

## **Pedagogic capital : An essential concept (and tool) for effective school leaders**

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School leaders frequently recognize the need for their schools to improve student outcomes in particular areas. It is often more difficult to describe the teaching practice that they need in place to deliver the improvement. It is more difficult still to change the present teaching practice in the school. This paper examines these issues.

Consider this scenario. As an improvement agenda, schools in a region of Department of Education and Training, Victoria decided to target developing literacy. Three secondary schools, X, Y and Z illustrate how schools in the region differed in their response to this challenge. All embraced the agenda. X and Y initially had lower student literacy levels than Z. Over a period X showed an improvement in student literacy outcomes while Y and Z remained largely unchanged.

The improvement in X was paralleled by a change in teaching practice across the school. This change was initiated and guided by its school leadership team, led by its principal, Robert. It was planned strategically and implemented in a systematic, structured and organised way. It was monitored using indicators of student learning and staff teaching behaviours.

This scenario is not unusual in educational provision. Whatever the improvement focus, schools differ in how they achieve it. The ease with which they do it is a measure of their effectiveness.

The means they use interests school leaders. In this scenario, one aspect of the improvement was a consistent and stable change in the teaching procedures. Teachers in X were led to modify their teaching procedures and these were associated with changes in what and how their students learnt. While schools Y and Z were committed to the need for literacy improvement, they did not show a similar change in teaching practice. This outcome is not surprising; studies over two decades have shown the important influence of teaching practice on student learning outcomes.

Robert recognized that X improved literacy would be more likely when the teaching practice targeted literacy learning. The staff needed to learn alternative teaching procedures that taught their students more about using literacy to learn. Without changing the practice, little would be achieved.

The leadership team needed to have a clear impression of what effective literacy teaching would 'look like'. This would enable them to provide a direction for the change, to evaluate or assess practice at any time, to monitor progress and see where to go next. They needed to be able to distinguish between teaching that would be more and less likely to foster literacy learning and to be aware of student activities that would be more likely to enhance literacy knowledge.

Robert's school, like most, had attempted this earlier but without sustained success. Staff had attended professional learning days but had not substantially changed their teaching. The innovative speakers he had invited to the school had been usually well received but had little impact. The opinions of educational acolytes identifying the need for 'transforming' and 're-imagining' schools and classroom practice that he distributed to staff had attracted positive derision as irrelevant rhetoric.

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<sup>1</sup> A version of this paper was published as Munro, J. (2007). *Pedagogic capital : An essential concept (and tool) for effective school leaders*. Seminar paper. Jolimont, Vic.: Centre for Strategic Education.

Robert needed to unpack the conditions necessary for fine tuning classroom teaching. His staff in the past had resisted this. Some had acknowledged as useful the recommended ideas of earlier visiting speakers but always had reasons for not implementing them. The restrictions and barriers they perceived seemed impenetrable. Some had attempted to make minor adjustments to their teaching but these had not delivered consistent improvement in student outcomes.

What we are talking about here, and what concerned Robert at the start of the improvement agenda, was teachers' professional practice, that is, the teaching procedures they actually used. In his school, it ultimately changed sufficiently to scaffold improved student outcomes. In schools Y and Z, though there was a commitment to enhanced outcomes, there was not an accompanying change in professional practice.

The focus of this paper is on teachers' pedagogic practice from a knowledge perspective. It asks the questions : What knowledge underpins professional practice at any time ? What conditions are more likely to allow it to be enhanced ? "Knowledge" is used to refer to all that individuals know and believe about professional practice. It includes relevant conceptual knowledge, professional experiences, attitudes and beliefs about learners, knowledge and learning, beliefs and assumptions about how schools do and should operate and their ethics and values as professional educators.

When Robert began to interpret teachers' earlier involvements in pedagogic change activities, he could see that staff members differed in what types of knowledge they had. Some lacked a conceptual understanding of the topic, such as literacy. Some knew the topic but didn't map this into learning and teaching. Some knew about effective teaching procedures but did not use them in their classrooms. Some believed they were teaching effectively and their students needed to adjust to this. Some had negative experiences in earlier staff development programs. Some thought the school leadership team would soon tire of this innovation and take on another priority.

Each of these reasons for 'professional inertia' indicate a different knowledge disposition. To complicate the issue, the reasons often co-occur. Any professional learning program intended to change teaching needs to acknowledge these factors. Its success will depend on the extent to which each of these is accommodated.

### **Practitioner knowledge**

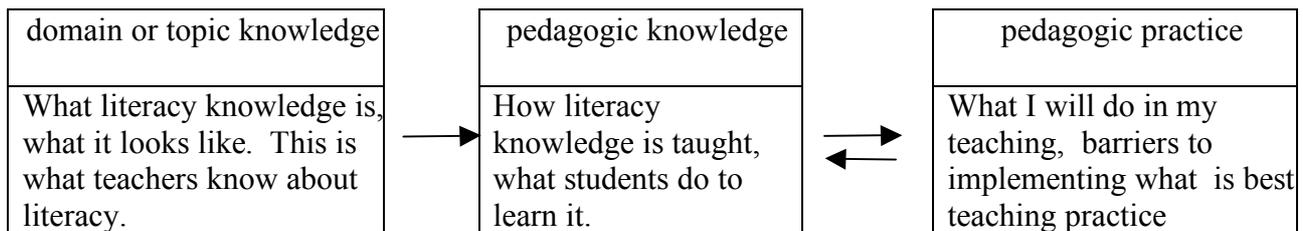
As a first step in unpacking or analyzing teaching practice, it is useful to identify various types of knowledge at an individual practitioner level.

