

Building the capacity for professional learning: A key component of the knowledge of effective school leaders in the Twenty-first Century

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It is generally acknowledged that successful school leaders in C 21st need to know how to lead their schools as well as to manage them. Most will face the challenge of needing to lead their organisations to modify their core professional activity in specific ways. These may include reorienting the focus of their curriculum, modifying curriculum provision in key areas, improving student outcomes in particular areas and responding to cultural or community changes.

In all cases a determinant of the success of the change or transformation will be extent to which the quality of teaching in the schools adapts in the direction of the change. While a school leadership team (or SLT) may decide that a particular innovation or change is necessary, the school may not necessarily move in that direction. To achieve improved pedagogic practice, a school needs the capacity to learn professionally. Effective leadership builds and guides this capacity. School leaders need to know how to build a professional learning capacity (or PLC). This paper presents an explicit, operational model of PLC.

Professional learning capacity and pedagogic capital

This paper examines two related concepts; professional learning capacity and pedagogic capital. The pedagogic capital of a school is its knowledge about how to do its core work of facilitating students' learning (Munro, 2004a). The term 'capital' is used to refer to the synthesised knowledge that exists in a school about effective teaching practice and to see this as an essential strength or a valuable resource to a school.

When a school embarks on a change or 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.

Professional learning is the means by which a school's pedagogic capital is enhanced. The schools' professional learning capacity determines the extent to which PL can occur. The focus of the present paper is on professional learning capacity.

Professional learning and professional knowledge

To begin an examination of professional learning, it is necessary to identify what is seen as preferred professional knowledge. In the present context, professional knowledge is what teachers display in their core work or practice as teachers. It is the corpus of actions they

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implement to lead and support their students to enhance what they know or to learn. It is, in summary, the teachers' pedagogic knowledge.

Professional knowledge is informed by a range of domains of knowledge. These include the teachers' conceptual and experiential knowledge of

- learning,
- the topics they teach,
- teaching practice,
- the institution, system and community in which they teach and
- themselves as teachers.

The particular pedagogic practice implemented at any time will reflect decision making and prioritising that derives from these areas of 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.

Professional learning (or PL) is the means by which teachers enhance their professional knowledge. The present paper assumes that effective schools provide the opportunity for this through their development of a professional learning capacity or PLC. This capacity is in place when a school can implement a change in pedagogic practice that matches a re-orientation in the school's vision, aims or agenda.

The concepts that underpin the model of professional learning

The present model of PL proposes that building a PLC involves five related elements:

1. A shared commitment to the goals and learning outcomes of the PL activity, that is, the learners make up a professional learning community that embraces the need for PL.
2. A clear idea of 'who will learn what'. PL is complex and different groups in the community may learn different aspects of the overall vision. PL is distributed both within and beyond the professional learning community. The learning activity of each PLT is determined by the particular domains and contexts in which members work.
3. A clear idea of how to learn professionally. Success in enhancing pedagogic practice is more likely when the PL activity is underpinned by an explicit model of knowledge enhancement that is consistent, systematic and embedded in professional practice.
4. A clear idea of how to embed the PL activity in the context of the school at any time and to foster a climate for PL to continue that is consistent with the culture of the school at the time.
5. A strategy for allowing the community to 'grow' professionally, for recognising this growth and for fostering autonomous, self managed and directed PL.

This paper unpacks the concept of a PLC and operationalises it from a learning perspective. It asks the question : What would a school be doing when it is learning professionally ? What would it look like ? The synthesis of five key concepts underpin the model of a PLC.

The context for professional learning : the learning community.

When is a group of learners a learning community ? Most definitions identify a shared commitment to agreed community goals and shared learning, including on-going collaboration and communication, between members (Senge, Cambron-McCabe, Lucas, Smith, Dutton, Kleiner, 2000). A learning community has a solution focus (Munro, 2002b, 2003d); its aim, purpose and function is to solve problems and respond to issues identified by the community. At the same time as they are members of a particular learning community, the members can also belong to other communities and also learn independently.

Not all schools, and not all communities, are learning communities. A group in which the individuals pursue their own learning agendas without a group purpose for learning or that does not, during learning, attempt to synthesise and collate what individuals have learnt, may be a community of learners but not a learning community in terms of the criteria above.

Professional practice is essentially community based; it involves individuals working collaboratively to serve their community in particular ways rather than individually. During professional practice, community interactions operate between individuals; individuals ‘serve beyond themselves’. Professional practice involves individuals collaborating to meet particular community needs. The benefits of establishing and then working within a PLC both from the leadership perspective and the community perspective include the following: The opportunity to

- learn collegiately and to support peers.
- learn from each other, to pool knowledge and to engage in collaborative problem solving.
- develop the perspective of community professional knowledge.

A professional learning community responds to a problem or issue in professional practice; it attempts to learn solutions to problems in professional practice. How well do teachers generally learn from each other ? Fullan (2001) answers this question : “It is one of life’s great ironies : schools are in the business of teaching and learning, yet they are terrible at learning from each other. If they ever discover how to do this, their future is assured “.

SLTs may need to lead their staff to clarify both their concept of professional practice in C21st schools and their concept of a learning community. Teachers may differ in their perception of what constitutes a PL community and how their participation in it can contribute to their practice. As noted by Fullan, many teachers have not experienced the value of community PL; for them professional practice generally has been an individual rather than a collaborative activity. The PLC will develop procedures for leading a group of professionals with an individual focus into a learning community.

The unit for professional learning : the PLT

While the context for PL is a learning community, the unit for PL is usually a group within the community. Suppose a school has the goal of enhancing its teaching practice in particular areas such as literacy teaching, gifted and talented education, e-learning or boys’ learning. Different groups within the school will approach this goal from different perspectives. They may interpret

or relate to an issue in slightly different ways and apply it differently. In a primary school aiming to improve its literacy education provision, teaching at the early levels may confront slightly different issues from those faced by teaching at the senior primary levels. In a secondary schools aiming to improve its provision for gifted learners, each subject area or faculty may prefer a different orientation.

