The Influence of Operating a Professional Learning Community on Principals’ Leadership Styles and Teachers’ Level of Efficacy in Two North Indian Schools: Lessons for Indian Schools Generally?

A thesis submitted for the degree of Doctor in Philosophy (Ph.D.)

By

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Declaration

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___________________________
Joseph Vellanal Augusthy

Date:__________________________
I dedicate this thesis to my parents, for their unconditional love and sacrifice by letting me go to serve the society. This work is also dedicated to the Carmelite order and to the members of the Anglo Irish and Delhi provinces, who always encourage and support me. A special dedication to Angela O’Brien, whose motherly love and affection makes me feel important.
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Abstract

A belief that the quality of learning and teaching can be enhanced by teachers working and learning together has led to increased interest in the potential of professional learning communities [PLCs] for school improvement and reform. With a core emphasis on the undeviating focus on students’ learning, PLCs are said to be conducive to what is best for students’ learning and teachers’ wellbeing. This concept, developed by Shirley Hord, Richard DuFour and Robert Eaker who were pioneers of PLCs and supported by McLaughlin and Talbert amongst others, revolves around the claim that if opportunities are given for collaborative inquiry, veteran teachers will share the wisdom they have gained through experience in a way that makes for improved teaching practices generally.

This study was an attempt to introduce PLCs into two northern Indian schools; to observe how useful the operation of a PLC was in each case and to establish what practical lessons could be learned from this experience when the concept was adapted to Indian culture. Simultaneously, it also looked at the effect of implementing PLCs on principals’ leadership styles and levels of teacher-efficacy. The research involved a combination of qualitative and quantitative tools, used sequentially but with priority given to the qualitative phase. Specifically, this involved the use of semi-structured interviews, focus group interviews, and observation. The Professional Learning Community Assessment - Revised [PLCA-R] instrument was used to measure the professional learning communities’ practices at the schools in question. The Leadership Practice Inventory [LPI] was used to assess the leadership styles of the principals. The Teacher Efficacy Scale [TES] provided construct validation support for this variable, and allowed me to examine the relationship between teachers’ levels of self-efficacy and their observable behaviours. The work had two phases. Phase one involved the introduction of PLCs into
two schools and in this phase pre-research data were collected (using the PLCA-R, the LPI and the TES). The second phase of the research involved post-research tests when PLCs had been functioning in each school for one academic year. Tracking the efforts of principals and teachers in these two Indian schools in implementing PLCs suggested that the transformation to a PLC can be a slow and challenging process. The study of the relationship between a principal’s leadership role and a PLC in this research reinforces the existing literature in suggesting that, while successful implementation and effective operation of PLCs in any school greatly depends on the leadership of the principal, at the same time, the principal benefits reciprocally as it positively influences his/her leadership quality. Even though this study could not establish a correlation between operating PLCs and teachers’ sense of efficacy in a quantitative way, qualitative results suggested that the sources that enhance the development of high teacher efficacy, namely: (1) mastery experiences, (2) vicarious experience, and (3) social persuasion, were very much present in the day-to-day operation of the PLCs. These results give grounds for cautious optimism and indicate PLCs could have a significant influence on pedagogical decisions made in Indian classrooms.
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List of Abbreviations

ASER: Annual Status of Education Report
CABE: Central Advisory Board of Education
CBSE: Central Board of Secondary Education
CISCE: Indian Schools Certificates Examination
CLA: Collective Learning and Application
CPD: continuing professional development
DL: Distributed Leadership
DPEP: District Primary Education Programme
ECM: Efficacy in Classroom Management
EIS: Efficacy in Instructional Strategies
ESE: Efficacy in Student Engagement
IB: International Baccalaureate
IIM: Indian Institutes of Management
IIT: Indian Institutes of Technology
IL: Instructional Leadership
INSET: In-Service Training
LPI: Leadership Practice Inventory
NCERT: National Council of Educational Research and Training
NCLB: No Child Left Behind
NCT: National Commission on Teachers
NCTAF: National Commission on Teaching and America's Future
NFE: Non-Formal Education
OECD: Organisation for Economic Cooperation and Development
PBE:  Performing Beyond Expectations
PD:  Professional Development
PLC:  Professional Learning Community
PLCA-R: Professional Learning Community Assessment- Revised
PTE:  Personal Teaching Efficacy
RTE:  Right to Education
SCERT: Councils of Educational Research and Training
SCR:  Supportive Conditions-Relationships
SCS:  Supportive Conditions-Structures
SD:  St. David’s School
SE:  Self-efficacy
SJ:  St. Joseph’s School
SPP:  Shared Personal Practice
SSL:  Shared and Supportive Leadership
SVV:  Shared Values and Vision
TL:  Transformational Leadership
TSES: Teacher’s Self Efficacy Scale
UNESCO: United Nations Educational Scientific and Cultural Organisation
UT:  Union Territory
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Chapter 1

Introduction

‘If we teach today as we taught yesterday, we rob our children of tomorrow’

(Dewey, 1944, p. 167)

