Laying Foundations for an Effective Professional Learning Community in a New Primary School: An Action Research Study

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Abstract: This study explores the culture of a new primary school, as it is engaged in the process of setting its policies, developing pedagogies and introducing organisational structures. Specifically, it examines the Professional Learning Community (PLC) model which is reported in the literature to create a *collaborative culture* aimed at improving both the educational environment and students' achievement. The study critically analyses the literature in the field of PLCs, and the principles extracted from it guided the methodological approach adopted in this study. The research approach was action research, with the aim of *changing practitioners' practices*, their *understandings of their practices*, and the *conditions in which they practice* to improve the learning experience of the students. Finally the study outlines the leadership implications to develop and support a PLC in the local setting.

Keywords: professional learning communities; school culture; and primary school organisation.

Introduction

The subject matter of the research undertaken in this study was to explore how the notion of professional learning communities (PLCs) might be introduced into a newly-developing primary school. Advocates of PLCs declare (InPraxis Group Inc., 2006, p.38) that they provide a framework of principles that concentrate the energy of an organisation towards the common goal of improving student achievement and continuous professional development of its members. This is done through facilitating learning for the entire community. Bolam et al. (2005) define it thus:

> An effective professional learning community has the capacity to promote and sustain the learning of all professionals in the school

community with the collective purpose of enhancing pupil learning (p.2)

Researchers and theorists (Olivier & Cormier, 2009) struggle to define a PLC, and Bolam et al. (2005) signal the breadth of interpretation put on it. DuFour (2004) warns that "the term has been used so ubiquitously that it is in danger of losing all meaning" (p.1). Schmoker (2006) notes that the term has been used to define everything from self-managing teams to communities of practice. However, even though a definitive formulation has not yet gained unanimity, recently, a confluence of ideas has emerged in the literature on the attributes necessary for PLC development (In Praxis Group Inc., 2006). Table 1 is a typology of dimensions some scholars describe as critical by PLCs.

Table 1: Typology of PLC Dimensions

	Typology of PLC dimensions
Hord (2004, p.7)	(1) supportive and shared leadership, (2) shared values and vision, (3) collective learning and application, (4) supportive conditions, and (5) shared practice
Stoll et al. (2006c, p.4) **Bolam et al. (2005, p.145)**	(1) shared values and vision, (2) collective responsibility, (3) reflective professional enquiry, (4) collaboration, (5) group as well as individual, learning (6) mutual trust, respect and support (7) inclusive schoolwide membership, (8) networks and partnerships beyond the school.
Feger et al. (2008, p.3)	(1) reflective dialogue (2) de-privatization of practice, (3) professional growth (4) mutual support and mutual obligation
DuFour and Eaker (1998, pp 25-29)	(a) shared mission, vision, and values, (b) collective inquiry (c) collaborative teams, (d) action orientation and experimentation (e) continuous improvement and (f) results orientation

Why Professional Learning Communities?

In recent decades, educational reforms have had one major aim: that of increasing student achievement (InPraxis Group Inc., 2006). McLaughlin and Talbert (2006, p.1) identify two pressures that drive today's schools: society's demand to produce students with the complex cognitive skills needed by the 'knowledge society' (Sahlberg and Boce, 2010, p.34) and a wish to address the issue of inequity so that all students achieve set standards (OECD, 2008). However, these two aspirations may or may not be compatible, most often depending on how policy-makers address reforms (Hargreaves 2003). Research to promote change and reforms thus focused on the important

relationship between school organisation, teacher quality and student achievement (Robinson and Timperley, 2007). It is within this context that PLCs have been found to play a critical role (Hughes and Kritsonis, 2007). Such a conceptualisation is one of increasing importance because PLCs are considered as a dynamic model to improve education systems (Barber and Mourshed, 2009). It has particular relevance to new-start schools because it reports how at this stage culture responds to shaping on PLC characteristics.

The advent of PLC in education

During the eighties, educators felt the need of regeneration and to move away from traditional schooling to improve 'accountability, collaborative environments and teachers' efficacy' (InPraxis Group Inc., 2006, p.7). Consequently, research set about scrutinising what was really effective in education and how learning can be sustained. This brought under scrutiny the link between student achievement, 'teacher quality, organisational and systemic change and reform' (Ibid., p.7).

By the turn of the 21st century, Senge (2000) had articulated a view of the workplace as a learning organisation for the business world which seemed to propose a solution for the sought after change in education (Feger et al., 2008). Hord (2004), referring to Senge (2000), states that:

> Senge's book promoted the idea of a work environment where employees engaged as teams, developing a shared vision to guide their work, operating collaboratively to produce a better product, and evaluating their output (p.1).