The present model of PLC sees the professional learning team or PLT as the unit for effective PL. Each PLT is a mini-learning community in the sense that it has the goal of enhancing its knowledge in particular areas. Its learning activity is determined by the domains and contexts in which members work.

As well as a collaborative approach, PL is distributed both within and beyond the community. In a complex organisation such as a school learning to fine tune its pedagogy, there are three main organisational levels which PL needs to occur. Each is defined by its functions, that it, what it does:

- The school leadership function. PL here is at the global level. The SLT learns about a topic in terms of the whole school, other schools and community bodies and interprets policy at the school level. SLT learning looks beyond the school as well as 'into and across the school' in relation to any learning goal.
- the individual classroom practice or implementation function. This is the level at which the new knowledge is converted to teaching in classrooms. It includes (1) trialing novel teaching procedures in classrooms and (2) reflective activity both for past experiences and 'dry runs' of possible future activities. It may also lead to changed student or parent activity.
- the PLT level. Each PLT has a domain of knowledge (including beliefs) that it shares and negotiates. The PLT provides the means for synthesizing and learning collaboratively. It draws together the individual and collaborative learning activities. The PLTs plan how they will learn, negotiate goals and purposes, review and collate knowledge at various times and develop enhanced pedagogy. They assist staff to map their enhanced knowledge into improved classroom practice. They can be based on faculties or areas of study. Each PLT operates as a mini learning community.

In summary, the PLC will foster both individual and group collaborative learning components. The notion of building a PLC at various functional levels is recognised in the NCSL's capacity building model (NCSL, 2004). The present model elaborates two of the levels in the NCSL model.

SLTs are more able to build in their community a capacity to learn professionally when they understand the factors that influence this learning. A SLT can appraise its school's capacity and culture for PL by estimating factors such as: (1) its relevant knowledge and skills; (2) its preparedness to learn or change; and (3) the level of knowledge it would need to scaffold and support the change.

The PLTs operate at the interface between the school leadership team and individual classroom practice. They bridge between the SLT and individual classroom practice. Their overlapping functions are shown in Figure 1.

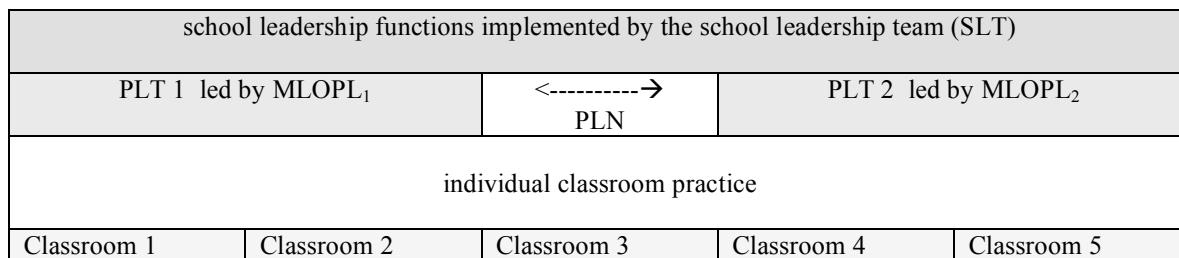


Figure 1 : The professional learning capacity in a school

An explicit theory of learning to scaffold knowledge enhancement

Successful community learning is underpinned by an explicit theory that specifies the key learning actions used to enhance knowledge by individuals and groups. The learning framework recommended for PL has been described extensively (Munro, 2003a, 2003c, 2003d, 2002a, 1999) and is summarized here. To learn successfully, learners need to :

1. frame up and explicate their purpose or reason for learning the ideas.
2. form an impression of the intended outcomes of the learning.
3. make links with and use what they know about the topic. They recall : (1) what they know about the topic; their abstract, imagery and experiential and action knowledge of it; (2) what they know about how to learn it; (3) what they believe about themselves as learners of the ideas, whether they believe they can learn the topic successfully (their self-efficacy); (4) how they value the ideas and (5) what they don't know about the topic, their unanswered questions about the topic.
4. construct a possible pathway or direction to their goal.
5. learn the new ideas in specific contexts in limited, supported, 'scaffolded' ways.
6. abstract or "decontextualize" the new knowledge and link it more broadly with what they know.
7. link emotion with the new knowledge.
8. identify how they learnt, that is, they reflect on and review the actions they used to learn.
9. store what they have learnt in memory and practise remembering it.
10. see themselves making progress.
11. automatise aspects of what they have learnt so it can be used more easily to build further learning.

12. analyse the new understanding from a range of perspectives and explore the extent to which they can transfer the ideas (near and far transfer) and use the knowledge in open-ended creative problem solving.
- 13 reflect on the context in which they need to display the new knowledge and how they can align it with various assessment criteria.

How learners use the learning actions to transform their knowledge have been described extensively (Munro, 2003c). Learning occurs in context, with learners using one or more actions at any time at each phase of knowledge enhancement. They can use the actions spontaneously or be cued to use them. Those who use them mainly when instructed are more dependent and externally managed learners. Learners who use them autonomously and spontaneously in a strategic, selective way are more self managing and directing learners (Ablard & Lipschultz, 1998; Boekarets, 1997). The use of the actions in a self managing way depends on the content being learnt. Learners are more autonomous and self managing for some topics.

The actions have both generic and subject specific aspects. Each is linked with a set of teaching procedures (Munro, 2003c). Together they provide a framework for the ‘how to learn’ component of the PLC.

Embedding the theory of professional learning in a school community.

The SLT of a school needs to consider how it will embed the PL activity in the context of its school at any time and to foster a climate for a PLC that is consistent with the culture of the school at the time. Some of the questions it may need to examine are shown in Figure 2.