1.1 Background of the Study

By 2018 critical thinking, problem solving, accountability, and assessment were amongst the most popular buzzwords in education-related debate. This could be attributed in large part to reform movements and changes in educational systems and contexts around the globe, including the seminal piece of legislation passed in 2001 in America, the No Child Left Behind Act [NCLB], and India’s equivalent, the Right to Education Act [RTE] of 2009. These various reforms were purported to contribute to improvements in educational equity, quality, and efficiency – the three major challenges routinely said to be facing educational systems around the world (Arnove, 2005). Even though, by 2018, there had been improvements with regard to the universalisation of education because of such reforms and legislation, equity remained an issue in most parts of the world (Mohanty, 2017). As a result, there began to be growing interest in system-level changes aimed at fostering equity in education. The search for ways of improving the experience of education became a search for systems and structures that could support teachers’ professional development and for new instructional approaches that could respond to changing societal need. These themes came to be widely seen as being the keys to successful school improvement.
As education programmes in many countries increasingly faced pressure to demonstrate that the education they offered met the expectations of students and the requirements of employers, both currently and in the future, so the quality of teaching became an issue of importance. By the early twenty-first century, increasingly much research evidence suggested that the quality of teaching was the single most important in-school factor that could influence students’ achievements, and that improvement in teaching quality was of paramount importance (Darling-Hammond & McLaughlin, 1995; Jensen, 2012; Nagoba & Mantri, 2015). Keeping that specific requirement in view, Darling-Hammond and McLaughlin (1995) proposed certain design principles to guide the conduct and organisation of school reform. Their findings suggested that traditional forms of in-service training delivery needed to be replaced by opportunities for ‘knowledge sharing’ based on real situations. Teachers need opportunities to share what they know, to discuss what they want to learn, and to connect new concepts and strategies to their own unique contexts. Darling-Hammond and McLaughlin (1995) argued that in the climate of reform that had emerged by the late 1990s, teachers needed to rethink their own practice and teach in ways they had never contemplated before. Because, according to their study, success depends on how teachers are able to learn new skills and un-learn previous beliefs and practices. Such a model of professional development ultimately requires a fundamental change in institutional structures so as to make educational systems into learning organisations.

By 2018 one model that had evolved as a way of supporting this paradigm change was the so-called professional learning community [PLC]. While in most aspects of the reform movement emphasis was placed on using data to monitor educational institutions and effective practices nationwide, the concept of PLCs focuses on using data in collaborative groups at the site level for the purpose of improving instructional practices. The PLC
became popular in the 1990s, borrowing from the ‘learning organisation’ in business described by Senge (1990) who proposed that learning organisations should be places ‘where people continually expand their capacity to create the results they desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together’ (Senge, 1990, p. 3). He said further that it is the mastery of certain basic disciplines, including systems thinking, personal mastery, mental models, building shared visions, and team learning that fundamentally distinguish learning organisations from traditional, authoritarian, controlling organisations (Senge, 2000). In the consideration of PLCs as a model of school reform, DuFour, Eaker, and DuFour (2005) emphasised that when schools function as PLCs the educators in them embrace the premise that the fundamental purpose of the school is to see to it that all students learn very effectively, rather than their merely being taught apparently very effectively. In Hord’s (1997) view, it was the fact that schools are expected not only to offer education, but to ensure learning that helped PLC to become well integrated into the lexicon of American education.

Since the concept of PLC originated in the USA it is important to delve a bit into the background of the American context. NCLB, signed into law by President George W. Bush on 8 January 2002, remained, by 2018, the most noteworthy of various reforming attempts to improve student achievement and secondary educational programmes in the United States (Simpson, Lacava, & Sampson Graner, 2004). Some authors consider NCLB as a response or reaction to the publication of A Nation at Risk (National Commission on Excellence in Education, 1983), an ambitious and well-publicised examination of elementary and secondary education which largely launched the reform movement (e.g., Vinovskis, 2015). No Child Left Behind ensured accountability and flexibility as
well as increased federal support for education. At the same time, NCLB mandated that schools make adequate yearly progress in reading and mathematics on state tests in order to continue to receive federal funding (Powell, Higgins, Aram, & Freed, 2009). The aim was gradually to improve the scores on state tests for all children, including the impoverished, disabled and minority students. Elementary principals and teachers across the USA were mandated to implement the NCLB law including its requirement to incorporate ‘scientifically-based’ strategies and curricula in reading, mathematics and science instruction (Powell, Higgins, Aram, & Freed, 2009). A massive change being mandated for states and schools, to be accomplished very quickly, greatly increased pressure of expectation, both on principals and on teachers. A study undertaken by Powell, Higgins, Aram, and Freed (2009) to evaluate the effects of NCLB on students, teachers and principals suggested that this mandatory reform initiative influenced US schooling in such a way that raising test score gained overwhelming importance over children’s success in future schooling. As a result, many teachers reported being discouraged and desiring to quit teaching. Even though new teachers were said to be more prepared, low performing schools lost experienced teachers to early retirement or to private schools. ‘NCLB has caused many teachers to adopt teaching methods that lack innovation and creativity often leaving teachers to feel that they are unable to use their professional judgment about what’s best for their students’ (Powell, Higgins, Aram, & Freed, 2009, p. 27).

Under the terms of NCLB schools were held accountable for ensuring that all students reach proficiency on state assessments by 2013-2014. It thus became vital that teachers, in a certain way, had the knowledge and skills needed to teach effectively (Birman et al., 2009). NCLB made professional development a key strategy for improving teachers’ knowledge and skills as it was attempting both to find way to engender higher expectations
and to increase students’ learning and achievement outcomes. Based on the theoretical and empirical research regarding teachers’ work and educational reform in US schools, researchers such as Talbert and McLaughlin (2008) argued that building school-based teacher learning communities was key to improving educational quality and equity. Further, they suggested that school-based teacher learning communities were essential to promoting the significant improvements in teaching quality and student achievement envisioned by NCLB. ‘Teachers’ communities enhance students’ outcomes because they provide effective learning environments for teachers, organize instruction to provide equitable student learning opportunities, and nurture and sustain a professional service ethic and mutual accountability for all students’ success’ (Talbert & McLaughlin, 2008, p. 182). Doolittle, Sudeck, and Rattigan (2008) observed that schools, in general, struggled with meeting the multiple priorities generated by the intensification of expectations following NCLB. Thus, in addressing the problem of improving struggling schools, school leaders were turning to PLCs as their reform model of choice (Norton, 2006).