- pedagogic practice : this refers to the repertoires of teaching behaviours a teacher uses routinely and strategically to facilitate and support students' learning. These are the actions that characterize a teacher's on-going professional interactions in her or his practice, the totality of what the teacher 'says' and 'does' to fulfil her or his role as an educator. More generally, this knowledge can be referred to as 'professional practice'.
- pedagogic knowledge : this is used to refer to what a teacher knows about effective teaching and the learning -teaching aspects of a topic, for example, what a knowledge of what effective science teaching or literacy education might 'look like'. It includes what a teacher knows about teaching and learning, curriculum and assessment, the topics they teach, the institution, system and community in which they teach, themselves as a teacher, their expectations of key stake holders and their ethics as a teacher. This knowledge can be in multiple forms; conceptual, experiential, attitudinal and belief forms.

The pedagogic practice implemented at any time will reflect decision making and prioritising that derives from this knowledge. Teaching practices are a consequence of a selective and often strategic synthesis and mapping of these areas of knowledge into teacher action sequences that are intended to initiate, guide and support student learning.

- domain knowledge : this is what a teacher knows about a particular topic in ways that are unrelated to teaching and learning. A teacher may, for example, have a well developed knowledge of topics in science or literacy.

A teacher’s professional knowledge is an integration of these three aspects. They are illustrated using literacy knowledge



The three types of knowledge are related. First, it is assumed that pedagogic practice is influenced by the relevant pedagogic knowledge and that pedagogic knowledge is in turn informed by the relevant domain knowledge. Pedagogic knowledge, for example, provides the potential for pedagogic practice. However, not all that a teacher knows about teaching possibilities in an area goes into the teacher’s practice. Teachers may see barriers and obstacles to doing this.

The relationship between pedagogic knowledge and pedagogic practice is not one-directional. Pedagogic practice is more than ‘doing what you know’. The actions a teacher uses can feed back to change or to broaden what the teacher knows and inform the further development of knowledge. Many theories of knowledge development identify action sequences as important in understanding ideas in more abstract ways. Both Piaget and Vygotsky, for example, talk about ways of thinking being learnt by ‘internalizing action sequences’.

Teachers frequently reflect on what happened after they use a sequence of teaching procedures. This reflection allows them to modify what they know, or see new options or possibilities. The importance of retro or evaluative reflection on the outcomes of action sequences is important for the development of practitioner knowledge generally.

School leaders can use this differentiated approach to professional knowledge to identify those aspects that in place at any time and those that need further development. They can also use it to encourage focused reflection on professional practice and to guide teachers to modify their practice accordingly.

What a teacher actually does is influenced also by various factors in the school community, such as policy, political, institutional, economic, demographic and community factors. These factors act as ‘filters’ or ‘lenses’ on the teaching procedures that are actually used. A school may decide, for example, to pursue a particular approach to literacy education. Teachers could be expected to use teaching procedures consistent with it regardless of their pedagogic knowledge.

A teacher’s pedagogic practice may be influenced by colleagues and members of the school leadership team through the professional climate in the school. Some schools encourage teachers to work collaboratively to trial novel teaching procedures and to share professional knowledge.

Some school leadership teams encourage dialogue about professional practice through the strategic use of instructional leadership.

Again, school leaders need to understand and recognise the influences on a teacher's practice at any time. They may also need to intervene to modify these influences.

### **Pedagogic capital : the teaching power in a school**

Just as a student's learning progress is likely to be influenced by the teaching practice of more than one teacher in a school, so is a teacher's practice likely to be affected by factors in the school community. Some were noted in the foregoing section. It is reasonable, therefore that school leaders think in terms of the total pedagogic knowledge their staff have relating to a particular topic. This is referred to as the pedagogic capital in a school and represents its 'teaching power'.

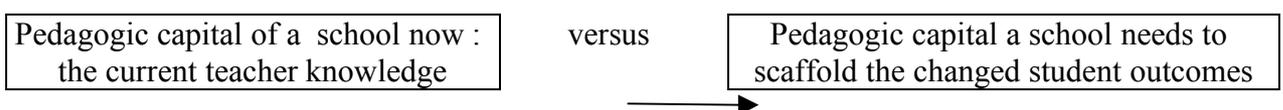
The pedagogic capital of a school is its knowledge about how to do its core work of facilitating students' learning (Munro, 2004a). It is the total teaching resources and knowledge on which the school can draw, the synthesised knowledge that exists in the school about effective teaching practice. The term 'capital' is used to indicate that this knowledge can be seen as an essential strength or a valuable resource to a school that can be used to achieve its core goals.

The concept can be used to refer to a particular topic or subject area. When Robert's leadership team began to plan the professional learning program for his school, it needed to know the current status of literacy teaching in the school. This included an estimate of what the staff already knew about fostering literacy, both what they actually did in their teaching and what they believed to be good practice in fostering literacy but didn't necessarily do. This would indicate the current pedagogic capital for literacy in the school.

As well, the team needed a clear impression of what effective literacy teaching would 'look like'. This would indicate the pedagogic capital the school would need to achieve its goals in the area of literacy education. They needed distinguish between teaching that would be more likely to foster literacy learning and student activities that would enhance literacy knowledge.

The current pedagogic capital of the school in literacy would provide the starting point for professional development program. The preferred pedagogic capital indicates the direction in which teacher knowledge would be guided. It provides indicators of progress in fine tuning teachers' pedagogic knowledge. It also provides a reference point for evaluating current practice and for developing an action plan for staff professional learning in literacy.

Generally then, the concept of pedagogic capital focuses attention both on where a school is and the knowledge it needs in order to achieve its goals or visions. This is shown in the following:



The focus here is on the school leadership team (or SLT) identifying 'where it wants to be' and comparing this with 'where it is now'. It asks the questions *"How will our teachers be teaching if we achieve our goals ? How will our students be learning ? What will they be doing ? What will the school and the leadership team be supporting, resourcing and scaffolding?"* It matches each question with the current situation in the school.