What ? What knowledge and skills is the school be learning ? What will it know when it has learnt ?	How ? How will the school learn ? What will it need to do to learn ?	Goals ? What are the goals for learning ? How will activity in the school be different when the school has learnt ?
From where ? What does the staff already know about the topics it is learning ?	A learning community learning	Pedagogy ? How will the staff be taught ? What teaching procedures will be used ?
Progress ? What are indicators of the community learning ?	Why ? What will motivate the staff to learn ?	Show what it has learnt ? How will the community show what it has learnt ?

Figure 2 : The types of questions that guide a PLC.

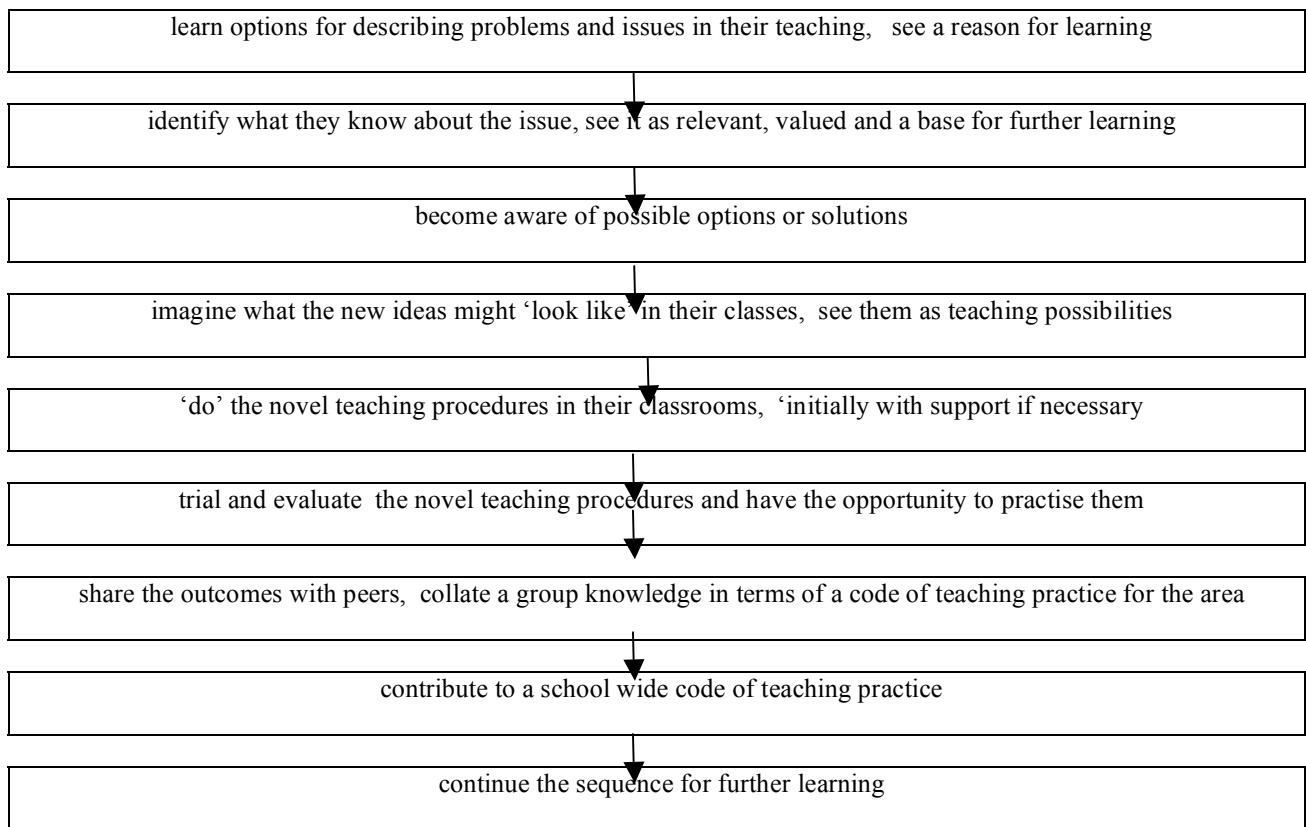
The SLT needs to make decisions about each of these questions, in order to put in place the optimal conditions for PL and to foster a positive climate for it. The following factors influence the quality of the PL climate and the PLC.

1. **How the culture affects PL** These include : (1) demographic factors; (2) the personnel in the school (staff availability to implement the learning agenda, their relevant knowledge and commitment to learning); (3) socio-political factors such as the dominant values in the community, the extent to which the school culture can scaffold the change, power differentials within the community; (4) pedagogic factors,

such as teachers' beliefs and knowledge about effective pedagogy, the extent to which teaching can be modified and the perceived power of pedagogy; (5) economic factors such as the financial resourcing of the change in pedagogy; and (6) management factors, such as the extent to which management processes support staff professional learning, the balance between management and leadership processes.

2. ***Ensuring that PL is student referenced.*** The goal of the PL is enhanced student outcomes. Given that the student cohorts in schools differ greatly on a range of variables, the PLC needs procedures that allow 'the student voice' to inform PL. This may include student evaluation of the teaching, student achievement data and procedures for fostering in students a positive disposition to the outcomes of professional learning, that is, 'bringing them on board'.
3. ***PL can follow a chaotic path*** PL can move in unexpected directions and have unanticipated outcomes. Unforeseen hurdles, uncertainty and unpredictable aspects on the PL pathway may worry some staff. School leaders need to know that while they cannot control or totally plan PL, they can put in place the conditions most likely to foster it. These include (Hannay, Erb & Ross, 2001): (1) using procedures that encourage and value change and continual organisational learning, such as tolerating divergent perspectives; (2) encouraging professional collaboration and teamwork; (3) involving those affected by decisions in the decision making; (4) using procedures that are flexible and that help staff to link their new knowledge in the context of their classrooms; and (5) helping staff become aware that the uncertainty, confusion and lack of resolution associated with professional learning are often temporary and that with more time or minor changes, they may seem less chaotic.