PLCs shift the focus of school reform from restructuring to what has been called reculturing. Establishing and operating a PLC is an attempt to increase students’ levels of achievement by creating a collaborative school culture with an emphasis on learning. DuFour and Eaker (1998) claimed that ‘The most promising strategy for sustained, substantive school improvement is developing the ability for school personnel to function as professional learning communities’ (p. xi). The purpose of this study is to examine the effects of operating PLCs in schools in north India. More specifically, this study examined the effects of a PLC on principals’ leadership styles and on teachers’ levels of self-efficacy in two north Indian schools.
1.2 Statement of the Research Problem

When I planned and initiated this work I did not know if PLCs could be developed in north Indian schools. Furthermore, even though the literature spoke at length about the role of the principals in leading PLCs (Berdos, 2009) and considered leadership on the part of principals one of the preconditions most necessary for successful PLCs (Hord, 1997) very little literature was available that concerned whether or not taking an active part in implementing and sustaining PLCs can influence the leadership practice of principals. Over the years the construct of teacher efficacy has evolved from being dominated by Rotter’s (1966) locus of control theory to being more concerned with Bandura’s (1977, 1986, 1997) social cognitive theory. From the 1990s onwards the role of self-efficacy in teaching and learning continued to interest many researchers and practitioners alike (e.g., Hoy, 2000; Klassen & Tze, 2014; Mintzes, Marcum, Messerschmidt-Yates, & Mark, 2013; Zee & Koomen, 2016). Bandura (1977, 1997) postulated four sources of efficacy expectations: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states. Through cognitive processing, these four sources lead educators to an analysis of their teaching performance and to an assessment of their personal teaching competence. But before I commenced my work apparently few researchers had sought to answer the question: if these sources of efficacy are present in a PLC, will levels of teacher-efficacy be positively influenced by participating in the PLC?

In 2004 Adey said: ‘A desire to improve the quality of education is a perfectly respectable aim in its own right, and is one that should always continue, whatever successes may be achieved on the way’ (Adey, 2004, p. 2). When I applied this thought to the state of Indian education as I found it a decade or so later, when this work began, it seemed to me that the ‘desire to improve the quality of education’ was not merely respectable and a righteous
cause to pursue, but it was an absolute necessity. The India of the early twenty-first century was trying to actualise its policy of providing free and compulsory education to all children and transform the elite education system inherited from its colonial past into a mass education provider, but the task was always a race against a rapidly growing population, which outstripped the pace at which children could be enrolled and educated in schools (Govinda, 2008). The struggle to reach the long-cherished goal of universal elementary education continued by 2018 in most of the states of India but a greater challenge lay in the question of quality of education offered to those students who were enrolled in its schools. The annual Status of Education Report 2017 (2018) entitled Beyond Basics shows the truth, which was that, in spite of many incentives and steps, including the District Primary Education Programme [DPEP] in 1994, and Sarva Siksha Abhiyan (Education for all Movement) in 2000, even in the fundamental skills of reading and calculating most pupils were not up to their grade levels. The report also showed that substantial numbers of young people who have completed eight years of schooling had difficulty in applying their literacy and numeracy skills to real-world situations. Another challenge for twenty-first-century Indian schools was that every class across the country had a significant proportion of children who were first generation school-goers. This typically meant that the schools had significant extra burdens and responsibilities as many students did not receive any help or even encouragement from the parents (Behar, 2015, January, 20). Ramachandran (2005) in her study on teacher motivation in India noted that, when in one district of north India she asked a group of teachers what, according to them, marked out a motivated teacher, almost all believed that daily attendance and complying with orders and requests for information were reasonable indicators of motivation. Ramachandran, (2005) further observed that administrators described as motivated those teachers who were regular attenders, did what they were told and who, by and large, did not complain.
'Children were nowhere in the picture, nor were the teaching and learning processes. Learning was incidental to the mountain of data they gathered and fed into the system’ (Ramachandran, 2005, p. 2141). Pressure to change and improve the nation’s schools caused the spotlight to be shone ever more on teachers’ capabilities when it came to providing the kinds of classroom experiences needed to improve all students’ learning and achievement. Two pressures provided an increased sense of urgency about teachers’ own learning opportunities. First, modern society demands schools that produce students with the complex intellectual skills that are needed by the knowledge society (McLaughlin & Talbert, 2006), but are sometimes said to be missing in too many of their former pupils. Second, by the early twenty-first century it was no longer acceptable that unequal student outcomes would characterise Indian schools as they had hitherto (Desai & Kulkarni, 2008), with advantaged students achieving more academically than students with fewer resources to support their learning. It is at this juncture PLCs become relevant, because PLCs focus on the kind of teaching that is really interested in students and their needs, student-centered teaching.

1.3 Purpose of the Study

From the 1990s the promotion of professional learning communities emerged as a potentially promising way to assist educators to learn, collaborate and support each other as they work to meet the needs of students (Huffman et al., 2016). Research into PLCs has also suggested that the core PLC elements - having a shared vision and values, supportive and shared leadership, collective creativity, fostering of supportive conditions and joint practical activities (Hord, 2004) - can provide an atmosphere in which there can be dialogue amongst professionals (Gray, Kruse, & Tarter, 2016). Deep team learning (DuFour, 2004), the development of positive coping strategies (Delany et al., 2015), and
teachers becoming pedagogically responsive (Gay, 2013) are additional benefits which may ultimately increase students’ achievements (DuFour & Marzano, 2015). The key to a successful PLC is that responsibility and authority are distributed and shared between the principal and teachers (Hord & Sommers, 2008).

