*Significance* refers to pedagogy that helps make learning more meaningful and important to students. Such pedagogy draws clear connections with students' prior knowledge and identities, with contexts outside of the classroom, and with multiple ways of knowing or cultural perspectives.

Each of the three dimensions of the NSW model of pedagogy is comprised of a number of elements. These elements are presented in Table 1.

	Intellectual quality	Quality learning environment	Significance
Elements	Deep knowledge	Explicit quality criteria	Background knowledge
	Deep understanding	Engagement	Cultural knowledge
	Problematic knowledge	High expectations	Knowledge integration
	Higher-order thinking	Social support	Inclusivity
	Metalanguage	Students' self-regulation	Connectedness
	Substantive communication	Student direction	Narrative

Table 1: The dimensions and elements of the NSW model of pedagogy

The discussion paper and other support materials related to *Quality teaching in NSW public schools* can be found on the web site:

<http://www.curriculumsupport.nsw.edu.au/qualityteaching/>



## **1.1 Deep knowledge**

### *Description*

Knowledge is deep when it concerns the central ideas or concepts of a topic, subject or KLA and when the knowledge is judged to be crucial to the topic, subject or KLA. Deep knowledge is evident when either the teacher or the students provide information, reasoning or arguments that address the centrality or complexity of a key concept or idea, or when relatively complex relations are established to other central concepts.

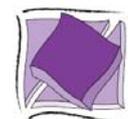
Knowledge is shallow or superficial when it does not concern significant concepts or key ideas of a topic, subject or KLA, or when concepts or ideas are fragmented and disconnected from a central focus. Knowledge is also shallow when important ideas are treated superficially by the teacher or students, or when there is no clear focus on an important idea or concept. This superficiality can arise from trying to cover large quantities of fragmented information that results in the content covered remaining unconnected to central ideas or concepts.

### *Coding scale*

**To what extent is the knowledge being addressed focused on a small number of key concepts and the relationships between and among concepts?**

#### **Deep knowledge**

- ① Almost all of the content knowledge of the lesson is shallow because it does not deal with significant concepts or ideas.
- ② Some key concepts and ideas are mentioned or covered by the teacher or students, but only at a superficial level.
- ③ Knowledge is treated unevenly during instruction. A significant idea may be addressed as part of the lesson, but in general the focus on key concepts and ideas is not sustained throughout the lesson.
- ④ Most of the content knowledge of the lesson is deep. Sustained focus on central concepts or ideas is occasionally interrupted by superficial or unrelated ideas or concepts.
- ⑤ Knowledge is deep because focus is sustained on key ideas or concepts throughout the lesson.



### INTELLECTUAL QUALITY

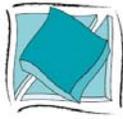
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#### Notes

1. The essential difference between deep knowledge and deep understanding is that deep knowledge is about how **content** is presented in a lesson, while deep understanding is about the **learning** students demonstrate. It is possible for deep knowledge to be presented (by the teacher, students or guest speakers), but for students to demonstrate only superficial understanding, or vice versa.
2. In curriculum debates, a strong distinction is often made between **depth** and **breadth** of knowledge, which at times pits one against the other. It is important to recognise that substantial syllabus content coverage (some breadth) is necessary in order to achieve depth of knowledge. Consequently, depth cannot be achieved simply by focusing on "less" content.
3. The main issue related to deep knowledge is one of **quality**. Deep knowledge requires relevant syllabus content to be organised and taught in such a way that a small number of ideas or concepts are clearly established as the focus of the lesson. Depth is present if the content of a lesson is structured such that the central focus brings coherence and purpose to the lesson.

#### Suggestions

- Identify and review students' prior knowledge as a starting place for addressing deep knowledge.
- Identify significant concepts in syllabuses by reviewing objectives, outcomes, content (e.g. *learn about* and *learn to* statements) and stage statements. Reflect on how the syllabus content can explicitly illustrate the concepts.
- Identify the key concepts and relationships to be addressed by asking the questions: *What do I want the students to learn?* and *Why does that learning matter?*
- Check that you have identified the key concept or relationship by asking the question: *How well does the concept or relationship draw the content together?*
- Map outcomes and content during unit planning so that each lesson focuses on illustrating significant concepts while addressing manageable amounts of content.
- Connect key concepts being addressed from lesson to lesson.
- Use learning tools in both planning and teaching to connect, identify and clarify knowledge, e.g. concept maps which explain relationships within a complex issue or topic.
- Select specialised resources carefully to build deep knowledge. These could include field experts, the local community and services, the Internet, multimedia and out-of-school visits.
- Provide unit or module overviews for students so that they can see how the concepts fit into the overall picture.