Senge's idea was supported by Sergiovanni's (1994) work on 'communities of learning'. Sergiovanni (1994) advocated the importance of a school adopting a sense of community, becoming more of a social rather than a formal organisation. He notes that "success seems to be related to the fact that though substance differs, the schools have achieved focus and clarity and have embodied them in a unified practice" (ibid., p.100). Other educational researchers were pooling evidence from the field (Astuto et al., 1994) and eventually the concept was refined to that of PLC by writers such as Hord (1997). While trying to avoid the pitfalls of new buzzwords that often pervade the educational lexicon, recently a new concept of 'intelligent school' has developed that expands on the same basic dimensions of PLC presenting them as multiple intelligences that may be fostered in schools (MacGilchrist et al., 2004).

The International and National Contexts

In many countries, research on PLC's dynamics is at a relatively early stage of development, even though evidence suggests that they have a positive impact

on school improvement (Stoll et al., 2006). Various efforts can be noted especially in the English-speaking world (Stoll & Seashore Louis, 2007). In the USA, PLCs have been promoted as a way to facilitate school reforms and a means to manage the challenges of raising student achievement (Cormier and Olivier, 2009). From their study on PLCs, Hughes and Kritsonis (2007) have found that schools that re-culture to PLC give evidence of improved student achievement. In Hong Kong, ACTEQ (2003) recommends that "schools should be developed as professional learning communities" and that '"teachers' professional development should be regarded as an important force in school development" (p.7) establishing the school as a PLC. Moreover, they state that "teachers as professionals also have a responsibility to facilitate the professional growth and development of their colleagues" (ibid., p.7). In England, it seems that the concept of PLC was also growing in this last decade and that it presented "a means of promoting school and system wide capacity building" (Bolam et al., 2005, p.10).

Meanwhile, in Malta, policy makers made a conscious effort to move away from a highly centralised and bureaucratic system to a wider participative and collaborative strategy among stakeholders (Bezzina, 2006). This vision aimed to empower members of staff in educational decision-making to determine the way forward and develop schools as learning organisations (ibid). Consequently, a number of schools in Malta started their journey towards implementing PLC principles (Bezzina & Testa 2005; Salafia 2003).

The School Context

SPP school is a new primary school, which opened its doors to its first students in September 2011. At the initial stages of this research, the school admitted only two grades, namely grade 1 (5-6 year olds) and grade 4 (8-9 year olds), totalling to a school population of 150 students. During this phase, 30 staff members worked in the school's primary section comprising senior management, teachers, learning support assistants and support staff. In its second operative scholastic year, during which the research was sustained, the primary school's population doubled to 300 students. This was made up of 150 new students in grades 1 and 4, as well as the previous year's students who were promoted to grade 2 and grade 5 respectively. Consequently, the school also experienced the addition of new teaching, administrative and support staff.

SPP school is an extension to the extant secondary school. The secondary section had a positive school culture founded on Catholic communitarian values. The latter was reported by the national Quality Assurance Department in the school's first reported external audit in 2010. The leaders' vision was to have a whole-school approach to development and that a positive culture would embrace both sections. In order to strengthen this

unitary vision the school organisation was established with one head acting as a principal with a deputy head for each section. It was envisaged that the new primary school would serve to strengthen the secondary section with innovative approaches.

The initiative to extend the school was as a result of one of the reforms in Maltese education (Cutajar, 2007), which established the importance of continuity from ages 5 to 16, and from the school's leadership objective of addressing learning difficulties at the earliest. In this context of reform and innovation the school was shaping its organizational structures and consolidating its principles and policies. It was within this context that the principles behind PLCs have been deemed central to this research, and thus positioned as the main aim of the study by the researcher who was also the primary school's Deputy Head.

Thus, it was a particularly exciting time as the culture of the researched school was in what can be described as the 'making process' where the aim was to put the school on track towards sound professional and educational principles that work to optimise learning.

Since, SPP was in its initial stages of setting and shaping its culture and organisational structures, this research aimed at guiding the school through an action research project to pilot the effective principles portrayed in the PLC research field. As the study is action research, it is grounded in the applied research camp (OECD, 2002). However, that does not exclude, with careful empirical approaches, the opportunity to generate good theoretical research as part of the process (OECD, 2002).

The research took place in a context that has seen the development of a vision through the concerted efforts of many educators. A number of professionals were involved in various structured and scheduled discussions that focused on issues such as formulating curricular ideas, pedagogies of learning, staffing requirements and identifying the logistical needs for the new school. Starting a year after the school opened its doors to the first cohort of students, this study aimed to carry out a review of the developments that have taken place till then, and to identify potential ways of nurturing those principles that will help the school develop into a PLC.

SPP and the National Policies

SPP, being a Catholic Church school, falls under the country's Church schools directorate which works in collaboration with the country's education authorities. SPP enjoyed a great degree of autonomy on how to run the school compared to schools run by the state. However, it was still bound by the country's Education Act (1988) and the Church-State agreement of 1991

(Agreement on Church Schools, online). Whilst accepting and respecting these binding documents, the school was free to establish its own mission statement, vision and educational policies.