This in-time visioning provides SLTs with a useful conceptual tool for unpacking the building of pedagogic capital needed to scaffold the school's growth or improvement. When a school

embarks on an improvement agenda, it needs to target its pedagogic capital. Even though the school may have the desire to change, it will not do so unless it develops its relevant corporate knowledge about pedagogy. A school that decides to improve the literacy outcomes of its students may need to develop its pedagogic knowledge about how to teach literacy to its students. Key notions in school improvement are a school's current pedagogic capital and the pedagogic capital it needs if it is to achieve its goals.

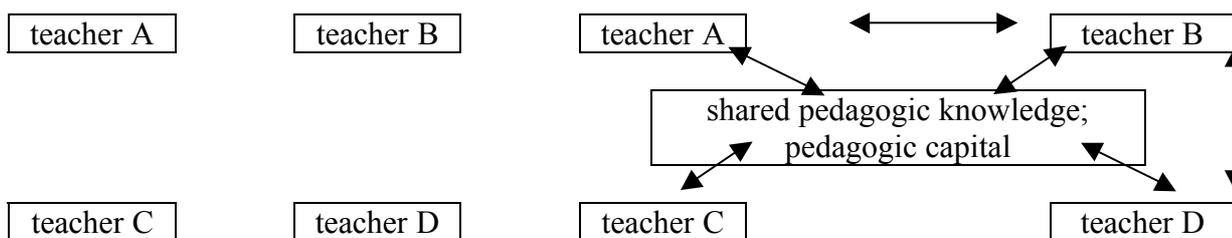
### Code of teaching practice

Some schools and departments or faculties within schools find it useful to assemble a 'code of teaching practice' that specifies the key characteristics of pedagogic practice that are shared and practised by staff, that the school believes to be the core elements of best teaching practice. The code is the school's recognition that there are aspects of 'best teaching practice' that are acknowledged in all of its teaching. A school may agree, for example, that valuing and using students' existing knowledge of a topic, or that encouraging students to review regularly what they have learnt, will generally be explicit in teaching practice in the school.

The code is a means by which the school can communicate what it sees as its pedagogic capital at any time. All teachers in the school will use procedures that target these aspects of learning, even though they may differ in the actual procedures and the student activities they use. It provides the school with a means of saying 'this is where we stand in pedagogy' or 'this is what you can expect to see in teaching practice in our school'.

### Knowledge networks underpin effective pedagogic capital.

Teachers' knowledge of effective pedagogy is a potential resource for any school. It becomes an actual resource when it is available to assist the school to achieve its goals. This can happen in various ways; the knowledge is mapped into practice that allows students to learn most efficiently and when it is available to enhance the pedagogic practice of other teachers in the school. The knowledge sharing in the two contexts is shown for four teachers, A, B, C and D, implementing pedagogy, in the following diagram.



(1) Pedagogic knowledge is mapped into practice

(2) Pedagogic knowledge is shared collegially and mapped into practice

In the first case there is little sharing of professional knowledge. It is possible that Teacher B knows little about the teaching procedures used by Teacher A. In the second case there is, evolving in the school, a body of shared professional knowledge. The pedagogic practices used effectively by Teacher B are available to inform the practice of A, C and D. While the potential for pedagogic capital may be high in the first case, the actual pedagogic capital may be lower.

So far we have discussed pedagogic capital as an outcome, or as a description of group knowledge at any time. It is also a process, through which pedagogic knowledge is made explicit, pooled and synthesised and made available to colleagues. The second case shows a knowledge network

underpinning the gradual emergence of a pedagogic capital. Knowledge networks underpin effective pedagogic capital.

The development and emergence of pedagogic capital is based on professional dialogue, both informally and in more organised, planned ways, that encourages a positive focus on learning and teaching. The nature and quality of this dialogue will be influenced by factors such as the level of professional trust in the school and participants' preparedness to engage in this dialogue in an on-going way. It includes sharing professional practice, discussing issues and options and problem solving. Useful contexts include staff seminars, joint action research and trialing of novel teaching procedures and work in professional learning teams.

These activities scaffold the notion of pedagogic capital in the thinking of staff as an invaluable resource in the school for dealing with emerging problems and issues. When an issue arises, individual staff learn to access the pedagogic capital, either informally or formally. They frame up the problem or issue in terms of learning and teaching criteria and discuss it with colleagues.

### **The role of school leadership team in fostering a positive disposition to pedagogic capital**

The school leadership team has a key role to play in fostering a positive disposition to pedagogic capital through its strategic use of instructional leadership. Instructional leadership refers to the practices used in a school to lead the implementation of pedagogy and where necessary, to change that practice in response to issues both within or outside of the school. It is a means through which the SLT can take active and strategic responsibility for the teaching practice in the school. The SLT can develop pedagogic capital as a school-based resource for dealing problems and issues.

There are various questions the SLT may examine in relation to the pedagogic capital of the school. These include:

- How would you assess the current pedagogic capital of a school in an area in which the SLT would prefer improvement? The issue here the extent to which the SLT judges the school's teaching knowledge and capacity as sufficient to allow it to meet its goals. The SLT needs to decide how it will assess pedagogic capital, what it will see as evidence and how it will collect the evidence. These questions are examined in a later section.
- To what extent is the capacity to convert pedagogic knowledge to pedagogic practice an issue for a school? How well do staff put their professional knowledge into practice? The SLT needs to decide what would be useful indicators of this, for example: To what extent are teachers likely to talk about teaching options that they do not use in the current context because of the barriers or obstacles they perceive?

The issue here is that teachers don't necessarily apply all that they know either pedagogically or conceptually in their teaching practice, for a range of reasons. These can range from not seeing links between what they know and the current context, a lack of self confidence in applying what they know, a belief that what they have in place is sufficient (that is, a lack of incentive to change current practice) to a belief that the current context does not expect or value changes in practice.