The SLT may need to use dialogue that assists staff to see chaotic outcomes in context, the parts that are in place and that the process of learning is in place and under control. The learning framework can help school leaders to guide PL and to make diagnostic-intervention decisions at any time. The SLT also needs to judge the 'breadth of chaos' (randomness, confusion and unpredictability) their school can carry at any time and the readiness of their staff to engage in an activity that may involve uncertainty and over which they may have less management and direction.
4. ***PL requires a systematic set of learning opportunities.*** A PLC requires a carefully sequenced set of PL activities through which staff enhance their pedagogic knowledge in the context of the school. These learning opportunities allow the chaos mentioned earlier to be managed. Schools differ in the extent to which they permit and foster PL. The learning actions described earlier recommend a systematic set of PL activities in which staff



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). Teaching applied action research skills necessary to research and modify teaching procedures can assist PL (Munro, 2003b).

5. ***PL involves distilling past professional experiences*** During their professional careers, school leaders and teachers store a bank of professional experiences or ‘episodes’. Each episode includes the participants, the actions taken, the emotions that were implicated and the learning outcomes. PL involves distilling and reflecting upon the experiences of individual staff members and groups, finding common patterns, seeing the relationship between these experiences and the contexts in which they were gained and how these can be used in the future. They can analyse their experiences to see how both students and staff learn. They can describe these features in operational ways that are more general than specific episodes and that can be applied to new situations.

Professional development programs in schools frequently ignore or neglect to draw on the experiential knowledge of staff. Staff don’t see their experiences are recognised or valued. 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.

To develop a PLC, SLTs can encourage staff to (1) recognise, value, reflect on and interrogate the experiences of staff; (2) contribute their unique experiences of a topic or issue to the group’s professional knowledge as additional options for colleagues and (3) trial and evaluate the distilled outcomes of experiences and map them into novel possibilities or up-dated ‘virtual experiences’ for improved professional practice

6. ***PL involves thinking innovatively about possibilities and options.*** Without this thinking novel solutions and genuine learning are less likely. Often in PL the focus is on the problem rather than on possible options for solutions and on using what has worked for others without taking account of the context. The SLT needs to ensure that a PLC maintains a balance between creative innovative thinking and retaining what is known.
7. ***PL involves professional collaboration.*** For many staff, past PL will have been essentially an individual or solo activity. For the approach recommended here, the SLT need to ensure that the school will foster a balance between this and team or community learning, shared responsibility for learning and for peers learning from each other. Activities for fostering this collaboration include collegiate scaffolding through activities such as reciprocal teaching (Stone, 1998) and peer coaching.

Staff differ in their preparedness to collaborate with peers, to work in teams and to share their knowledge. Some may not have experienced the positive outcomes of collaborating. Some may lack confidence in their ability to learn professionally. Their response to collaboration with peers may be “just tell me what you want me to do and then leave me alone to do it”.

To foster this aspect of a PLC, school leaders may need to

- establish opportunities for authentic PL collaboration.
- provide staff the opportunity to build their confidence as professional learners and to learn professional respect and valuing for the knowledge of colleagues.
- model collegiate dialogue in their on-going actions with staff and encourage increased self-reflection and analysis
- foster professional trust. This is examined in a later section.

8. ***PL acknowledges that individuals differ in how they learn.*** Learning styles have been canvassed in recent years. SLTs need to acknowledge the influence of multiple ways of learning for each learning action and provide the opportunity for learning in these different ways.
9. ***PL involves building and drawing on the relevant group knowledge*** A key aspect of PLC involves the PLTs identifying, sharing, collating, synthesizing and valuing the knowledge gained by members. This becomes the group knowledge of the PLT, department or faculty. The group knowledge of each PLT can be pooled to become the knowledge of the school community. The collation is shown in Figure 4.

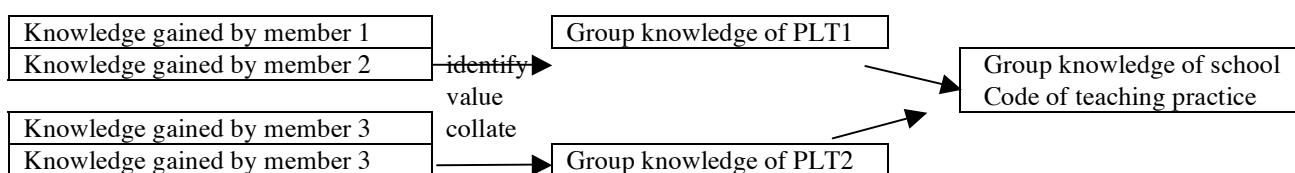


Figure 4 : The gradual collation of community learning.

Part of the PLC involves two aspects of reflection on practice; members :

- (1) reflect evaluatively on what they have learnt and select those outcomes that they might trial in their practice.
- (2) reflect 'into the future, contemplating possible directions for future learning.

This activity serves several purposes in PLC:

- It communicates in a tangible way the expectation that each teacher will engage in PL and that their learning outcomes are valued by the community.
- It helps the community see where it is on its pathway to its goals for learning.
- It allows staff to examine how the new knowledge might enhance its work more broadly and inform a code to teaching practice.

The SLT can examine how well its staff shares, assembles or collates, recognizes and values what it has learnt and how well it develops a community knowledge.

10. *Professional learning involves identifying what has learnt about how to learn professionally*

One of the learner actions is reflecting of how you learn, what you do to learn. The PLT and the community can identify what it has learnt about how to learn. This will help them to move towards being self managing and directing learning communities. A community that builds a knowledge of how to learn professionally is more likely to keep learning in the future. This assists in future problem solving and assists the PLTs and the school to see that professional learning is manageable and frequently motivational.