Research Methodology

This research aimed to explore the extent to which PLC principles could be embedded effectively in the culture of SPP, a developing primary school. It adopted an *action research* approach as it aimed at changing '*practitioners practices*', their '*understandings of their practices*', and the '*conditions in which they practice*' (Kemmis, 2007, p.1). The following research questions guided the investigation:

1. What are the existing characteristics of a PLC as identified in the literature and as applied to SPP school?
2. What is the readiness level of staff at SPP in relation to implementing the principles behind the PLC?
3. Which areas need to be addressed to enhance the school's internal capacity to become a PLC?
4. What marked developments take place within the action research period?
5. What are the leadership implications for the required changes?

The research motivations flow from two previous studies at this school, one on the school culture (Farrugia, 2011), and the other on the effect of collaboration on newly qualified teachers (Farrugia, 2012). Both studies converge on the benefits of a school wide collaborative culture. The concept of PLC emerged from the literature as that which encompasses a comprehensive model of collaborative practices in schools.

Since the research project was intended to improve the school's practice, a *critical theory* and *praxis framework* were considered as the epistemological structures fitting to reach the aims, thus following the non-positivist/ interpretative paradigm of reflective rationality (Zuber-Skerritt, 2001). Moreover, action research is seen as an educative process which fits perfectly with PLC dimensions thus stimulating a beneficial practice of collaboration between participants through the research practice itself (Chioncel et al.,2003*)*. Critical action research also collectively treats practitioners as being simultaneous theorists and researchers (Kemmis, 2007), as *symmetrical communicators* implying that everyone has something to contribute (Zuber-Skerritt, 2001). This also fits in the praxis paradigm "as the interdependence and integration – not separation – of theory and practice, research and development, thought and action" (ibid., p. 15).

Participants develop both a self-critical attitude and a collective endeavour such that "critique is never taken as a personal attack (destructive), but

accepted as a necessary condition for organisational change, innovation or recreation (constructive)" (ibid., p.12). As phenomenologists believe, the participants "explore together their patterns of sayings, doings and relating as socially-constructed formations" which reasonably have to pass the sustainability rationale (Kemmis, 2007, p.8).

However, *emancipatory action research* is often criticised that it has a social agenda and often resolves to create a status quo (Cohen et al., 2007). Though conscious of the latter, this difficulty was considered minimal due to the nature of the research itself which had the aim of starting PLC practices which in principle generate a culture of self-reflection and self-criticism (Kemmis, 2007).

In addition, a pragmatic approach was seen appropriate to address the underlying research questions effectively. Utilising a quantitative (positivist) paradigm in conjunction with the qualitative paradigm discussed above, the commonly ascribed traditional dichotomy was therefore ignored to reach the research aims (Onwuegbuzie and Leech, 2005).

Action Research

Zuber-Skerritt (2001) defines action research as a "cyclical iterative process of action and reflection *on* and *in* action" (p.1). Reflection constructs the concepts and generalisations extracted from the action consequences themselves. These concepts will have to be confirmed or not through investigating new situations. Action research includes active learning, searching, problem solving, and systematic inquiry, which is rigorous, scrutinisable, verifiable, and always made public (ibid., p.2). Moreover, Cohen et al., (2007) state that action research can be used as a school-wide improvement which perfectly fits the intents of this research.

Table 2: Synthesised Action Research Model from Literature

Synthesised Action Research Model from Literature		
PLANNING	**Preparation**	Define the inquiry Review related Literature Describe the educational situation
	Audit Phase	Review of current practice Collect evaluative data and analyse it Review the data and look for contradictions Identify an aspect to improve
ACTING OBSERVING **ACTING**	**Planning**	Plan a way forward Introduce change through an action
	Observing	Monitor the change
	Modifying	Modify the plan in the light of findings and continue with 'action'

	Reflecting	Analyse evaluative data about the change and modified action
REFLECTING		Review the change and decide what next
	Communicating and Validating	Share and communicate the results
	Restart cycle	

Bassey (1998), McNiff et al., (1996) and Mertler (2006) outline an action research cycle summarised into eight or nine steps. These are a practical expansion of the cyclical or spiral traditional models found in literature of action research, which are structured on planning, acting, observing and reflecting (McNiff et al.,1996). Table 2 below is a synthesis of the steps defined by Bassey (1998), McNiff et al. (1996) and Mertler (2006).