While numerous studies and policy proposals have emphasised the professional development opportunities available in PLCs and the importance of principals in implementing and sustaining them, the purpose of this study was to look at two perhaps neglected questions: whether implementing and sustaining PLCs has an effect on the leadership quality (style) of a principal and whether participating in PLCs can affect teachers’ levels of efficacy. Another purpose of this study was to provide a real picture of the story of the implementation of PLCs in two north Indian schools so that it may throw light on how to implement PLCs in this particular culture.

### 1.4 Research Questions

The questions of interest explored in this study include:

1) How do PLCs operate in north Indian Schools?
   a) What are the factors that help or hinder the creation and development of effective PLCs?
   b) What are the challenges experienced in implementing PLCs in north Indian Schools?

2) Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?
   a) What are the teachers’ perceptions?
   b) What are the principals’ perceptions?
3) Is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy?
   a) What are the collective perceptions of this on the part of members of a PLC?
   b) What are each individual teacher’s perceptions?

1.5 Definition of Terms

The list provided below offers working definitions of terms used in this study.

Professional learning community: Educators committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students whom they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous job-embedded learning for educators (DuFour, DuFour, & Eaker, 2008, p. 469).

Mission and vision: Mission and vision both relate to an organisation’s (in this context, school’s) purpose and direction. How do the people there answer questions such as who are we, what do we value, what are we here to do together and where are we going (DuFour & Eaker, 1998)? These are typically communicated in some written form.

Values and goals: Values are the criteria people use in assessing their daily lives, arranging their priorities and choosing between alternative courses of action. Goals are desirable outcomes which influence the achievement of the mission. Goals inform the people where the school is going and how it plans to get there. Having goals helps making decisions and evaluating and controlling performances.
**Collaborative culture:** All teachers in a school are willing to work interdependently to analyse their practice in an effort to improve results for their students, their team, and their school.

**Collective enquiry:** Teachers are willing candidly to clarify their current practices and honestly assess their students’ current levels of learning.

**Principal leadership practices:** A principal leadership practice refers to the leadership behaviours that allow principals to create positive school cultures and learning environments. One of the early inventories developed by the Northwest Regional Educational Laboratories (1978) provides a description of a person’s leadership style. According to this there are two dimensions: the introvert versus extrovert and people versus task dimensions. In the present study principal’s leadership practices was defined as the score on the LPI. The observer form was used to allow each school’s teachers to report on their principal’s daily practices. The LPI reports a total score as well as scores in five categories.

**Teacher self-efficacy:** A ‘teacher’s belief in his or her own capability to organize and execute courses of action required to successfully accomplishing a specific teaching task in a particular context’ (Tschannen-Moran et al., 1998, p. 233). For the purpose of this study, teacher efficacy was measured by the Teacher Sense of Efficacy Scale [TSES].

With these preliminary notes and working definitions in place, I proceed, in the bulk of this text, to explore the issues in hand; I do so in the spirit suggested by Dewey, concerned to seek a better tomorrow and in hope of improving children’s lives.
1.6 Chapter Summery

As it is usually beneficial to give a brief idea about what a study is about, I take this opportunity to do so. This first chapter has focused on the background to the study and explained the research problem that the work deals with. This chapter also explained the purpose of the study and set out the research questions to be answered hereafter. Finally, it provided working definitions of the terms used in the study to aid clarity. The next chapter attempts to survey a large body of literature relevant to the study.
Chapter 2

Literature Review: Part One: Professional Learning Communities

2.1 Introduction

International evidence suggests that educational reform’s progress often, or to a considerable extent, can depend on teachers’ individual and collective or school-wide capacity for promoting pupils’ learning (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005; Hord, 2004; Little, 2003; Rentfro, 2007; Stoll & Louis, 2007). Building capacity would seem, therefore, to be critical. Capacity emerges from a blend of motivation, skill, previously successful learning (i.e. learning the teacher has either personally experienced or observed), a school’s organisational conditions and culture and the quality of its infrastructure of support (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). When these are put together, they give individuals, school communities, groups within those schools and those who run school systems the power to get involved in and sustain learning over time. However, as researchers and practitioners examined school improvement efforts from the late 1990s onwards it became apparent that something important was missing in the study of capacity building. The narrow, piecemeal attempts made previously to improve schools lacked a fundamental concern for supportive cultures and the conditions conducive to achieving significant gains in the quality of teaching and learning. Too often, it was claimed, teachers worked in isolated classrooms, struggling with the needs of challenging students and lacking productive interactions with colleagues through which they might gain new insights into, and understandings of, the other teachers’ practices. By the early twenty-first century many teachers were still ill-prepared to teach every student successfully and often lacked the skills required to challenge students by
offering high-quality intellectual tasks (Morrissey, 2000). In addition, principals often did not know how to help teachers address their own learning needs (Leithwood, Patten, & Jantzi, 2010).

Some research has indicated that PLCs offer an opportunity to address the issues referred to above (Huffman & Jacobson, 2003; Leithwood, Patten, & Jantzi, 2010; Maloney & Konza, 2011; Rhodes & Brundrett, 2009). A successful PLC may provide a form of collegiality which may support teachers and administrators in improving their practice by allowing them to learn new curriculum content, instructional strategies and methods for interacting meaningfully with each child/teenager. In other words, PLCs may provide opportunities for professional staff to look deeply into teaching and learning processes in a school with a view to learning how to become more effective in their work with students. If we accept the intuitive importance of PLCs, the next question is: who is to take the initiative to convert schools into such professional learning communities? Developing schools where staff are engaged in continuous learning, based on critical appraisal of their practice with a view to improvement, is a challenging responsibility for school leaders and managers (O’Sullivan, 2011).

2.1 School Culture

Culture may be defined as:

...a system of ordinary, taken-for-granted meanings and symbols with both explicit and implicit content that is, deliberately and non-deliberately, learned and shared among members of naturally bounded social group (Erickson, 1987, p.12).