The PLC of a school is influenced by what it knows about how to learn professionally. The focus on 'learning how to learn professionally' provides a basis for a positive disposition to 'life long professional learning' and fosters in the school a preparedness to engage in this activity long term. It can lead also reduce the influence of the departure of members who have been strong learners and on whom the community has relied for learning outcomes.

11. *Professional learning involves trust* Trust is a key aspect of developing and sustaining a capacity for professional learning (Youngs & King, 2002). PL occurs in a network of trust. Teachers need to

- trust their leaders and the community to allow them to learn professionally, to support them as learners and to allow them to trial and evaluate possible teaching procedures.
- trust themselves; to believe they can learn new teaching procedures successfully, trust what they know and to solve problems in their teaching.
- trust their fellow team members to accept and support them as professional learners and to allow them to operate as learners.

Trust is necessary for developing a PLC and is fostered through effective communication (Barker & Camarata, 1998). The SLT needs to

- ‘do professional trusting’. Through their actions, they show they have confidence in the knowledge of their staff and believe they can learn.
- show a trust in the change process, that it can facilitate progress to the desired outcomes. Often it is necessary to show sustained trust when unexpected obstacles arise.
- understand the role of trust in PL and the actions they can take to strengthen it. The trust teachers have for peers influences the effectiveness of peer coaching on teaching (Arnau, Kahrs & Kruskamp, 2004). A lack of trust among the staff can limit PL.
- recognise the indicators of trust such as the quality of what is said and done during PL, the valuing staff members feel in their relationship with the organization, the empowerment they experience and the extent to which they believe they are encouraged to own professional knowledge and practice (Barker & Camarata, 1998).
- Recognise that professional trust is domain or subject-specific. Individuals are more likely to trust others in some contexts more than others.
- Allow staff to learn to trust colleagues in PL activities. The level of trust in a PL community can change. Leaders may need to provide avenues for trust to be learnt.

The set of factors here can be combined to build a PL climate. The SLT needs to take responsibility for implementing this.

Leading PL teams : middle leaders of PL

Just as individual learners need to manage and direct their learning (Schraw & Moshman, 1995), so do PLTs. The present model of PL uses the concept of ‘middle level leaders of professional learning (MLsOPL) to facilitate the learning of individuals and groups and to build a professional learning capacity. In other words, they operate as the metacognition of the PLT.

The learning activity of each PLT is led by an MLOPL who fosters and supports staff learning, both in groups and individually. MLsOPL assist and guide each PLT to manage and direct its learning, to plan how it will learn, use what it knows in strategic, systematic ways, monitor its learning progress, change direction if necessary, use learning actions selectively and to review and consolidate what it has learnt.

The concept of a MLOPL is not necessarily synonymous with the concept of the ‘middle level manager’, a recent innovation in school improvement. Middle level managers in primary schools are the section or level managers or co-ordinators. In secondary schools they may be faculty heads or year level heads. The MLOPL has a ‘learning leadership function’. The concept of MLOPL has been associated with literacy enhancement in primary schools (Munro, 2004b), in secondary

education (Munro, 2004a) and with improved curriculum provision for students who are gifted (Munro, 2005c).

A middle leader may be an MLOPL but training for middle level leadership per se may not be sufficient to lead professional learning. This is clearly indicated by an analysis of the present model of MLOPL by recent graduates of the Leading from the Middle program in the United Kingdom (Munro, 2005a). The graduates evaluated the model of building a PLC as being able to contribute both to their knowledge and skill as middle leaders and to a school's capacity to improve its pedagogy. They believed that it was very important that middle leaders have a firm understanding of how to build a PLC.

What knowledge do MLsOPL need to lead the professional learning of colleagues ? Munro (2005a) identified the following areas of knowledge for effective leadership of PL:

- an in-depth understanding of the domain in which they lead the learning.
- an understanding of adult professional learning.
- a knowledge of how to foster 'change' or 'improvement' thinking.
- a knowledge of effective pedagogy and how teachers can map their skills, conceptual knowledge and attitudes into pedagogy.
- A knowledge of the school as a learning organisation and the relationship of professional learning to the work of the school and the work of individual teachers.
- a knowledge of how to develop and foster a learning community from a group of individuals.
- an understanding of the influence of context on learning.
- an understanding of how to use resources.

The PLC of a school is influenced by the quality of its leaders of PL. School leaders need to provide the opportunity for the leaders of the school's PL capacity to acquire of these areas of knowledge. These areas of knowledge are described in greater detail in Munro (2005a).

What will the PLC actually generate ? The professional learning processes

Different community members learn different outcomes In a complex organisation such as a school learning to fine tune its pedagogy, three main areas or domains of PL have already been noted, each defined by its functions in the school community, that it, what it does:

- the SLT function.
- the individual classroom practice or implementation function.
- the PLT function.

How does the community learn professionally ? The PL framework What will the community do to learn ? What are useful actions for each functional area of the learning community ? The set of learning actions can be applied to the three functions in a learning community. This leads to a 'how to learn' model for the community. There is, in addition, a fourth function, that of the MLsOPL.

The PLC generates improved teaching. As well as those who have a professional responsibility for teaching, members of the school community such as students and parents inform PL. Effective PLTs have procedures for learning from other community members.

Types of activities for each learning action at each function level are shown in Table 1. They are specified as questions. The questions in each cell identify activities and lead to explicit outcomes that contribute to the overall learning outcomes of the community. The question format allows contextual variations between school communities to be taken into account. The outcomes at each phase inform PL at the following phases.

The acronym FOPL refers to the focus of learning by the school community at any time. This is the issue or topic that each PLT works on. It could be, for example, improved literacy teaching, improved provision for gifted students or improved match between contemporary adolescent learning and teaching.