Research Design

The investigation was planned on the model outlined above in Table 1 (see also figure 1). During the *planning phase,* the review of literature was critically drawn to shed light on PLC and research in the field. This helped to put the subject in a wider perspective and give insights on which basis the investigation could be built.
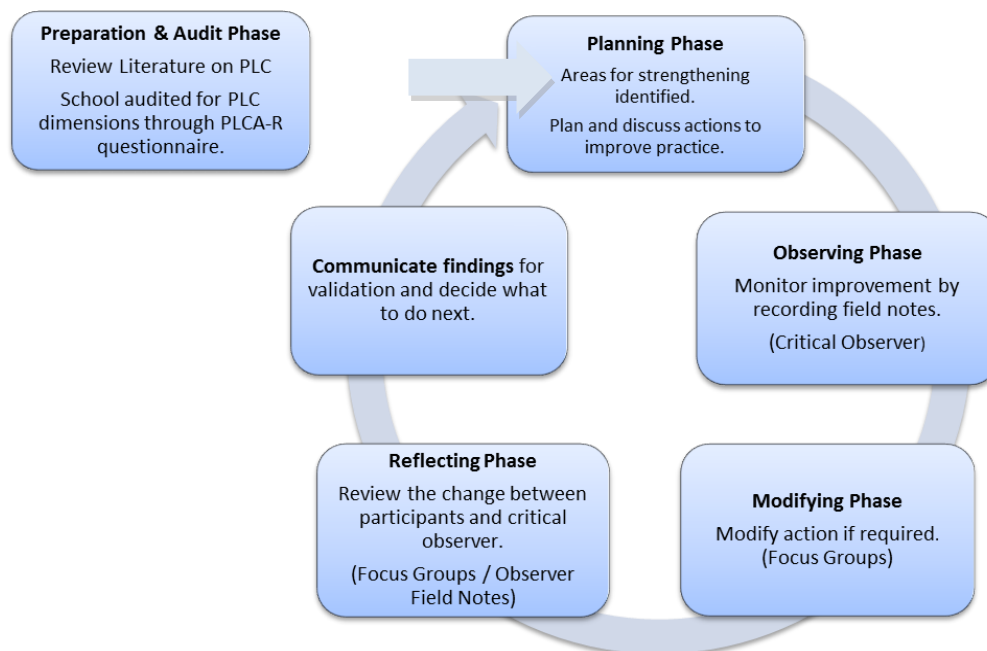
Preparation & Audit Phase
Review Literature on PLC
School audited for PLC dimensions through PLCA-R questionnaire.

Planning Phase
Areas for strengthening identified.
Plan and discuss actions to improve practice.

Observing Phase
Monitor improvement by recording field notes.
(Critical Observer)

Modifying Phase
Modify action if required.
(Focus Groups)

Reflecting Phase
Review the change between participants and critical observer.
(Focus Groups / Observer Field Notes)

Communicate findings for validation and decide what to do next.

FIGURE 1 ACTION RESEARCH CYCLE FOR SPP TO PROGRESS AS A PLC: RESEARCH DESIGN OUTLINE

During the *audit phase,* the PLCA-R (see Table 4) questionnaire was chosen as an auditing tool and placed on the school e-learning platform (MOODLE) with a minor modification to the original PLCA-R to probe for readiness. The PLCA-R is a four level Likert-Scale type questionnaire filed in sections, investigating PLC dimensions. At the end of each section, an open type question prompts for any comment by respondents. This open-ended question was slightly modified for this research by specifically asking the respondents for their view on that particular dimension. Consequently, from the respondents' points of view one would be able to sense the aptitude towards PLC and eventually conclude the collective readiness of the whole school.

The MOODLE facility was seen as a good medium as it is easy to construct, fast to deliver, provides anonymity and computes results with every entry giving the facility to monitor entries. After ensuring all ethical research procedures were respected an informative email explaining the aim of the whole research and the questionnaire were sent to all the staff in the primary school.

Following an email reminder, 16 participants out of 22 responded to the questionnaire (Response Rate = 72%), thus providing the research with a high degree of representativeness and reliability. Consequently, the data gathered was analysed to identify the areas needing adjustment.

At the end of this phase, the areas that needed strengthening were identified and paired with possible interventions for improvement. The areas were presented to the participants, and an action was collectively decided. Having the actions implemented, and operating, monitoring and modification led to the evaluation phase by means of focus groups.

Table 3: Changes Devised to Improve PLC at SPP

	Dimension developed	Supportive changes of Human capacity/ Collegial relationships	Structural Changes
1.	**Promote and nurture more leadership among staff members.**	Change in headship style with a more collaborative approach.	
		SLTs meet every day to discuss daily and curricular issues and given room for autonomy.	Time set for meetings.
		Teachers were participative on the school improvement	Time allocated for discussions.