Some teachers may not be aware of the distinction between what they know and what they do, that is, they may not have clarified a distinction between pedagogic knowledge and practice. Others may be aware of the distinction but not see ways of dealing with it. SLTs need to be aware of these possibilities and identify which are acting as inhibitors in making maximum use of existing professional knowledge.

- How able is the school to enhance its pedagogic capital in particular ways? The issue here is how well the school can build pedagogic capital to scaffold its movement in particular directions. The questions here are: *What would you rate / evaluate as the professional learning capacity of your school? What would be indicators of a high / low capacity? To what extent has the pedagogic practice of the school / particular teachers changed recently following teachers' involvement in professional development?* This issue will also be examined in a later section.

The emergence of the professional knowledge sharing networks is facilitated by a positive professional climate in the school. This is examined in the following section.

### **Pedagogic capital as a conceptual tool**

School leaders can use the notion of pedagogic capital as a conceptual tool to assist them to understand more about their school, to evaluate and diagnose its strengths as a teaching and learning organization and to equip them with strategies for enhancing its performance in these areas. Three key ways in which it can operate as a conceptual tool are as follows:

- A tool to assist a school to identify its strengths at any time, to identify the extent of alignment between its goals at any time and the pedagogic practice available to meet these. *How would you assess the current pedagogic capital of a school in terms of an area in which the SLT would prefer improvement?* The issue here the extent to which the SLT judges the school's teaching knowledge and capacity as sufficient to allow it to meet its goals. The SLT needs to decide how it will assess pedagogic capital, what it will see as evidence and how it will collect the evidence.
- A tool to assist planning future directions and pathways for the school to build capacity to support these directions in the future
- A focus on how pedagogic capital is built, a means of monitoring progress The issue here is how well the school can build pedagogic capital to scaffold its movement in particular directions.

### **How to assess the pedagogic capital of a school or a group within the school**

A SLT usually has particular reasons for assessing how well the teaching practice is achieving specific goals. To assess the pedagogic capital of his school for literacy, Robert's SLT needed to evaluate what was actually done systematically and strategically to achieve the literacy teaching goals. This included

- what teachers did in their classroom practice, the student literacy behaviours they scaffolded, the student indicators they used.
- what teachers did to support and scaffold the literacy teaching practice of colleagues.

To assess his school's pedagogic capital in literacy, Robert's SLT needed a clear impression of the characteristics of teaching practice most likely to enhance literacy learning, that is, what teaching practice likely to enhance literacy learning would 'look like' in classroom practice. They needed to know whether what teachers are doing is likely to be effective in achieving their goals.

More generally, to gauge the pedagogic capital of teachers' practice, it is necessary to assess its effectiveness. *Is the current teaching likely to improve student learning outcomes in the intended ways? Are professional development activities most likely to enhance teaching practice?*

Student learning outcomes data tell part of the story. They indicate student knowledge at fixed points in learning pathways. Sometimes they are collected too late for effective changes in teaching practice. Student indicators of learning progress along a pathway are more useful.

In terms of the sufficiency of the pedagogic capital in his school for literacy learning, Robert needs to know more than the students' literacy outcomes at the end of each year. He needs to know whether the teaching of vocabulary enhancement in Term 1 or paraphrasing written texts in Term 2 is working. Overall test results at the end of Term 4 are not as useful as indicators of literacy progress along the pathway.

SLTs can use a range of devices for collecting data about the collective pedagogic knowledge relating to a particular issue in their school. These include

- discussions with individual staff about problems or issues with student learning in the area and the teaching procedures they use.
- staff focus groups that examine how aspects relating to the issue are handled in the school.
- the level of confidence staff have in their capacity to lead staff discussion about aspects of the issue and their preparedness to model relevant teaching procedures for colleagues.

These discussions could include a consideration of

- what staff believe they know and can do and those areas in which they need further assistance in teaching.
- what staff believe they could do if aspects of the school context were different, the barriers they perceive to using other teaching options.

### **How pedagogic capital is built : Professional learning capacity**

The concept of pedagogic capital is also useful when a school embarks on an improvement agenda. While a SLT may decide that an innovation is necessary, the school may not necessarily move in that direction unless it modifies its teaching practice to scaffold the change. It may need to develop its relevant corporate knowledge about pedagogy. A school that decides to improve the literacy outcomes of its students will probably need to modify what it knows about how to teach literacy.

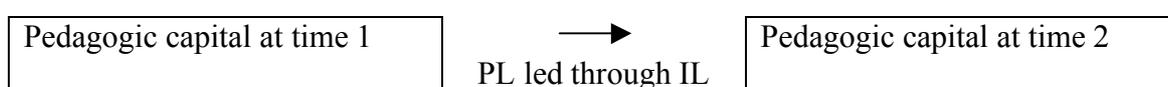
The school needs to identify how its teachers will be teaching differently, what its students will do differently and how the leadership team will be leading differently.

Improving a school's pedagogic capital involves building its capacity as a professional learning community. This involves

1. an explicit statement of where the school would 'like to be' given enhanced pedagogic capital.
2. an audit of where the school is in its professional learning capacity and its relevant pedagogic capital.

3. combining data from the audit with data from other aspects of the school's operation (such as student learning outcomes, staff morale) to identify areas for professional growth.
4. developing an implementation plan and a set of processes and structures to foster focused professional learning (or PL). This includes indicators for monitoring growth and changes in pedagogic capital.
5. fostering and implementing a positive professional climate to enhance pedagogic capital.

To achieve improved teaching practice, a school needs the capacity to learn professionally. PL is how teachers enhance their professional knowledge by learning new teaching procedures. It is the means by which a school's pedagogic capital is enhanced. In-time visioning as a conceptual tool for directing or orienting the building of pedagogic capital has been discussed. Effective PL, guided and shaped by effective and focused instructional leadership (IL) will allow it to be realised.