School culture might also be called school environment or school climate. School culture can be described as the metaphorical personality of a school or its character based on
trends, patterns, goals, or values. Cultures are based on individual perceptions of how to behave, reflecting group beliefs/values. Standards in maintaining safety, delivering teaching/learning, ensuring effectiveness, building decent relationships, keeping up morale and motivation, and environmental elements are contributors to a school’s culture (Cohen, 2009). The study of culture (in the meaning of this word that interests me) has its roots in anthropology, focusing mainly on human behavioural patterns, social norms, ceremonies, values and beliefs at community and national levels (Apte, 1994).

It is often assumed, especially by management studies scholars, that organisational culture is a dominant factor affecting attitudes towards work and productivity and that strong organisational culture can bring great satisfaction, while ensuring commitment and high levels of performance on the part of workers (Huselid, 1995). Culture also became a “hot” concept used to explain local or international variation in levels of educational effectiveness in the late twentieth century and early in the twenty-first (Cheong, 2000). Taken as a whole, school culture might be said to be one of the most complex and important concepts in education (Stoll, 1998). But it has also been one of the most neglected in educational planning and it has been claimed that reforms that strive to achieve educational excellence may fail if they are not meaningfully linked to schools' unique cultures (Deal & Peterson, 1999). Therefore, it must be important to have an understanding of the idea of school culture before promoting the establishment and operation of a PLC in a school. In considering the phrase school culture it is useful first to consider various definitions of the term culture. Geertz (1973) laid down the foundation for understanding culture as implicit and explicit patterns of meaning. He included in this explanation elements such as norms, values, beliefs, traditions, rituals, ceremonies and myths. Similarly, Schein when discussing organisational culture in 1990, Schein defined culture as follows:
(a) a pattern of basic assumptions, (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore (e) is to be taught to new members as the (f) correct way to perceive, think, and feel in relation to those problems (1990, p. 111).

Willower (1984) also addressed organisational culture and has described it as ‘the peculiar set of traditions, values, norms, and other social structures and process that characterise a particular organisation’ (p. 36). Thus, the sum of the values, cultures and organisational structures within a school that cause it to function and react in particular ways can be regarded as that school’s culture. For example, some schools may be said to be nurturing environments that recognise children/teenagers and treat them as individuals; others may have the feel of authoritarian institutions where rules are strictly enforced and hierarchical control is strong. Teaching practices, degrees of diversity in the pupil population, and the relationships among administrators, teachers, parents and students contribute to school climate. Although the two terms (culture and climate) are sometimes interchangeable, school climate may more precisely refer to school's effects on students, whereas school culture concerns the way[s] teachers and other staff members work together.

The multifaceted nature of culture as a concept means that it is used by various authors in ways that have differing implications for schools. Thus, school culture can be understood as the ‘historically transmitted patterns of meaning that include the norms, values, beliefs, ceremonies, rituals, traditions, and myths understood, maybe in varying degrees, by members of the school community’ (Stolp & Smith, 1995, p. 13). However, the claim that schools have distinctive cultures was not new. Willard Waller, an American sociologist whose research concerned the sociology of education, wrote in 1932:
Schools have a culture that is definitely their own. There are, in the school, complex rituals of personal relationships, a set of folkways, mores, and irrational sanctions, a moral code based upon them. There are games, which are sublimated wars, teams, and an elaborate set of ceremonies concerning them. There are traditions, and traditionalists waging their world-old battle against innovators. (Waller, 1932, p. 96).

Sixty-five years later, Cavanagh and Dellar (1997) described school culture as the product of individual and collective perceptions of the social environment in a particular school. Deal and Peterson (1999) have also observed that ‘Parents, teachers, principals, and students have always sensed something special, yet undefined, about their schools as something extremely powerful but difficult to describe’ (p. 2). This “something” they define in the following terms.

School cultures are complex webs of traditions and rituals that have built up over time as teachers, parents and administrators work together and deal with crises and accomplishments. . .Cultural patterns are highly enduring, have a powerful impact on performance, and shape the ways people, think, act, and feel (p. 4).

Barth (2002) provided an even more succinct definition of school culture when he stated that, ‘A school’s culture is a complex pattern of norms, attitudes, beliefs, values, ceremonies, traditions, and myths that are deeply ingrained in the very core of the organisation’ (p. 7). Furthermore, a school’s organisational culture has, in his view, more influence over the life of the school community than, as he puts it (using the language of American school administration): ‘the superintendent, the school board, or even the principal, teachers, and the parents can ever have’ (p. 6).

A central theme of the literature on culture generally, and school culture as an example of this, is the concept’s complex and subjective nature (Barth, 2002; Cavanagh & Dellar, 1997; Deal & Peterson, 1999; Geertz, 1973). Various authors state that school culture cannot be understood on its own, as it is inseparable from the structure of the school (Barth,
2002; Schein, 1990; Willower, 1984). And it has been pointed out that any attempt to measure or understand school culture should involve an attempt to understand the ‘systemic patterns and relationships’ inherent in that school (Stolp & Smith, 1995, p. 19).

2.3 Why is School Culture Important in Implementing a PLC?

The more the members of a school community share the same assumptions and values about aims, process and management of education, the stronger the behavioural norms and cultural influence on their daily practice and performance will be (Cheong, 2000). In other words, the effects of a stronger culture are more powerful on educational effectiveness at individual, classroom, and school levels. A school’s culture has obvious implications for the quality of life for those who work in it. ‘It affects every part of the enterprise from what faculty [staff] talk about in the lunch room, to the type of instruction that is valued, to the way professional development is viewed, to the importance of learning for all students’ (Deal & Peterson, 1999, p. 7). It has been claimed that healthy and sound school cultures correlate strongly with increased levels of achievements and motivation on the part of pupils and with teachers’ levels of productivity and progress satisfaction (Deal & Peterson, 2009). School culture also correlates with teachers’ attitudes to their work. In a study that profiled seemingly effective and ineffective organisational cultures Yin Cheong Cheng found schools with stronger cultures had better motivated teachers (Cheng, 1993).