Table 1. The professional learning framework : The questions that each level of function would ask for each learning interaction.

	leaders of school	MLOPL	PLT	teacher
a challenge or reason for learning	What challenges or expectations does school need to meet in the FOPL that it isn't ? What is the challenge for the SLT and for the school in the FOPL?	How will the MLOPL lead the PLT to identify challenges / expectations in the FOPL ? How will the MLOPL guide the PLT to frame up a challenge in the FOPL?	How does the PLT comprehend and respond to the challenge? What challenge does it frame up?	What is the personal challenge framed up by each staff member?
vision of the outcomes of learning, the goals	What will be the outcomes for the school given learning in the FOPL ? How will its core teaching and learning look different? How will the SLT negotiate the vision with groups in the school and allocate parts of it to school members ?	How will the MLOPL communicate the vision to the KLA, lead the PLT and members to that ownership of it is taken?	What is the vision of the PLT re the change? What does it see students and staff being doing differently from what they are doing now? What is the role of each staff member in the vision?	What is the goal of each staff member re the change? What images does the teacher have of her / classroom with the novel outcome in place ?

use existing knowledge	<p>What knowledge does the school have about the FOPL? How sufficient is it? What are the school's attitude to /confidence in learning?</p> <p>What processes in the school will support the change? What does the school know about how to manage, direct and monitor the change process?</p>	<p>How will the MLOPL assist the KLA to collate what it knows about the FOPL? What procedures will be used? How will the MLOPL put in place processes to increase KLA knowledge and to facilitate collegiate learning? How will the MLOPL lead group learning? How will the MLOPL coach attitude change?</p>	<p>What does the KLA know (including experience) that is relevant to the FOPL? What are the KLA's attitude to and confidence in changing?</p> <p>What does the KLA know about how to manage, direct and monitor the learning? What unanswered questions does the KLA have about the FOPL?</p>	<p>What does each member know that is relevant to the change? How prepared is each staff member to share that knowledge? What are the staff member's attitude to and confidence re the change?</p>
see a pathway to the goal	<p>What does the SLT see as a pathway to the visualised outcome for the school?</p> <p>What does the school see as steps to the goal? What are indicators or measures of learning?</p>	<p>How will the leader assist the KLA to develop and implement an action plan? How will the leader lead the group to identify indicators of success? What processes will the leader recommend to monitor progress?</p>	<p>What steps will the KLA take to achieve the goal? What is its explicit action plan? What are indicators of its success? How will it monitor and review progress?</p>	<p>What does the member see as their pathway to the visualised outcome? What is the teacher's explicit action plan? What are indicators of its success? How will each teacher monitor progress?</p>
learn new ideas in specific contexts	<p>How will/did the school learn about the topic in specific instances?</p>	<p>How will the MLOPL assist staff to learn new ideas, 'do' them as innovative teaching procedures and to trial them in specific contexts, perhaps using action research?</p> <p>How will the MLOPL coach staff in specific aspects, demonstrate novel procedures, foster collaborative planning for teaching?</p>	<p>How will KLA staff, in PLTs, trial and learnt about innovative teaching procedures in particular contexts for the FOPL?</p>	<p>What teaching innovation did each teacher plan, do and monitor? What did each teacher learn about enhanced instances of teaching practice?.</p>

abstract, decontextualise what they have learnt	<p>How do the set of professional learning gains in the school inform its code of teaching practice, enhance its policy in the area and its relationship with the broader community?</p> <p>How is the school's identity and standing in the community enhanced by the professional learning activities?</p>	How will the MLOPL assist staff to distil their experiences and generalise what the PLT has learnt about innovative practice and to improve its code of teaching practice	<p>What has the KLA learnt about innovative teaching procedures ?</p> <p>What is the enhanced group knowledge of the PLT in the FOPL? How has its code of teaching practice been enhanced by the learning?</p>	What new teaching procedures did each teacher learn ? What are the conditions necessary for the novel teaching procedures to be implemented?
invest positive emotion in the new knowledge	How does the SLT encourage staff to value and celebrate the gains in professional knowledge and take ownership for them?	How will the MLOPL lead the PLTs to value what they have learnt and to remain motivated to engage in further professional learning?	<p>How did the PLTs celebrate their learning success?</p> <p>How does the group give positive feedback to its members and encourage group ownership of the new knowledge?</p>	What processes are used to assist each teacher to value positively the new knowledge and to implement it in teaching ?
store what they have learnt in memory, practise remembering it	What steps does the SLT take to help the staff retain the enhanced practices, for example, add them to the school's code of teaching practice, identify them as part of the pedagogic knowledge that characterizes practice in the school, communicates them to new teachers ?	How will the MLOPL lead the PLTs to store in the group memory what they have learnt ?	What steps do the PLTs / KLA put in place to store the new practices in the 'group memory' of the KLA, for example, (1) identify how they will use the new teaching in topics they will teach in the future; (2) represent the key ideas as an acronym.	What steps will each teacher take to remember the new teaching procedures and to apply them in their teaching, for example, use a cue card for applying the key ideas in their teaching.
identify how they learnt, what they did that helped them to learn	What has the SLT learnt about how to guide school level professional learning? What key learning actions seemed to foster school wide learning ?	What have the MLsOPL learnt about how to manage, guide and direct the professional learning of PLTs ? What were useful learning actions? What procedures will be used to assist the PLT to reflect on and identify how it learnt?	What has the PLT learnt about how to learn professionally ? What collaborative learning actions might be used in the future?`	What did each teacher learn about how to learn professionally to improve pedagogy? What actions worked best? How will these used in the future?
see progress being made	<p>What evidence shows professional learning success at the school level?</p> <p>How does the school recognise and value the progress made by each PLT and by individual teachers?</p>	How did the MLOPL assist the PLT to see progress in their learning? What were useful indicators ?	What indicators in the action plan showed that the PLT progressed in learning ? What does it know now that it didn't know earlier? What problems / obstacles can it now solve?	What indicators did each teacher use to see progress in professional learning : progress in (1) student outcomes; (2) pedagogy that solves problems; (3) confidence to enhance teaching.