		plan.	
		A positive student-teacher-head relationship underpinned by trust. Encourage and praise initiative.	Dedicate an amount of quality time to communicate on a personal level.
2.	**Promote collaborative analysis of multiple sources of data to assess the effectiveness of instructional practices and share student work to guide overall school improvement.**	Mentor support to interpret data. IT support for users.	A weekly fixed slot to discuss curricular issues to align with students' needs. Teachers were given flexibility to adopt a student profile to identify needs. Facilitate the School Management Information System
3.	**Improve supportive conditions mainly structural i.e. organise the time table to increase collaborative time.**	SLT present for support in curriculum meetings.	Two hours weekly were allotted for curriculum meetings and planning where grade level teachers can meet together. Some slots permitted vertical collaboration.
4.	**Improve communication amongst staff.**	**SLT present regularly in corridors and open spaces.**	**Communication is encouraged during meetings and through emails.** **SLT sends a weekly forecast and decisions concluded the week before.** **Classrooms are in proximity of same grade.** **Network storage of schemes of work- accessible to all teachers**
5.	**Create opportunities for staff members to observe peers and offer provide feedback and encouragement related to instructional**	Mentor offered observation on free will basis and encourage good practice. SLT encourage such practice.	Each grade teacher has a daily lesson free from the class to have the availability to visit or meet peers for observation and planning. Opportunities are created to share good and successful practices during

		professional development programmes.
6. **Create opportunities for coaching and mentoring.**	Staff were given the opportunity to avail of an external mentor following a CPD training on differentiated techniques.	Space and time was facilitated when staff asked for the mentor's support.
7. **Allocate funds to create a programme for professional development.**	The school engaged in a European funded programme that offers support in continuous professional development and mentorship. Teachers invited to share good practice in professional development programmes.	Planned dates during the scholastic year for professional development.

Four focus groups were conducted with four different grade level teachers. The *observing phase* involved data gathered from focus groups and the use of field notes recorded by a participant critical observer. This cycle was implemented for a number of areas needing change.

The data gathered from the focus groups was transcribed, sorted and analysed to extract perceptions on the changes done, and if they had improved school practices. The findings were communicated to validate the research and eventually start the process again to keep improving in the area studied. Figure 1 outlines the whole process.

Data Collection Tools

This action research used a mixed method approach to try to address the research questions appropriately and gain methodological triangulation. Table 4 below lists the tools used, indicating relevant information the researcher took into consideration.

Table 4: Data Collection Tools

Data Collection tool	Phase of research	Advantages	Reliability Issues	Validity Issues
		Disadvantages		
Questionnaire PLCA-R (Huffman and Hipp, 2003)	Audit	-Wide coverage -Economical -Easy to Arrange -Supply standard answers	This questionnaire is tried and improved and thus gained	Olivier et al. (2009,p.4) testify that the instrument is

| | | -Accurate date | the 'Test-retest ' characteristic described by Bush (2010, p.92) | found by researchers to be valid. |
| | | -Poor response -Pre-coded questions may be frustrating -Responses cannot be checked for truth Denscombe (2007, p.171) | | |

Data Collection tool	Phase of research	Advantages / Disadvantages	Reliability Issues	Validity Issues
Focus Group	Planning Observing Modifying and Reflecting	-Deep unique-valuable data -Economical -Can provide a wider range of data -Can be clarified -Risk irrelevance by divergence from topic -May be difficult to manage -Low attendance -Group pressure conditioning -May not be representative of the group eVALUEd (2006) Online	-Research questions have to be kept in focus -Small number of participants and homogeneous (Chioncel et al., 2003, p.503)	- Research questions have to be kept in focus -Inferences done have to abide to the language and concepts of participants -Verify information with participants (Chioncel et al., 2003, p.502).
Participant Observations	Observing	-Basic Equipment -Non-interference -Rich insights -Ecological Validity -Holistic explanations -Subjects' point of view -Limited access -Demanding -Weak on reliability and generalisability as it depends on 'self'. -Ethical problems Denscombe (2007, p.224)	Use systemic observation rubric PLCDR Huffman & Hipp (2010, p.52)	Rubric is used as a diagnostic tool for PLC progression Huffman & Hipp (2010, p.44)

The Sample

Throughout the preparation phase of this research, twenty-two members of the teaching staff were invited to audit the current state of PLC at the school. From the planning phase onwards, the school expanded with new student entrants and fourteen newly recruited teaching staff, the latter being also invited to join in this research. The participants included members of management, teaching and support staff. These are categorised according to McNiff and Whitehead (2009) as *research participants*. They also served as *critical friends and validation group* .

The inclusion coordinator (INCO) and the school external consultant were invited to act as *observers* using the PLC development rubric as a guide. Their choice is motivated from their relation to the school. The nature of work of the INCO, which is flexible and spread across the whole school, puts her in a strategic position to observe valid developments. Meanwhile, the external consultant who acted as a mentor during the research period would help to identify changes and triangulate the data.

Data Analysis

Action research involves gathering a sizeable amount of data while the research unfolds. Thus, data needed careful sorting and categorising. Consequently, the general criteria to regulate data is that only data conspicuously relevant to the research questions were used (McNiff and Whitehead, 2009). Meanings were then extracted from data gathered through the chosen design tools. Data were analysed through a reflective and dialectic critique This implied awareness of personal values as positioned and relative to the context of the research when analysing the data. Moreover, the aspects studied were viewed as inter-reliant in that together they compose the phenomenon, but separately they are diverse and thus theoretically in conflict (Waters-Adams; 2006, online). Consequently, the extracted data provided some valid recommendations in the form of leadership intentions to foster continued school improvement to keep the school improving.