In an environment characterised by strong organisational ideology, shared participation, charismatic leadership and intimacy, teachers experienced higher levels of job satisfaction and increased productivity. However, it may be that schools characterised by a great deal of togetherness, familiarity and trust among teachers will not guarantee more effectiveness – and, indeed, may be less effective – than schools in which this familiarity does not exist.
(Sergiovanni, 1994). In this sense, school culture is a form of organisational “energy” the effects of which on the school depend on how it is channeled and directed (Sergiovanni, 1994). For example, teachers often form closely-knit and highly familiar groups or (to use a more pejorative term) cliques (Sergiovanni, 1994). Some of these groups can use their closeness to make a school work better, but other groups may (intentionally or not) use the same quality in ways that cause the school problems and difficulties. The key to deciding how such events play out is whether the group identifies with, and is committed to, the school and its purposes. When there is positive energy on the part of a group, and when this becomes, so to speak, part-and-parcel of the school’s culture, we may be said to have a functional PLC. Thus, some research suggest that positive school cultures foster trust, collaboration and improvement and negative cultures foster distrust, isolation and lack of progress (Deal & Peterson, 2009). School culture can greatly influence how people think, feel, and act. Culture, generally, is a key contributor to staff members’ levels of focus, commitment, motivation, and productivity. It thus seems reasonable to say that school improvement almost certainly cannot take place if we ignore school culture and it may be that a PLC has to be part of a school’s culture if it is to be effective. ‘We certainly stress the importance of culture - the assumptions, beliefs, values, and habits that constitute the norm for an organisation - in Professional Learning Communities at work’ (DuFour & DuFour, 2012, p. 46). DuFour and DuFour are of the opinion that educators who cultivate PLCs must engage in an internal process to have a positive impact on the culture of their schools. When they are successful, their organisations will undergo profound cultural shifts (DuFour & DuFour, 2012).
2.4 What is a Professional Learning Community?

‘PLCs are not new; they have a distinguished history, going back at least to W. Edwards Deming. Best known for his work in Japan after World War II, Deming focused on creating a quality culture in the work place’ (Easton, 2011, p. 25). Easton here refers to the work *The New Economics for Industry, Government & Education*, published in 1994 by Deming (Deming, 1994). In this book he expresses his observation that all too often educational systems involved competition between people, teams, departments, divisions, students, schools and universities. Although economists have long taught that competition will solve most problems, by the late twentieth and early twenty-first centuries some had come to think that the solution to many problems might come from cooperation, not competition (Deming, 1994). Deming has further emphasised the importance of making everyone in an organisation responsible for quality. In the 1980s and 1990s, Peter Senge promoted the claim that what he called *the fifth disciplines* were key to successful corporate life. Crucially for present purposes, these included team work. Kruse, Louis, and Bryk wrote about school-level teams as early as 1994, but Shirley Hord may have been the first to use the specific term Professional Learning community or PLC.

A PLC can be understood as a synergy of collaborative action. The term *synergy* is derived from the Greek word *synergos*, meaning the working together of two or more drugs, muscles, etc. to produce an effect greater than the sum of their individual effects. It describes situations where increased effectiveness and achievement are produced by combined action. Improved levels of achievement on the part of pupils might be one benefit to emerge from educators working collaboratively to effect greater than the sum of individual efforts (Fullan, 2005). It may be that effective PLCs can provide the conditions conducive to the synergy that drives school improvement. Ideally, in such a situation,
students, teachers and school leaders are the recipients of the positive effects of the collaborative actions practiced in the professional learning community.

In an educational context, a PLC is a community whose key goal is to provide a context for teachers to search for good practice through enquiry. Hoban (2002) and Cassidy et al. (2008), for example, explain that teachers’ learning involves collaboration between members of a community who are able and willing to provide cross-fertilisation of ideas and knowledge about their practices through both interaction and participation. In such a community learning takes place in an authentic way that allows people to try out new ideas about their practice through reflection-on-action (paying critical attention to the practical values and theories which inform everyday actions, by examining practice reflectively and reflexively so as to engage in a process of continuous learning) and reflection-in-action (how teachers improve learning by experience (see: Schön, 1983). This can provide teachers with the opportunity to observe other, more expert, teachers, be observed teaching in their own classrooms and obtain comments on their teaching. These opportunities can take a variety of forms, including providing comments on videotaped lessons, having teachers visit each other’s classrooms to observe lessons and having activity leaders, lead teachers, mentors and coaches observe classroom teachers and engage in reflective discussions about the goals of a lesson, the tasks employed, teaching strategies, and pupils’ levels/types of learning (Garet, Porter, Desimone, Birman, & Yoon, 2001).

By 2004 it was possible to say confidently that: 'the idea of improving schools by developing PLC is currently in vogue' (DuFour, 2004, p. 6). However, DuFour goes on to say that the term PLC had been used so widely that it was already in danger of losing all meaning by the time of his writing.
2.5 Definitions of Professional Learning Communities

The term learning community has taken on a variety of meanings in the literature. The book *Improving Schools from Within* describes a community of learners as 'a place where students and adults alike are engaged as active learners in matters of special importance to them and where everyone is thereby encouraging everyone else’s learning' (Barth, 1990, p. 9). There is no universal definition of PLC and the term may have different meanings in different contexts. But there appears to be a broad international consensus that suggests it requires a group of people sharing and critically interrogating their practices in a way that is reflective, collaborative, inclusive, learning-oriented and works to promote growth (Mitchell & Sackney, 2011; Toole & Louis, 2002). It also involves operating as a collective enterprise (Newmann & Wehlage, 1995). Summarising the literature, Hord describes a professional community of learners as one:

> in which the teachers in a school and its administrators continuously seek and share learning, and act on their learning. The goal of their actions is to enhance their effectiveness as professionals for the students’ benefit; thus, this arrangement may also be termed communities of continuous inquiry and improvement (1997, p. 1).