automatise what they have learnt	What aspects of the new knowledge will become ‘automatic’ parts of the pedagogic knowledge of the school?	How will MLOPL guide the PLT to automatise aspects of the new knowledge ?	How will the KLA automatise useful parts of the new knowledge so that they are used as a matter of course ? What practice opportunities will be available to achieve this?	How will each teacher automatise aspects of the new knowledge in her / his regular teaching?
transfer, apply and generalise the new knowledge	To what problems / issues at a school level can the new knowledge be transferred / generalised?	How will the MLOPL lead the PLT to explore the range of applicability of the new knowledge ? How will the PLT members be encouraged to trial their new knowledge further ?	How broadly can the PLT apply the new knowledge? How far can it be transferred? What additional problems might it solve?	To what other content areas / topics could the new teaching procedures be applied? Where else would they be useful?

* This refers to the unit of change in the school, that is, the area of responsibility or domain in which the change will occur.

As noted earlier, each cell in the framework leads to explicit learning outcomes. Both the SLT and the PLTs can decide and negotiate the actual form of these outcomes for any school. Because the outcomes at each phase inform subsequent learning, they can be gradually improved. They indicate the quality of professional learning at any time, the progress being made, where the community is on its learning journey and how to take diagnostic actions if necessary.

Ways of using the learning framework to enhance professional learning The learning framework has been used to underpin continuing PL in a range of ways (Munro, 2003c, 2002d, 2000) and to target some of the traditional barriers to PL. Some of these are summarized below. It has been used to

- (1) coach and mentor colleagues, to identify the areas of learning and teaching that need to be coached to enhance teaching (Munro, 2000).
- (2) provide a practical and systematic means for distributing leadership for PL.
- (3) collect feedback from students and to use the student voice as an indicator of the effectiveness of pedagogy. Questionnaires to do this are described in Munro (2003c).
- (4) develop a set of teaching procedures that have been used to give teachers options for improving their classroom teaching.
- (5) help PLTs to be self managing and regulating.
- (6) cater for multiple ways in which professionals learn.
- (7) analyze, evaluate (and diagnose if necessary) professional learning.

Balancing and synthesising : Integrative leadership of PL

Growing towards autonomous PL We noted earlier that the PLC is dynamic and needs a strategy for ‘growing’ or evolving towards autonomous, self managed and directed PL. In some cases the learning of PLTs will need to be guided and directed externally. In other cases, PLTs will set decide more their own directions and agendas. These conditions and examples of both cases are described in Munro (2005a).

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.

The balance at any time depends on and the focus of the learning. The extent to which the SLT directs the PL depends on a range of factors at any time, including

- what is being learnt,
- what the school knows about how to learn professionally
- the intrinsic motivation of the staff to learn it and
- the goals of the learning.

A school needs to remain integrated while learning. While parts of the school’s knowledge changes during PL, other parts remain unchanged. The SLT needs to ensure that change in part of the system is balanced by stability in other parts. The steps or increments in PL need to be manageable both for the staff and the organisation. 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.

Balancing PL across the functional levels of the school A second aspect of the integrative leadership of PL relates to the balance between the learning activity at each of the functional levels of the school noted earlier. A key aspect of the PL capacity in a school community is the regular collation and integration of new knowledge across the community, the alignment of the learning action plans of the PLTs with the learning action plan for the community as a whole and re-negotiation and alignment of the vision of each PLT with the vision of the school.

There will be times when PL by the SLT dominates, times when there is a need for PLT level scaffolding and times for a focus on the individual classroom implementation function. Integrative leadership synthesises the PL outcomes of each. Effective school leaders identify the various outcomes and indicators of extent of balance between the three levels and to take steps to adjust it if necessary.

The quality of professional learning will be influenced by the quality of the reciprocal relationship between the MLsOPL and the SLT.

Judging readiness for autonomous PL How can a SLT judge the extent of autonomous learning potential in the school or a PLT ? This can be estimated by looking at what the school or PLT

knows or can do in terms of knowledge enhancement. Indicators include the actions needed for knowledge enhancement, measures for monitoring group knowledge and procedures for identifying and framing up challenges. A PLT or school that did not know how to initiate learning effectively would obviously require more direction.

The interaction between the SLT and the MLsOPL. The PLC of any school will be influenced by the quality of the functional relationship between the MLsOPL and the SLT. Anderson (2004) identifies a similar relationship for teacher leaders and school leaders more generally. School leaders need to be aware of how the relationship can be most functional. Factors such as selection of teachers to fill the function of MLsOPL and their training will determine the effectiveness of the PLC.

Developmental trends in PL. Just as we know individual learners show developmental trends in how they learn, so do PLTs. While it is not possible to pursue this in depth in this paper, we have already noted that not all schools are ready to begin as autonomous PLs; their PLC is not well developed. Steps on the developmental pathway are not dissimilar to those of individual learners, for example, as their PLC develops, PLTs

1. learn initially in small increments in specific, real life contexts, build self efficacy as PLers,
2. gradually transfer and generalize the learning outcomes, reflect on how they learn and what they do to learn,
3. automatise their knowledge of PL in specific contexts and
4. decontextualise and abstract their knowledge and ways of thinking professionally

The developmental trends are important because they show where a school or a PLT is at any time in their PL journey.

The model of PLC facilitates school improvement

Using a PLC for school improvement The PLC framework accommodates the six core principles for school improvement noted by Hopkins (2003). The focus for each PLT is on

- (1) framing up its challenges for improved pedagogy and integrating these with the challenge identified by the school;
- (2) collating, sharing and evaluating group knowledge facilitate building collective ownership;
- (3) focusing on the teaching and learning priorities; and
- (4) embedding the improvement in the school's practices.