Findings and Significant Developments that took place within the Action Research Period

Probing on the readiness level of the school and adopting Morrissey's (2000) two indicators of PLC readiness, that is a) the overall climate of acceptance, growth, and learning among teachers, and b) the openness and availability of the principal, one might conclude that the school readiness level was positively oriented. Table 5 presents some opinions of respondents on the five dimensions of PLC, thus attempting to present the collective attitude.

Despite some hesitation, there was overall agreement by staff that PLC dimensions were desirable, and that their implementation would improve student learning.

As regards the openness and availability of the head of school, following a professional discussion, the concept of PLC was welcomed by the head with enthusiasm and support, where the head expressed motivation to support this challenge, visioning that this was a good way forward for the school.

TABLE 5- Opinions of SPP staff On PLC Dimensions

PLC Dimension	Comments by SPP respondents
Shared and Supportive Leadership	• I do believe that the school is not only of the headmaster or SLT, but it is of the members of staff, students and parents. However, to ensure that shared and supportive leadership is being implemented, more communication meetings have to be held so one can share his intentions, share ideas and resources such as good practices so that the school community will own the leadership itself.
Shared Values and Vision	• I personally think that if schools and working staff build together a collective educational vision which is clear, concise and linked with teaching and learning, this will result in a successful in-depth learning. Such shared values and vision are the bases of a true community. They also help to focus attention on what is important, motivates staff and students, and increases the sense of shared responsibility for student learning.
Collective Learning and Application	• Collective learning is an asset in my opinion, as when one works in a group, one learns through others' input, concerns and visions. For example, sharing a learning experience with parents gives one an opportunity to get to know how parents think about certain areas, whereas sharing a learning experience with colleagues gives one a totally different experience as one shares with others who have the same pedagogical formation and aptitudes.
Shared Personal Practice	• I believe it has a lot to benefit from as one learns from the other and each individual's learning, experience and knowledge grows faster. Obviously the children will ultimately benefit from this as well. It is always wise and beneficial to be open and be ready to learn from others. All of us have a lot to contribute to the diverse aspects of the teaching and learning process.
Supportive Conditions – Structures	• These are very helpful and resourceful. All the points mentioned above (in the questionnaire) ease the job and make it more pleasurable to work in an environment where the teacher will find continuous professional development, help and professional support. Resources, welcoming environment and care are all important to make the lesson more successful.

Supportive Conditions – Relationships	• They are vitally important as the school is a community, a second home where we all come to every single day. Thus it is extremely important that each member feels a sense of belonging and supported as this will in turn strengthen his/her performance at work.

Findings from the Audit Phase

The responses of this questionnaire exposed some compelling factors about this school's culture. Considering that it is the school's first year in operation, a number of essential processes were already in place and developing. There were areas, though, that needed attention and support for improving the teaching and learning experience. In answering the third research question, the main identified areas to be addressed were as follows:

1. Promote and nurture more leadership among staff members.
2. Promote collaborative analysis of multiple sources of data to assess the effectiveness of instructional practices and share student work to guide overall school improvement.
3. Improve supportive conditions mainly structural, i.e. organise the time-table to increase collaborative time.
4. Improve vertical communication amongst staff.
5. Create opportunities for staff members to observe peers and provide feedback and encouragement related to instructional practices.
6. Create opportunities for coaching and mentoring.
7. Allocate funds for a professional development programme.

These conclusions led to the *planning phase* where possible strategies to improve these areas were discussed and implemented (see Table 3 for the structured plan). Having the planning concluded, the implementation, observing and modifying phase followed.

Observations During the Implementation Phase

i. PLC takes time to develop

This research supported and indeed justified, even more in the context of a new school, what Hargreaves (2007) advises that:

> Strong and sustainable PLCs cannot be rushed or forced. They can only be facilitated and fed. Professional learning communities take time. Like virtue or community in general, they cannot be mandated and legislated by imposed and over confident design. They can only be built and developed through strengthened relationships (p.188).

Whilst starting on a strong footing and with the right approaches was critical, one has to acknowledge that there was a lot to be established at this initial phase. The number of new teachers and support staff to be inducted in the school's culture was in itself a challenge. The 'ephemeral' effect of the school

culture (Deal and Peterson, 1998) in this context was magnified and makes the PLC undertaking more challenging as it was 'constructed and reconstructed through the collective articulation of beliefs' (Bates, 1992, as cited in Bates 2006, p.158).

ii. Integrated Professional Cultures and PLC

This research has unveiled an interesting dimension to inform educational research. In the first year, a number of recruited veteran classroom teachers resisted the collaborative culture projected from the start by the school leaders. A high veteran to novice ratio had originally been aimed at achieving some knowledge base as a starting school (Stoll and Louis, 2007a). Unfortunately, it did not work as envisioned. Before the second scholastic year, the teachers that offered resistance left and made room for new novice teachers.