## **1.1 Deep knowledge**

### *Description*

Knowledge is deep when it concerns the central ideas or concepts of a topic or subject and when the knowledge is judged to be crucial to the topic or subject. Deep knowledge is evident in a task when students are required to address the centrality or complexity of one or two key concepts or ideas, and to articulate relatively complex relationships between central concepts.

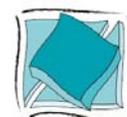
Knowledge is shallow or superficial in a task when it does not require students to address significant concepts or key ideas of a topic or subject, and when concepts or ideas are fragmented and disconnected from a central focus.

### *Coding scale*

**To what extent does the task focus on a number of key concepts within topics, subjects or KLAs, and require clear articulation of the relationships between and among concepts?**

#### **Deep knowledge**

- ① The task does not require students to address significant concepts or ideas.
- ② The task requires students to address some key concepts and ideas but only at a superficial level.
- ③ The task requires students to address a significant idea, but in general they are not required to sustain a focus on key concepts and ideas.
- ④ The task requires sustained focus on key concepts or ideas but does not require articulation of the relationships between and among concepts.
- ⑤ The task requires sustained focus on key concepts and ideas and requires clear articulation of the relationships between and among concepts.



### INTELLECTUAL QUALITY

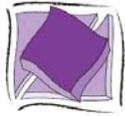
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#### Notes

1. The main issue related to deep knowledge is one of quality. Deep knowledge requires relevant syllabus content to be organised in such a way that a small set of ideas or concepts (one or two) is clearly established as the focus of the task. A task incorporates deep knowledge when it is structured such that it assists students to develop a coherent and purposeful response around a few key concepts.
2. In determining whether or not concepts or ideas are 'key' concepts, consider their broader meaning. Ask: "Does this concept or idea have significance for a lot of people?"; "Has its meaning lasted over time?"; "Does its meaning hold across a wide range of locations?" One of the tasks included in *Continuing the discussion about assessment practice* asks students to use the 3 on 2 situation in sport to their advantage. The deep knowledge lies in recognising the tactical advantage in using open space as a strategic principle in multiple contexts, including non-sporting contexts.
3. In curriculum debates, there has been a strong distinction made between depth and breadth of knowledge, which at times pits one against the other. It is important to recognise that some breadth is necessary in order to achieve depth of knowledge. Consequently, depth cannot be achieved in tasks simply by focusing on "less" content.
4. It is possible for a task to require students to address deep knowledge but require them to demonstrate only superficial understanding.

#### Suggestions

- Identify significant concepts in syllabuses by reviewing outcomes, content and stage statements. Reflect on how the syllabus content can explicitly illustrate the concepts.
- Focus tasks on relating central concepts and ideas with other concepts, or to particular contexts. Linking the task to previously addressed ideas (from either prior classwork or other tasks) or to new, as yet unexplored, concepts or contexts are two ways to strengthen the deep knowledge of a task.
- Ensure the task connects and scaffolds key concepts being addressed.
- Design tasks that require students to draw content together through the use of key concepts.
- Require students to carefully draw on a wide range of resources to help build deep knowledge. Such resources could include field experts, local community services, the Internet and other multimedia sources.



## **2.1 Explicit quality criteria**

### *Description*

High explicit quality criteria is identified by frequent, detailed and specific statements about the quality of work required of students. Explicit quality criteria become reference points when the teacher and/or students use the criteria to develop and check their own work or the work of others.

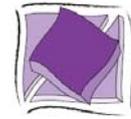
Low explicit quality criteria is identified by an absence of written or spoken reference to the quality of work expected of students. Reference to technical or procedural requirements only (such as the number of examples, length of an essay or the duration of a presentation) is not evidence of explicit quality criteria.

### *Coding scale*

**To what extent are students provided with explicit criteria for the quality of work they are to produce? To what extent are those criteria a regular reference point for the development and assessment of student work?**

#### **Explicit quality criteria**

- ① No explicit statements regarding the quality of work are made. Only technical and procedural criteria are made explicit.
- ② Only general statements are made regarding the desired quality of the work.
- ③ Detailed criteria regarding the quality of work are made explicit during the lesson, but there is no evidence that students are using the criteria to examine the quality of their work.
- ④ Detailed criteria regarding the quality of work are made explicit or reinforced during the lesson and there is evidence of some students, some of the time, examining the quality of their work in relation to these criteria.
- ⑤ Detailed criteria regarding the quality of work are made explicit or reinforced throughout the lesson and there is consistent evidence of students examining the quality of their work in relation to these criteria.