More recently, Hipp and Huffman (2010) defined PLCs as “professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults” (p. 12).

Bryk, Camburn and Louis (1999) have described PLCs as existing in ‘schools in which interaction among teachers is frequent and teachers’ actions are governed by shared norms focused on the practice and improvement of teaching and learning’ (p. 753). McMahon,
Stoll, Thomas and Wallace (2006) have credited an effective professional learning community with having the ‘capacity to promote and sustain the learning of all the professionals in the school community with the collective purpose of enhancing pupil learning’ (p. 2). DuFour, DuFour, Eaker, and Many defined a PLC as involving:

> [e]ducators [who are] committed to working collaboratively in ongoing process of collective inquiry and action research to achieve better result for the students they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous, job-embedded learning for educators (2006, p. 40).

Essentially, the emphasis across these various definitions is on the claim that teachers should collaborate, with an emphasis on improving their teaching and learning to enhance students’ learning and achievements.

Even though professional learning communities may be called many different things from school to school or place to place, including professional groups, or collaborative learning communities, critical friends groups, or communities of practice, to name just a few common terms, they tend to agree that, at its best, a PLC becomes self-perpetuating and is thus able to reshape its own values and norms. Our understanding of PLC may be clearer if we can answer a few questions. What are the big ideas that represent the core principles of professional learning communities? How do these principles guide schools’ efforts to sustain the professional learning community model until it becomes deeply embedded in the culture of the school? DuFour (2004) has elaborated three big ideas as the key merits of PLC.
2.6 The Big Ideas that Drive Professional Learning Communities

Big ideas can immediately transform a community, or they can be the cause of important change starts, benefiting future generations. Tichy and Cohen (1997) contend that great leaders are able to translate the purpose and priorities of their organisations into a few big ideas that unite people and give them a sense of direction in their day-to-day work. Successful organisations are built on clear ideas. Ideas serve as energisers. They are essential tools in motivating people. In 1961 John F Kennedy declared that America would like to put a man on the moon in the next ten years (Logsdon, 2011). This became the driving force so to speak, the energiser, for the National Aeronautics and Space Administration to plan all its activities; it became the driving force for all the personnel in the National Aeronautics and Space Administration to engage their minds in an effort to find new possibilities and alternatives. Establishing and operating a PLC in a second-level school is more modest, but, if it is to be a successful project, it may require its own big ideas.

2.6.1 Ensuring that Students Learn

It has been said that:

> [t]he fundamental purpose of the school is to ensure all students learn at high levels, and the future success of students will depend on how effective educators are in achieving that fundamental purpose. There must be no ambiguity of hedging regarding this commitment to learning, and schools must align all practices, procedures, and policies in light of that fundamental purpose (DuFour & DuFour, 2012, p. 43).

The professional learning community model follows from the assumption that the core mission of formal education is not simply to ensure students are taught, but to ensure that they learn. This simple shift, from a focus on teaching to a focus on learning, can have profound implications for schools. Ideally, what may tend to be bland and vacuous school
mission statements that promise things such as learning for all will be taken literally by teachers and become meaningful.

The school staff finds itself asking, What school characteristics and practices have been most successful in helping all students achieve at high levels? How could we adopt those characteristics and practices in our own school? What commitments would we have to make to one another to create such a school? What indicators could we monitor to assess our progress? When the staff has built shared knowledge and found common ground on these questions, the school has a solid foundation for moving forward with its improvement initiative (DuFour, 2004, p. 6)

Thus, a PLC may ensure continuous learning for students, teachers, administrators - everybody in the school. In such a state, what might be called job-embedded learning should become a part of how people do business. As the school moves forward, teachers in it must engage with colleagues in the exploration of three crucial questions that underlie their work.

- What do we want each student to learn?
- How will we know when each student has learned it?
- How will we respond when a student experiences difficulty in learning?

The answer to the third question separates PLC schools from so-called traditional schools. When a school begins to function as a PLC the teacher experiences the clash between commitment to the mission (learning for all) and any lack of coordination in responding to students who experience difficulty in learning. To quote at some length from DuFour, this involves the following:

The staff address[ing] this discrepancy by designing strategies to ensure that struggling students receive additional time and support, no matter who their teacher is. In addition to being systematic and schoolwide, the professional learning community’s response to students who experience difficulty is

- Timely. The school quickly identifies students who need additional time and support.

Based on intervention rather than remediation. The plan provides students with help as soon as they experience difficulty rather than relying on summer school, retention, and remedial courses.
• Directive. Instead of inviting students to seek additional help, the systematic plan requires students to devote extra time and receive additional assistance until they have mastered the necessary concepts (DuFour, 2004, p. 7).

2.6.2 A Culture of Collaboration

Ideally, collaboration facilitates both students’ and teachers’ learning by providing practitioners of different abilities and opportunities to discuss, debate, observe, and share practices (Lave & Wenger, 1991; Levine & Marcus, 2010).

*Schools cannot achieve the fundamental purpose of learning for all if educators work in isolation... school administrators and teachers must build a collaborative culture in which they work together interdependently and assume collective responsibility for the learning of all students* (DuFour & DuFour, 2012, p. 43).

The skills necessary to collaborate provide the building blocks for constructing a PLC and the means of bringing about continuous improvement (DuFour, DuFour, Eaker, & Many, 2006).