The result was that the novice teachers participated "from the start, building and defining a school's professional culture" (Kardos et al., 2001, p.256). Moreover, the school, in this phase of great demand, benefitted from the 'idealism and energy' that characterises *novice-oriented professional* cultures (Kardos and Moore Johnson, 2007). This proved to be more productive and easier to align with the school's values and vision of a collaborative culture. Moreover, all the new recruits and the rest of the previous year's teachers created an *integrated professional culture* (ibid., 2007) where novices interacted at par with veterans, the latter recognising their needs as beginners. Consequently, a shared responsibility for the school and its students was developed among teachers, a key aspect of a PLC.

These incidents, in this particular context, did not support the theories put forward by Talbert (2010) who purported that teacher turn over 'undermines social cohesion' and that "schools with high proportion of beginning teachers… , are handicapped in their knowledge resource" (p.558) thus hindering PLC progression. On the contrary, at SPP the energy and motivation of new teachers, together with support from the SLTs and experienced teachers, eased these drawbacks and were turned into opportunities. Facilitation and support was continuous to avoid what Hargreaves (2007) warns against as the risk of "driving teachers to distraction – away from the passion of teaching and learning in classrooms and enriched relationships with children...." (p.183).

iii. Starting from Practitioners' Knowledge

Practitioners' knowledge was always the starting point for every decision taken to generate change. This made every stakeholder feel confident and esteemed and added greater professional efficacy and motivation. Utilising capacity to build capacity (Fullan, 2003) at SPP not only gave more confidence and efficiency but added ownership leading to a deeper sense of leadership.

Two strategies were employed to tackle decisions. The *Teaching Learning Cycle* (Cowan, 2010) was introduced for the weekly curriculum meeting which involved the study of the problem, selecting a strategy, planning the way forward, the implementation, the analysis, and finally a decision on the adjustments that were deemed necessary. This strategy placed the teachers and support staff as co-contributors in the action research process, hence giving them more leadership in curriculum decisions. Subsequently, the mentor adopted the GROW model (Whitmore, 2002) to coach and mentor teachers in tackling problems in instruction. Both strategies were aimed at starting from what practitioners know and progressing to action research (Fullan, 2002), thus creating a supporting structure of regeneration through the school's internal capacity (Morrissey, 2000).

iv. PLC and External Facilitator

One of the common strategies acclaimed by administrators as making a difference in their schools is the identification and hiring of 'skilled teacher educators and facilitators outside the system to support PLC improvement efforts' (Talbert, 2010). This research validates this strategy as the external mentor appointed at SPP was well accepted and perceived as less threatening due to the fact that he was from outside the school community and also a foreigner. Another important factor that helped the mentoring process was that the suggestions forwarded by the mentor and the approach adopted were very practical and relevant (Roehrig et al., 2008); contrasting, according to the participants, with theories taught at university level

v. Leaders' Emotional Intelligence and PLC

Fullan (2002) states that in complex times emotional intelligence is a must. In the context of SPP where, due to the growth of the school, change was a constant, working on relationships was imperative. Although, distributed leadership is an important aspect in a PLC and improved at SPP, staff still felt the emotional need of a leader from whom to get direction and support when needed. Leaders at SPP worked relentlessly to create positive relationships amongst staff. They were sensitive to their emotional states and at times were inspiring in a number of situations. This disposition from the part of the SLT helped to foster trust and a greater sense of community among staff, facilitating growth as a PLC.

vi. Communicating the PLC Model

The PLC model was never mandated but only verbally communicated, explained and modelled as Talbert (2010) advised. This strategy made participants feel comfortable and free to pace their efforts in line with the PLC principles without feeling unduly pressured. However, a finding worth noting is that certain benefits should be regularly communicated and encouraged. It transpired from this research that although certain supportive

conditions for collaboration were explained and embedded in the school's organisational structure, the majority of teachers failed to benefit from them.

In addition, communicating success is motivating and leaves a positive impact. During the research period SPP was awarded a Bronze-level CPD mark established by the hired training company sponsored by the EU programme. This and other students' achievements were consistently communicated in recognition of the effort and work done by the staff (Talbert, 2010).