The schools' professional learning capacity (or PLC) is what the school knows about how learn professionally. This determines how well PL can occur. Effective leadership builds and guides this capacity. School leaders need to know how to build a PLC. An explicit, operational model for doing this is described in Munro (2005a, 2005b). Case studies that describe how primary and secondary schools have improved their pedagogic capital to support enhanced literacy outcomes are provided in Munro (2004a, 2004b).

**The SLT leads the focus of PL activity towards enhanced pedagogic capital.**

The SLT has the responsibility for directing the PL activity towards enhanced pedagogic capital. This includes guiding staff to

- unpack the demands of PL, see the learning pathways and how they can fine tune their teaching practice successfully.
- learn and work collaboratively and support each other to achieve change.
- use professional learning capacity, resources and opportunities to maximum success.

To illustrate this, consider one 'bottleneck' that restricts more successful pedagogic practice. This is the extent to which pedagogic knowledge is mapped into this practice. As noted earlier, what teachers know about effective teaching practice often exceeds what they do routinely in their teaching. The professional learning activities need to assist the translation of teacher knowledge into practice. Factors that assist this include the SLT

- (1) communicating explicitly the expectation that pedagogic practice will improve.
- (2) providing practical opportunities for PL that include (i) fostering and validating a community of pedagogic enquiry, (ii) encouraging PL teams to develop shared goals and purposes, (iii) reflecting on and evaluating their practice, identifying where it could be improved, (iv) action plans for orienting the learning, (v) indicators of progress, (vi) valuing individual and group knowledge and (vii) opportunities to trial and evaluate novel practices.

- (3) using strategic instructional leadership. We have noted the importance of professional dialogue to help teachers build their pedagogic practice. Various types of scripts to encourage critical teacher reflection on professional practice have been identified (Blase 2000). School leaders judged to be more effective;
- made suggestions that were purposeful, appropriate, non threatening. They listen, share experiences, use examples and demonstrations, give teachers choice, encourage risk taking, recognize strengths, and maintain a focus on improving instruction.
  - gave specific feedback that focused on observed classroom behaviour, expressed caring and interest, established a problem-solving orientation, responded to concerns about students, and stressed access to follow-up talk.
  - modelled and demonstrated teaching techniques in classrooms.
  - used inquiry and solicited teachers' advice about instructional matters.
  - gave praise that focused on specific and concrete teaching behaviours.
  - encouraged involvement in professional development, reflective discussions and collaboration.

School leadership teams may need to be trained to lead PL and to provide the IL necessary to build pedagogic capital. Their capacity to provide leadership that (1) extends teachers' thinking and helps them identify practical options and alternatives and (2) provides strategic and constructive evaluative feedback are important here.

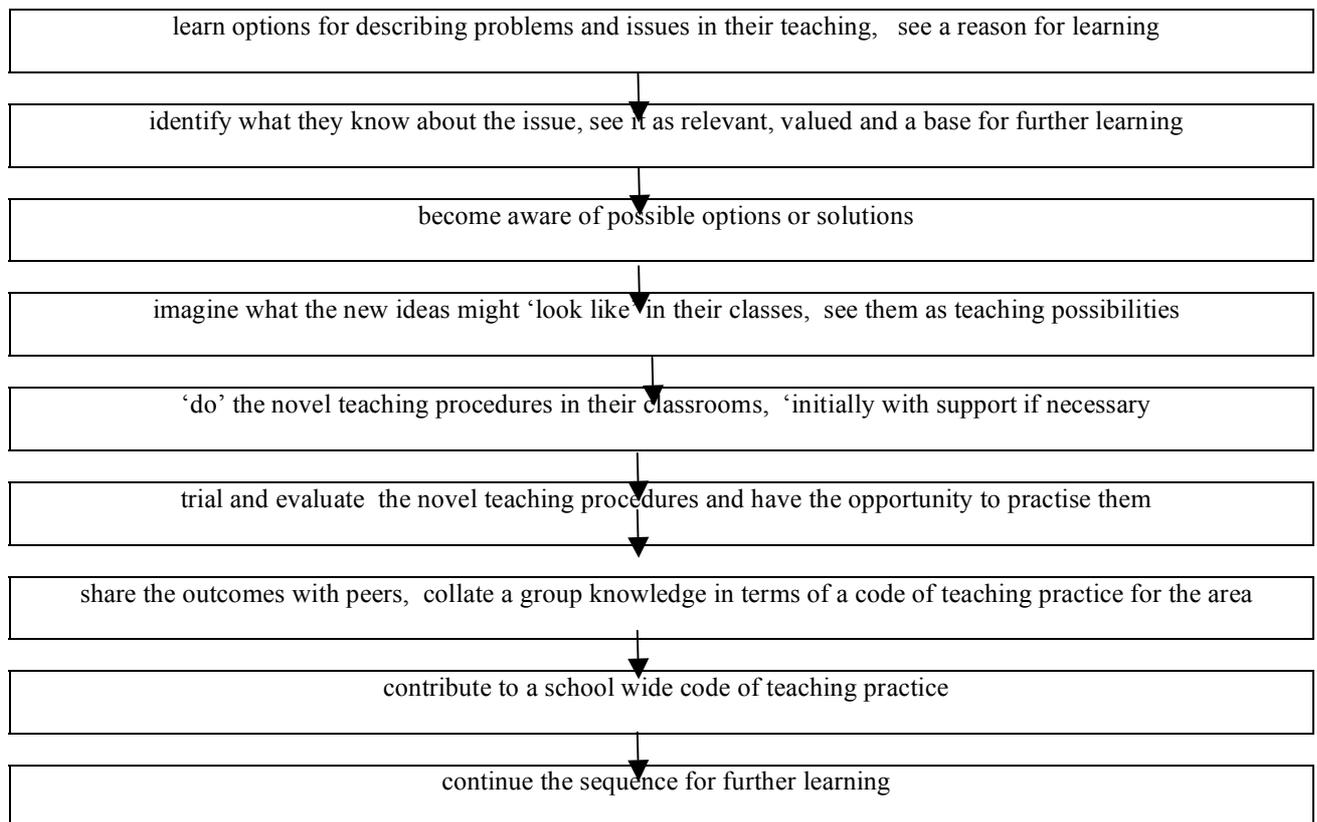
### **The PL most likely to build pedagogic capital.**