Gradually evolving a code of teaching practice for each teacher, each area of learning and the school is one aspect of this. Monitoring student and staff learning outcomes, again at an individual teacher, team and school levels allow improvement to be evidence based. The framework asks individual teachers, teams and the school to decide the measures and behaviours they will use as indicators of progress.

Many schools are seen as ‘failing’ or ineffective schools. These schools are characterized by low levels of student achievement; the pedagogy implemented is not leading to acceptable student learning outcomes. Our research has shown that building a PLC can lead directly to improved literacy teaching and literacy outcomes for students at both the primary and secondary levels (Munro 2004a, 2004b).

It is possible that a ‘failing’ school can ‘learn its way out of failure’ by targeting its capacity to learn more effective pedagogic practice. To achieve this, the school may need to develop its capacity to learn professionally. Equipping the school with a trained group of MLsOPL may contribute to this.

How to identify and diagnose barriers to PL. The diagnosis of barriers to PL involves identifying at any time what the school does have in place in terms of its preparedness for PL. While it is not possible to pursue this in depth in this paper, it is important to note that the SLT can use an assessment-diagnostic process that involves collecting and analyzing various sources and types of data for the various dimensions of the PLC.

You can interrogate each dimension of the PLC in the context of the school to gather data about those aspects of the PLC that are in place and those that may be restricting PL. The interrogation is multi-level and permits a profiling of the PLC of each PLT and the school as a whole.

The evaluation can examine:

1. The extent to which the school has in place the dispositions and actions that characterise a professional learning community, for example, a shared commitment to the goals, shared learning and knowledge sharing and the areas that merit further development.
2. A functional structure that facilitates learning units such as PLTs, a valuing of the various learning domains, the extent to which the school level visions and goals have been taken on by the PL groups, the clear explication of the different learning groups and of the essential links between classroom practice and PL, teachers’ attitudes to the collaborative learning groups.
3. Teacher knowledge about how to learn professionally.
4. The extent to which the PLC is being embedded successfully in the context of the school at any time, the extent to which it is evolving a culture and a climate that fosters PL (for example, scaffolding a trust for PL between staff) and is taking account of influences in the community that potentially affect PL.
5. The extent to which staff and PL groups perceive sufficient support for PL with a level of independence that reflects their professional knowledge and capabilities and their work context.

Data can be gathered in a range of ways. Useful procedures include

1. Reference groups in the school; these are frequently limited in their perception of the issues by what they know and expect.
2. Surveys and questionnaires.

3. Modified dynamic assessment procedures; these use strategic professional coaching and help PLTs to see what is possible in their teaching.

Work on developing validated diagnostic procedures for PL is continuing.

The model facilitates innovation Successful schools are innovative. They have a sound knowledge base that they can use to transform their practice. Transformation varies in the extent of its creativity (Hargreaves, 2003). The innovation that is most likely to lead to creativity in a particular domain of knowledge involves thinking divergently about that domain, inferring aspects of the future, engaging in probabilistic thinking, speculating and engaging in far transfer.

The PLC framework encourages this approach. Groups of learners use what they know to learn new ideas, first in specific situations and then to think creatively about them. Staff speculate and visualise possible outcomes for a problem, plan pathways, think about the ideas in a range of ways, collate the new knowledge of the group and engage in systematic far or remote transfer. A model for thinking creatively about improvement in a school context is provided in Munro (2001).

Where to in the future ?

Comment relating to contemporary educational improvement is replete with amorphous concepts that are rarely mapped into practice. Schools are encouraged to be ‘transformational’, ‘personalised learning’ is recommended as a desirable outcome of educational provision but is neither explicated in terms of ‘what it looks like’ in classrooms nor linked with knowledge enhancement and teachers and schools are encouraged to engage in ‘professionalised learning’ with little reference to how this learning might add to the school’s pedagogic capital.

The purpose of this paper has to provide school leaders with one option for leading their organisations to modify their core professional activity in specific ways, or, in the jargon of contemporary education, to ‘transform’. Its focus is unashamedly on knowledge enhancement. It links professional learning, which it sees as in part a collaborative activity, with professional knowledge that can be used to underpin a school’s pedagogic capital. The option is for the development of a professional learning capacity that will equip a school with the knowledge and skills necessary to fine tune its teaching practice, that is, to build its ‘pedagogic capital’ in particular areas.

The model comprises five dimensions: (1) the implementation of a disposition towards a ‘professional learning community’ within the school; (2) distributed professional learning across professional learning teams led by middle leaders of professional learning; (3) an explicit model of how to learn professionally; (4) a strategy for embedding the learning activity in the context of the school at any time and to foster a climate for professional learning and (5) a strategy for allowing the community to ‘grow’ professionally and to grow towards autonomous, self managed and directed learning.

The model can be used to understand professional learning, to develop a vision of what it ‘might look like’, to assess an organisation’s ‘readiness’ for professional learning and to diagnose aspects that merit remediation and to implement professional learning programs. A professional development activity, developed collaboratively through an international partnership (Munro, 2005b) has been shown to enhance the knowledge and skills of middle leaders to lead professional learning.

Educational provision across the world is in a state of change. This is in part due to changes in how individuals learn, approaches to teaching, changes in the types of knowledge cultures value, changes in how knowledge acquisition is assessed and changes in the nature of schooling. Across all of these changes, the processes that lead to knowledge enhancement in context will underpin this provision. Schools will need to develop the capacity to respond to these changes with modifications to their pedagogy. The model of professional learning capacity provides an operational framework for doing this.

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*****1. The following are referred to in the body of the paper, but no reference is given in the References at the end.

Munro, 1999a

Munro, 2000b

You give a number of Munro 2000 references, but also refer to a Munro 2000b. Can you clarify which is which (ie, 2000a and 2000b) in the body of the text?

3. The Munro 2003b reference is to a paper '... operationalising sing a conceptual model'. Should this be 'using'?