The above conclusions surfaced after approximately a year from the start of the research and at the end of a first research cycle. SPP, the starting primary school in this study was, in practical terms, at the implementation stage of PLC (see figure 2). From the beginning a number of dimensions that were supported for improvement have evidenced progress. However, after the research analysis there were a number of areas which emerged as needing a more systematic input such as the use of student's data, communication across levels and shared personal practice. However, nonetheless some recommendations emerged for leaders in similar contexts of a starting school and wishing to embed a PLC.
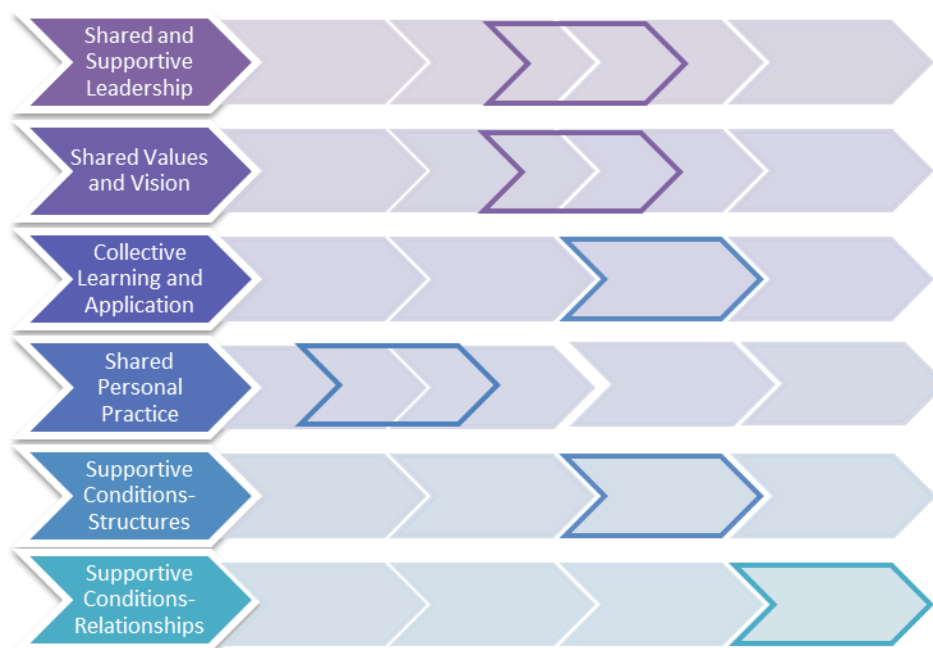

Figure 2: Graphical representation of PLC Progress Continuum at SPP

Implications for Leadership

The context of this starting school was a combination of building and changing a school culture. Building the culture of a starting school involves a culture change needed to harmonise the vision of the school with that of new staff that comes with preconceived beliefs, ideas and practices. In this context, a culture of collaboration was designated as the most comprehensive to achieve the desired aims. Research evidence shows that a culture of collaboration generates positive outcomes in achievements and is critical to establish a PLC (DuFour, 2004). Consequently, the following recommendations emerge from this action research intended to lay foundations for a PLC.

Leaders benefit:

– from emotional intelligence and need not be 'the smartest in an IQ sense but are those who combine intellectual brilliance with emotional intelligence' (Fullan, 2001) in a context of culture building and change.

– from diligently modelling and communicating PLC and avoid mandating (Talbert, 2010, 567) and the risk to 'turn into add-on teams that are driven by data in cultures of fear that demand instant results' (Hargreaves, 2007)

– from perseverance as PLCs need time to develop (Kruse and Seashore Louis, 2007, p.115) as 'the more patient, less deliberate modes are particularly suited to making sense of situations that are intricate, shadowy or ill defined" (Claxton ,1997, p.3 as cited in Fullan, 2001, p.122).

– from pacing and prioritising changes as one 'cannot press on relentlessly for more tested achievement by burning our teachers and leaders out' (Hargreaves, 2007), since PLCs need time and continuous adjustments.

– by starting from the practitioners' knowledge (Earl and Hanney, 2011) as this imparts confidence, efficacy and collective creativity (Hord, 1997) – "the collective ability of people, in an organisation, to learn their way out of trouble, and forward into the future" (Hargreaves, 2007, p.185).

– if they engage an external facilitator as a support and change agent (Hill and Crevola, 2003) where "with strong interpersonal, organisational and communication skills, [s/he] is the linchpin that holds the implementation together" (Cooper , 1998, p.12).

– when recruiting new staff, by balancing judgement between professional responsibility and maturity (Hargreaves, 2003) rather than level of knowledge base, and select individuals who can "make connections between the priorities of the school and their individual personal, professional and collective identity and commitment" (Day et al., 2005, p.575).

Conclusion

The praxis paradigm adopted by this research where "theory and practice, research and development, thought and action" (Zuber-Skerritt, 2001, p.15) were associated to develop a culture of PLC, definitely provided interesting results. The work has progressed on two critical fronts – first in starting a PLC, and secondly on how that impacts on the school leadership. SPP culture emerged as showing evidence of implementing a number of PLC dimensions that create a positive learning environment for teaching staff and that for the short research period the leadership learned a number of important lessons that strengthened its efficacy. The next step to attempt to validate that PLC foundations are educationally comprehensive would be to investigate if these dimensions subsequently result in improved learning and achievement for all stakeholders especially the students. This would involve a whole new set of research challenges.

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