The approach to PL most likely to build pedagogic capital involves the following systematic set of learning opportunities:

1. staff accept there is an issue or problem in their teaching practice that can be solved. In Robert's school the staff needed to see that students' literacy knowledge and skills were comparatively low and that their achievement and life options would be enhanced by improving them.
2. staff have the opportunity to learn more about the topic or issue. In Robert's school they learnt more about literacy and how it can be unpacked and used in their subject areas. They needed to see that learning in their subject involved using this knowledge and skills and that teaching would be easier in the subject if students' literacy skills were higher.
3. staff interpret the problem or issue in terms of learning and teaching and see there are teaching options for dealing with it. In Robert's school the staff in the past had believed that students' backgrounds restricted literacy. They now interpreted students' backgrounds from a teaching perspective and that it was the responsibility of each teacher to teach literacy in their subject area.
4. staff have the opportunity to apply novel options in their teaching, see that they are 'do-able' and manageable,

5. staff can learn to apply the new teaching options in supported or scaffolded contexts,
6. staff have the opportunity to apply, trial, practice and refine the teaching options in their regular teaching
7. staff share their evaluations of the novel teaching procedures with colleagues.

The sequence of professional learning activities is shown in the following diagram.



This sequence of professional learning activities can be applied to any topic schools need to learn. Detailed sequences and types of professional learning activities are described in Munro (2003b, 2002b). The outcomes of this for literacy enhancement is described in Munro (2004a and 2004b).

PL frequently ignores the need to explicate, acknowledge and build on the earlier professional experiences of staff. During their careers, teachers store a bank of professional experiences. Each experience includes the events, the emotions that were implicated and the learning outcomes. The capital can be enhanced by these banks of personal professional knowledge.

When PL programs neglect these experiences, staff don't see them recognised or valued, even though this may be the knowledge on which their current practice is based. As a consequence, they see a division between the focus of PL activity and their 'real world' experiences and see less value in engaging in the activity.

Whatever the leadership team does, these influence the future pedagogic capital of the school. It is in the interest of the leadership team that they have a positive influence. Even when the past experiences involve events, ideas and attitudes that are counter to the current improvement focus,

they need to be dealt with and resolved. If this is not done, they can seriously limit building the capital.

SLTs can encourage staff through PL activities to (1) recognise, value, reflect on and interrogate earlier experiences; (2) contribute their unique experiences of a topic or issue as additional options for colleagues, (3) analyse their relevance to the current pedagogic practice) and (4) trial and evaluate the distilled outcomes of experiences and map them into possibilities for improved professional practice.

### **The professional climate more likely to enhance pedagogic capital**

Building a pedagogic capital is easier given a professional climate conducive to it. The leadership team can work on putting this in place. Aspects of a positive professional climate are shown in the following table. Each is exemplified for enhancing an awareness of pedagogic capital in literacy.

Aspect	Applied to literacy pedagogy
The school emphasizes the study of teaching and learning about the particular topic.	Teachers observe and discuss trends in literacy learning and what these mean for teaching.
The school shows it is aware of what it knows about particular topics. It uses procedures to collate what members know about particular issues.	Teachers' existing knowledge about literacy teaching is pooled and collated. They describe what they know about literacy learning and teaching.
The school knows how to learn in relation to the particular topic and is confident of its capacity to do this.	The school has an explicit agenda of the steps to take to improve what it knows about literacy teaching.
Teacher PL is valued explicitly and the school applies the principles of adult learning to staff development opportunities. It supports collaboration, teamwork and coaching. Staff have time for self evaluation and reflection.	Teachers see literacy teaching procedures modelled and have time to trial these in their teaching, are encouraged to share procedures and observe literacy teaching in other classrooms and have time to reflect on and evaluate their teaching.
Ideas are discussed and evaluated freely on the basis of their intrinsic worth.	Staff discuss and compare a range of issues in relation to literacy teaching.
Multiple ways of PL rather than homogeneity are encouraged.	Staff can improve their knowledge of literacy pedagogy in a range of ways.
Explicit indicators of learning are used to monitor its progress / growth in an area of learning.	The school identifies the literacy teaching procedures staff will trial in their teaching each term.
The school sees improved pedagogy as a route to enhanced achievement. Dialogue about learning and pedagogy is valued. Pedagogic leadership is explicit and systematic. The school has an explicit plan for enhancing teaching.	The school describes problems and issues in terms of literacy learning criteria.  Options for improving literacy teaching are discussed regularly. Each department has explicit plans to improve literacy teaching and use action research to inform their literacy teaching.

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School leaders can use this set of criteria in various ways:

- to estimate or gauge the extent to which the professional learning climate in the school supports the development of pedagogic capital in relation to particular issues.
- to diagnose those aspects of the climate that require further development to more adequately support the development of pedagogic capital. A representative sample of teachers can be asked to rate the climate of the school on a 5-point scale for each criterion.

### **Guiding the building of pedagogic capital**

Robert’s staff, at the beginning of the PL program, generally did not have a useful understanding of literacy or what it involved; they lacked the relevant domain knowledge. Not surprisingly, they lacked a knowledge of how to teach it (the relevant pedagogic knowledge) and did not intentionally use procedures to foster it in their teaching (the relevant pedagogic practice). Some had a limited view of literacy and a belief that this would solve all problems. As well, the school did not have a clear idea of how to learn professionally. The PL for individual staff members needed to be guided and directed externally.