### QUALITY LEARNING ENVIRONMENT

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#### Notes

1. Designating what students are to do in order to complete a task does not by itself clarify what counts as high quality work. Merely outlining what students are supposed to complete is procedural. Explicit quality criteria, on the other hand, clarify for all students what the teacher expects in terms of a high quality completion of a task.
2. In some lessons and activities, explicit quality criteria should not be pre-specified, but rather allowed to develop as students are required to create their own work. When observing these lessons or activities, the question of explicit quality criteria relies on whether you can see students interacting with the quality criteria as they develop.
3. While the coding scale places value on the articulation of detailed criteria, simply listing detailed criteria may not give a full picture of what constitutes high quality work. For instance, at times when the "whole is greater than the sum of the parts", it may be useful to discuss the difference between a holistic impression in contrast to a point by point analysis.

#### Suggestions

- Ask the questions: *What do I expect the students to produce?* and *How well do I expect them to do it?*
- Provide students with clear criteria that explicitly describe the quality of work expected. This could be developed with the class through initial brainstorming and then discussion and refinement or through the development of an assessment rubric.
- Assist students to clarify the criteria to reach a shared understanding of what is expected, e.g. have students re-state in their own words what is meant by the criteria and identify examples of the criteria in their work and the work of other students.
- Assist students to use the quality criteria to reflect on and modify their work as it develops. This may assist students to develop skills in self-evaluation.
- Use the criteria to assess student work and to provide feedback during development, as well as on completion of the task.
- Provide annotated exemplars, work samples or models that illustrate high quality student performance based on the criteria. These exemplars could be work from past students and other sources.



## **2.1 Explicit quality criteria**

### *Description*

High explicit quality criteria in a task is identified by detailed and specific statements about the quality of work required of students. Explicit quality criteria become a reference point for assessing student work when it is clear how those criteria will be used to assess students' work.

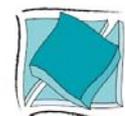
Low explicit quality criteria in a task is identified by an absence of written reference to the quality of work expected of students. Reference to technical or procedural requirements only (such as the number of examples, length of an essay or the duration of a presentation) is not evidence of explicit quality criteria.

### *Coding scale*

**To what extent does the task provide explicit criteria for the quality of work students are expected to produce, and use those criteria as a reference point for assessing the student work?**

#### **Explicit quality criteria**

- ① No explicit statements regarding the quality of work are made. Only technical and procedural criteria are made explicit.
- ② Only vague statements are made regarding the desired quality of work.
- ③ Clear statements are made regarding the quality of work but there is little elaboration of what it means to do well.
- ④ Clear statements are made regarding the quality of work and there is some elaboration of what it means to do well.
- ⑤ Statements regarding the quality of work are made explicit and it is clear how these criteria will be used in assessing student work.



### QUALITY LEARNING ENVIRONMENT

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#### Notes

1. Designating what students are to do in order to complete a task does not by itself clarify what counts as high quality work. Merely outlining what students are supposed to complete is procedural. Explicit quality criteria, on the other hand, clarify for all students what the teacher expects in terms of a high quality completion of a task.
2. Teacher modelling of a task does not constitute clear quality criteria as students may merely mimic what they have observed. However joint construction with the teacher, or a group of students, where students are engaged in producing their own model of what constitutes a high quality response to a task, can be regarded as high in explicit quality criteria.
3. In some practical creative tasks, it may not be possible to develop explicit quality criteria for particulars of the required product, as students may create their own work by determining the style, genre and materials they select. However, it is still possible to provide some general criteria which may be refined as the students develop their work.
4. While the coding scale places value on the articulation of detailed criteria, simply listing detailed criteria may not give a full picture of what constitutes high quality work. For instance, at times when the "whole is greater than the sum of the parts", it may be useful to clarify the difference between a holistic impression in contrast to a point by point analysis. In the construction of a holistic grading rubric associated with a set of marking criteria, clear connections should be made between the elements within a rubric and the separate criteria. Holistic rubrics should make clear how credit is given to the components within the rubric.

#### Suggestions

- As you design the task, keep in mind the questions: *What do I expect the students to produce? and How well do I expect them to do it?*
- When devising rubrics for assessment, consider whether the criteria refer to the quality of the work explicitly, or merely give procedural or technical instructions.
- Involve students in joint construction of clear criteria for the task that explicitly describe the quality of work expected. If the students have some control over the development of the assessment rubric they may have a greater understanding of what quality means.
- Use the criteria to assess student work and to provide feedback during development, as well as on completion of the task.
- Provide annotated exemplars, work samples or models that illustrate high quality student performance based on the criteria. These exemplars could be in the form of work from past students and/or other sources.
- Be clear about what counts as a high quality performance and communicate these criteria clearly so that all students know what quality work looks like, rather than spending lots of time articulating different bands or levels of performance.

### **Importance of Quality teaching**

SIPAQ examined participants' opinions on the importance of the NSW model of pedagogy, Quality Teaching. A construct was created, made up of four items. The reliability score attained for this scale was  $\alpha = .65$ . Respondents were asked to rate their opinion of Quality Teaching and its dimensions. The lowest possible score is 4 (Strong Disagreement) and the highest possible score is 24 (Strong Agreement). The mid-point of this scale is 14, so any score above a 14 indicates agreement. The closer a score is to 24, the stronger the agreement with the concept of seeing Quality Teaching as important.

The items included in this scale all led with the general prompt, 'What are your opinions about the NSW model of pedagogy, Quality Teaching? Mark the choice which is closest to your opinion' and included the following stems:

- The Quality Teaching model is an important focus for the NSW DET.
- It is important for teaching to promote high levels of intellectual quality for all students.
- A strong, positive and supportive learning environment affects the quality of students' work.
- If students are to value what they learn, they need to be able to link their school work to their lives beyond the classroom.

### **Effect of Quality Teaching**

SIPAQ examined participants' opinions on the extent of influence of the NSW model of pedagogy, Quality Teaching. A construct was created, "Effect of Quality Teaching", made up of nine items. The reliability score attained for this scale was  $\alpha = .91$ . The lowest possible score is 9 (Strong Disagreement) and the highest possible score is 54 (Strong Agreement). The mid-point of this scale is 31.5, so any score above 31.5 indicates agreement. The closer a score is to 54, the stronger the agreement with the concept of seeing Quality Teaching as influential.

The items included in this scale all led with the general prompt, 'To what extent have you engaged with the NSW model of pedagogy, Quality Teaching? Mark the response which is closest to your opinion' and included the following stems:

- I often engage in conversations with colleagues at my school about the Quality Teaching model.
- I have attempted to use the Quality Teaching model as a self-reflective tool.
- The Quality Teaching model has influenced the way that I plan my teaching.
- The Quality Teaching model has influenced the way that I develop learning tasks for my classes.
- The Quality Teaching model has had no impact on my students' learning (reversed).
- I have tried to keep up-to-date with the Quality Teaching publications released by the NSW DET.
- The Quality Teaching model has made no difference to the way that I teach my students (reversed).
- I have found the Quality Teaching model to be a useful resource for my teaching.
- The Quality Teaching model has influenced the way that I develop assessment tasks for my classes.

### **Support for Quality Teaching**

SIPAQ examined participants' opinions on the extent to which they felt they have been supported to engage with the NSW model of pedagogy, Quality Teaching. A construct was created, "Support for Quality Teaching", made up of three items. The reliability score attained for this scale was  $\alpha = .67$ . The lowest possible score is 3 (Strong Disagreement) and the highest possible score is 18 (Strong Agreement). The mid-point of this scale is 10.5, so any score above 10.5 indicates agreement. The closer a score is to 18, the stronger the agreement with the concept of being supported to engage with Quality Teaching.

The items included in this scale all led with the general prompt, 'To what extent do you agree with the following statements?' and included the following stems:

- I have been supported by my colleagues to engage with Quality Teaching.
- I have been supported by my school executive to engage with Quality Teaching.
- I have been supported by the NSW DET to engage with Quality Teaching.

### **Professional learning satisfaction**

SIPAQ examined the extent to which participants were satisfied with all of the professional learning experiences in which they had participated during Term 1 and Term 2, 2004. A construct was created, "Professional learning satisfaction", made up of seven items. The reliability score attained for this scale was  $\alpha = .83$ . The lowest possible score is 7 (Strong Disagreement) and the highest possible score is 42 (Strong Agreement). The mid-point of this scale is 24.5, so any score above 24.5 indicates agreement. The closer a score is to 42, the stronger the agreement with the concept of being satisfied with professional learning experiences.