As the school continued to experience success in modifying its literacy teaching, the staff learnt how to learn new procedures. They used the evolving pedagogic capital to develop a problem solving mindset to interpret issues in student learning from a literacy perspective, a dialogue for tapping into the collegiate knowledge bank and identifying possible teaching options and a collaborative framework for trialing these options. They regularly shared knowledge and fed into the capital. Teams became more autonomous, self managing and directing in their PL.

SLTs need to recognise these changes in PL capacity. From the perspective of a motivation to learn professionally, teams initially may need to be extrinsic motivated to learn. As their success as professional learners increases, the SLT needs to support a transition to intrinsic motivation. If the SLT continues to use extrinsic motivation strategies, staff will probably lose their intrinsic motivation to learn and the development of pedagogic capital will cease.

The balance in PL autonomy is shown as follows;



The SLT needs to decide the balance and put in place the conditions most favourable to the PL activity at any time.

### **Building pedagogic practice is fine tuning, not replacing.**

A school needs to remain integrated while enhancing its pedagogic capital. While parts of its knowledge and practice changes during PL, other parts remain unchanged. The rate at which pedagogic practice changes needs to match the capacity of staff and students to cope with change.

The SLT needs to ensure that the parts that change are balanced by stability in other parts. The steps in PL need be to manageable both for the staff and the organization. Without this, key aspects of the PL climate such as the trust for PL, the perception of chaos and the lack of valuing of past professional knowledge and experience can threaten the current PL agenda.

## **How to identify and diagnose barriers to building a pedagogic capital ?**

The effectiveness of PL can be restricted by various obstacles and barriers that arise. Barriers to PL are barriers to building pedagogic capital. Given that PL operates on the basis of chaos theory, a proactive knowledge of potential obstacles can reduce the extent to which these arise by chance.

What do teaching staff see as potential barriers to enhancing a school's pedagogic capital ?

During 2006 I collected the informed opinions of approximately 80 primary and secondary school teachers (Munro, 2006). The teachers represented schools from the three education sectors.

They were participating in a three-day professional development (PD) activity that targeted literacy teaching. They were asked to identify possible barriers to using the outcomes of the professional development activity in their teaching. The barriers most commonly identified by the teachers were

1. the school does not value or resource in time teachers' opportunity to reflect on the options learnt in PD or to examine how they could be implemented in the particular school context.
2. an individual versus a collegiate, learning community approach PL; the schools did not encourage PD attendees to share the new professional knowledge with peers and were reluctant to allocate time to foster its sharing.
3. competing priorities in the school; the school lacks processes for identifying and pursuing particular priorities in a stable, on-going way
4. the school lacks mechanisms for developing systematic PL plans or implementation strategies for improving teaching at the school, faculty or individual teacher levels.
5. improving teaching practice is not a priority for the school; the focus is on curriculum and the use of commercial programs and text books. Teachers pursue a range of tasks not directly associated with teaching procedures.
6. the teaching staff generally are not willing or motivated to question, evaluate or to change their practice, because (1) they either don't know how to change, (2) they believe the students should adjust to their teaching (which was more effective in the past), (3) they believe their students don't warrant or expect it or (4) because they feel threatened by the need to change.
7. the school lacks a core group of teaching staff with sufficient professional knowledge to (1) see the potential of the outcomes of the PD for improving classroom practice and teaching or (2) unpack them in terms of the particular school's needs and improvement agenda.
8. the senior management team values 'old ways of teaching from the top down' rather than newer teaching methodologies and approaches to learning.

Each perceived barrier to building pedagogic capital, either directly or indirectly, is linked with the capacity of the SLTs to lead, scaffold and support PL. The teachers who expressed these opinions judged the teaching procedures developed in the professional development activity to be relevant to their schools' teaching program and be likely to improve student learning outcomes.

## **Fostering the improvement of pedagogic capital at a regional level**

The Northern Metropolitan Region of Department of Education and Training, Victoria in 2006, led by its General Manager, Wayne Craig, implemented an integrated set of initiatives to improve the pedagogic capital in a number of low achieving schools from a regional level. The initiative involved a number of assumptions:

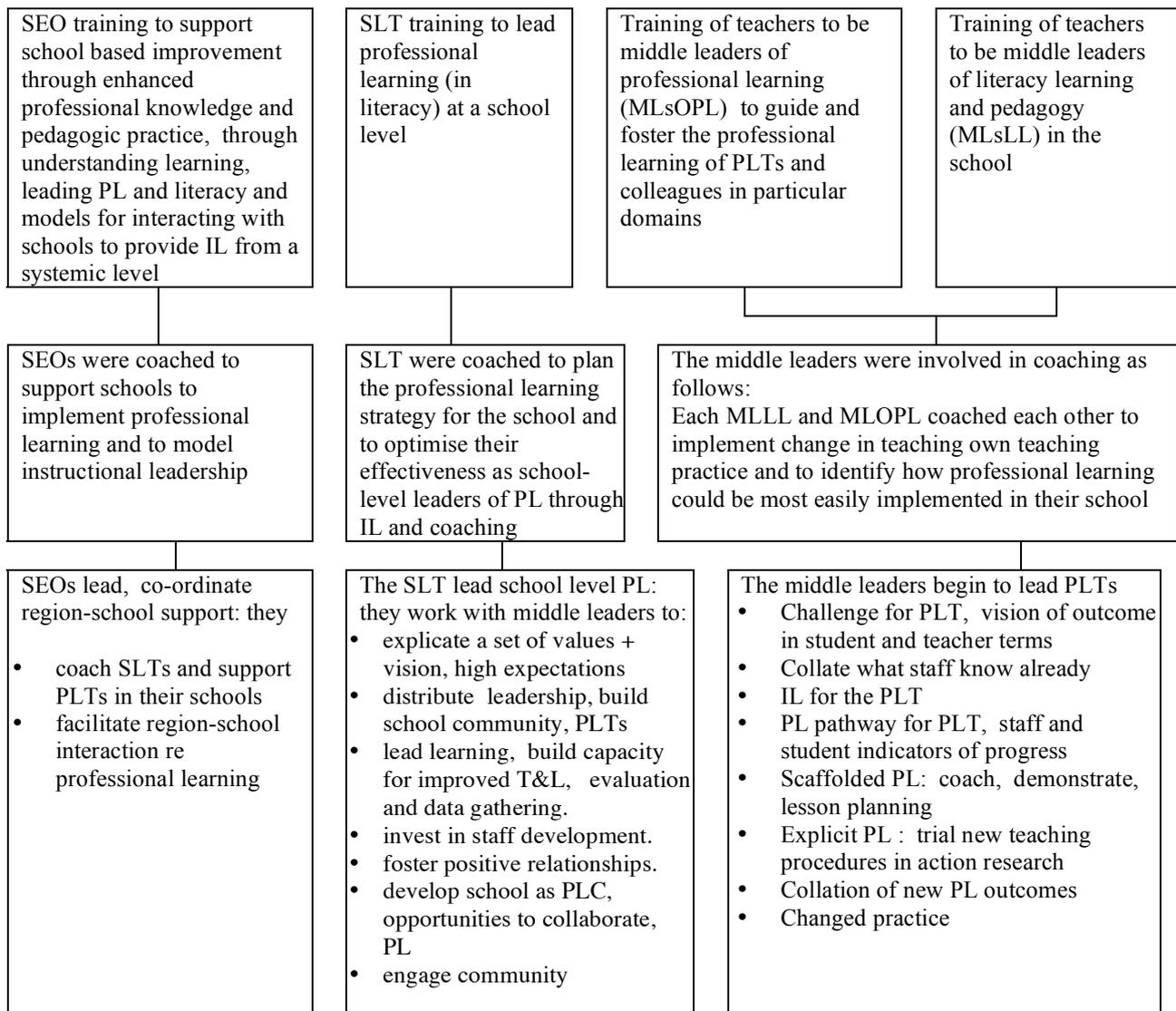
1. Improvement in student outcomes can be enhanced through improved teaching procedures and that investment in building a PL capacity from a regional perspective can enhance this.
2. Proficiency in literacy is a key vehicle for learning and that teachers in all content areas can include procedures in their teaching that will enhance both students' literacy skills and their content knowledge.
3. An explicit understanding of learning can inform both teachers' PL and student outcomes.
4. PL is collaborative and is led by the SLT.
5. Professional learning is informed by on-going data from a range of relevant sources.

The development of an improved pedagogic capital to support improved student literacy and learning outcomes involved a number of components:

1. major stakeholders in the improvement strategy were involved in focused professional development activities that examined explicit models of learning, literacy learning and leading professional learning. These activities were intended to provide the participants with relevant options in these areas. Professional development activities were tailored for the Senior Education Officers (or SEOs), who were responsible for links between each school and the regional officers, the SLTs from each school, a group of middle leaders of professional learning (MLOPL) who were trained to lead and guide the professional learning of teams of staff and a group of middle leaders of literacy learning (MLLLs) who were trained to provide literacy learning and teaching expertise to the professional learning teams in each school.
2. groups comprising stakeholders from the four areas identified explicit and detailed action plans for pedagogic improvement in each school.
3. coaching to assist in the translation of new pedagogic knowledge into pedagogic practice was initiated. The goal of the initial coaching was for the participants to build the new procedures into their own practices first, in their particular school context. This provided several types of important information for the participants, such as (1) experience in being both coach and coachee, (2) what the procedures could 'look like' in their school for students, teachers and leaders, (3) the influence of these changes on student learning outcomes and (4) barriers and obstacles in the particular school context. To achieve this of the MLsOPL and the MLsLL were paired where possible.
4. each school began to in service its school more widely, with staff organised into professional learning teams and middle leaders modelling and coaching colleagues, SLTs participating in active instructional leadership to foster the enhancement of the pedagogic capital.

Further information about the content of the professional development activities and the coaching programs can be obtained from the author.

The phases of the professional learning program are shown in the following diagram.



To support the school based professional learning and to provide schools with options for enhanced pedagogy, the region has begun to develop a range of materials that will be available on line to the schools. These include

- scenarios of exemplary literacy teaching procedures showing middle leaders demonstrating particular teaching procedures.
- sample teaching plans for incorporating the literacy teaching procedures in topics in each subject area at the various year levels.
- literacy assessment tasks at each year level that will be designed to provide literacy learning profiles and have linked teaching recommendations. These will be useful for developing a data base for literacy and learning
- resources to provide school improvement and professional learning options.

Middle leaders from the schools are actively involved in the development of these resources. This is expected to contribute to building further pedagogic capital the schools. It also indicates the

collaborative nature of and responsibility for building pedagogic capital . It indicates to schools and teachers that peers, working in schools and classes similar to their own, have built the expertise necessary to take leading roles in pedagogic enhancement.

Already there evidence in the targeted schools of an improved pedagogic capital to support literacy teaching:

1. students' literacy outcomes have improved on standardized literacy assessment tasks.
2. teachers report modifications to their teaching and increased student learning success. They believe that they are better equipped to understand student learning problems and unpack them in terms of the necessary teaching and are better able to implement it.
3. teachers and middle leaders report increased positive dialogue with colleagues about student learning.
4. teachers report an increased enthusiasm for the trialing of novel teaching procedures.
5. SLTs believe they can recognize literacy learning more clearly and see clear, manageable options for improving this in their schools.
6. SLTs report a more positive orientation to literacy enhancement in their school.

## **Conclusion**

A key aspect of the knowledge of successful school leadership relates to the teaching power of the school, that is, its pedagogic capital. School leaders need to be able to identify it, lead others to see it and to put in place the appropriate processes and structures to enhance it in various ways.

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