The items included in this scale all led with the general prompt, 'How well do the following statements describe your professional learning experiences this year?' and included the following stems:

- The professional learning in which I have participated this year has improved my teaching practice.
- The amount of professional learning in which I have participated since the beginning of this year has been sufficient.
- Professional learning is valued by teachers at my school
- The professional learning in which I have participated this year has encouraged me to be a self-reflective teacher.
- The professional learning in which I have participated this year has influenced the way I plan learning activities for my students.
- The professional learning in which I have participated this year has influenced the way I plan assessment tasks for my students.
- The quality of the professional learning experiences in which I have participated since the beginning of this year has been satisfactory.

### **Quality Teaching coherence**

SIPAQ examined the extent to which participants identified consistency among Quality teaching, professional learning and the culture of their schools. A construct was created, “Quality teaching coherency”, made up of six items. The reliability score attained for this scale was  $\alpha = .85$ . The lowest possible score is 6 (Strong Disagreement) and the highest possible score is 36 (Strong Agreement). The mid-point of this scale is 21, so any score above 21 indicates agreement. The closer a score is to 36, the stronger the agreement with the concept that there was consistency among Quality teaching, professional learning and the culture of the participants’ schools.

The items included in this scale included the following stems:

- The professional learning activities focused on Quality Teaching in which I have participated this year have been consistent with my understanding of the Quality Teaching model.
- The professional learning activities focused on Quality Teaching in which I have participated this year have been consistent with the Quality Teaching support materials.
- The professional learning activities focused on Quality Teaching in which I have participated this year have been consistent with each other (in terms of my understanding of the Quality Teaching model).
- The professional learning activities focused on Quality Teaching in which I have participated this year have modelled Quality Teaching in their practice (or delivery).
- The other (non-Quality Teaching) professional learning activities in which I have participated this year have been consistent with the principles of Quality Teaching.
- The culture of the school (or the way that work is organised in the school) in which I work is consistent with the Quality Teaching model.

### **Professional learning coherency**

SIPAQ examined the extent to which participants identified consistency between professional learning and the culture of their schools. A construct was created, “Professional learning coherency”, made up of seven items. The reliability score attained for this scale was  $\alpha = .78$ . The lowest possible score is 7 (Strong Disagreement) and the highest possible score is 42 (Strong Agreement). The mid-point of this scale is 24.5, so any score above 24.5 indicates agreement. The closer a score is to 42, the stronger the agreement with the concept that there was consistency between professional learning and the culture of the participants’ schools.

The items included in this scale included the following stems:

- Professional learning is supported by other initiatives to improve the school.
- Professional learning programs at my school do not complement my teaching. (reverse coded)
- Curriculum, instruction, and learning materials are co-ordinated across Year levels.
- Professional learning is sustained and consistently focused at my school.
- Most in-service professional learning helps to advance a co-ordinated school mission
- There is very little co-ordination of curriculum, instruction, and learning materials across KLAs at my school. (reverse coded)
- I make a conscious effort to co-ordinate curriculum content with other teachers.

### **Teacher responsibility scale**

SIPAQ examined the extent to which participants agreed that they are responsible for student learning. A construct was created, “teacher responsibility”, made up of seven items. The reliability score attained for this scale was  $\alpha = .67$ . The lowest possible score is 7 (Strong Disagreement) and the highest possible score is 42 (Strong Agreement). The mid-point of this scale is 24.5, so any score above 24.5 indicates agreement. The closer a score is to 42, the stronger the agreement with the concept that teachers are responsible for student learning.

The items included in this scale included the following stems:

- I feel that I have been successful in providing the kind of education that I would like to provide for students.
- Many of the students I teach are not capable of learning the material I am supposed to teach them. (reverse coded)
- The attitudes and habits my students bring to my class greatly reduce their chances for academic success. (reverse coded)
- My success or failure in teaching students is due primarily to factors beyond my control rather than to my own efforts and ability. (reverse coded)
- Sometimes it is a waste of time to try to do my best as a teacher. (reverse coded)
- I am certain that I am making a difference in the lives of my students.
- The level of student behaviour and/or drug or alcohol use in this school interferes with my teaching. (reverse coded).