Teachers working together can identify concerns and solutions, implement appropriate strategies and adjust their teaching based on students’ results. This may have a positive impact on teachers’ levels of efficacy, encouraging them to continue professional learning, and can influence the extent to which they are successful in programme implementation. Teachers collaborating in a PLC may strengthen their own teaching and their practice as a result (e.g. Darling-Hammond, 1998; Little, 2003; Louis, Kruse, & Bryk, 1995; Rosenholtz, 1989; Schmoker, 2006). Despite an increasingly widespread view that working collaboratively represents best practice (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; DuFour & Eaker, 1998; Huffman, Hipp, Pankake, & Moller, 2014), in the early twenty-first century teachers in many schools continued to work in isolation.

*Even in schools that endorse the idea of collaboration the staff’s willingness to collaborate often stops at the classroom door. Some school staffs equate the term ‘collaboration’ with congeniality and focus on building group camaraderie. Other staffs join forces to develop consensus on operational procedures, such as how...*
they will respond to pupils’ tardiness or supervise their breaks. Still others organise themselves into committees to oversee different facets of the school’s operation, such as discipline, technology or social climate. Although each of these activities can serve a useful purpose, none represents the kind of professional dialogue that can transform a school into a professional learning community in the sense that concerns me (DuFour, 2004, p. 8).

The powerful collaboration that can characterise a PLC emerge from a systematic process in which teachers decide to work together to analyse and improve their classroom practice. Teachers working in teams can engage in continuous cycles of asking and answering questions that promote collective learning. This process, in turn, may lead to higher levels of achievement on the part of pupils (DuFour, 2004).

2.6.3 A Focus on Results

‘It has often been said that schools will not know whether or not all students are learning unless educators are hungry for evidence that students are acquiring the knowledge, skills and dispositions deemed most essential for their success’ (DuFour & DuFour, 2012, p. 43). To ensure that a PLC meets its educational goal (learning all-round) educators must identify students’ current levels of achievement, establish clear educational objectives, work together to meet those goals and provide evidence that they have succeeded.

Professional learning communities judge their effectiveness on the basis of results. Working together to improve student achievement becomes the routine work of everyone in the school. Every teacher team participates in an ongoing process of identifying the current level of student achievement, establishing a goal to improve the current level, working together to achieve that goal, and providing periodic evidence of progress. The focus of team goals shifts. Such goals as “We will adopt the Junior Great Books program [an American educational practice based on the use of selected classic literary and other texts]” or “We will create three new labs for our science course” give way to “We will increase the percentage of students who meet the state standard in language arts from 83 percent to 90 percent” or “We will reduce the failure rate in our course by 50 percent” (DuFour, 2004, p. 10).
Establishing a PLC is a slow process that involves establishing a school-wide culture that develops teachers’ capabilities for leadership explicitly focused on building and sustaining school improvement efforts. Generally, PLCs are composed of teachers, although administrators and support staff can participate (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005; Huffman, 2000). In some schools PLCs are extended beyond teachers and school leaders to support staff, and it becomes a school-wide community rather than consisting of smaller groups of staff. Ideally and openness, networks and partnerships – looking beyond the school for sources of learning and ideas are characteristics of such schools (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006; Stoll & Louis, 2007). Through participation in PLCs, teachers can enhance their leadership capacities, while they work as members of learning teams that focus on improving students’ learning (Rentfro, 2007).

### 2.7 The Characteristics of a PLC

The literature provides various definitions of PLCs but they tend to converge on characteristics that are associated with PLCs’ development and maintenance. There are some generally accepted features: shared norms and values, reflective dialogue, deprivatisation (i.e. the sharing) of practice, a collective focus on students’ learning, and collaboration (Hord, 2004; Louis, 2006). A PLC is not a means of bringing about school improvement per se; rather, it is an approach or process. Most definitions assume a set of characteristics. An understanding of these characteristics may provide educators with a common lens through which to examine their own schools. They can also provide an infrastructure for shaping practice and assessing progress. There is general agreement in the literature of the core characteristics of a PLC which can be stated as five key characteristics or features.
2.7.1 Shared Beliefs, Values and Visions

Having a shared vision and sense of purpose has been said to be valuable in creating a PLC. As Hord and Sommers have said ‘Values and beliefs guide the behaviour of individuals no matter where they work or in what endeavour’. A fundamental characteristic of an effective PLC’s vision is its unwavering focus on students’ learning (Morrissey, 2000). This should guide all decisions about teaching and students’ learning and encourage central norms of behaviour (Huffman & Hipp, 2003).

2.7.2 Shared and Supportive Leadership

The collaborative effort of school administrators and teachers to share specific duties and responsibilities enhance the leadership capacity of the professional learning community members (Hord, 1997). Any positive change in a school must be accepted, appreciated, and nurtured by the principal. Hord and Sommers (2008) observe that in the case of PLCs, accepting, appreciating, and nurturing change may be a difficult challenge for some principals and even for some teachers who have been acculturated to see the principal as all-powerful, all-wise, and all-competent. But the PLC structure in a school should encourage continuous adult learning, strong collaboration, democratic participation, and consensus about the desired environment and culture and how to attain these ends. Lambert has defined leadership capacity as a broad-based skillful participation in the work of leadership that exists among the appropriate stakeholders of a school (Lambert, 2003). Leadership capacity in the context of a PLC would be the supportive, collegial participation of principals and teachers sharing authority for making decisions pertinent to the school in pursuit of its vision (Hord, 1997).
A successful PLC requires an acceptance that teachers do not simply teach, students do not simply learn, and administrators do not simply administer or manage. Instead, administrators as well as teachers must be learners who, together, discuss instructional problems and explore solutions to the problems they identify. The contribution [of a principal in a PLC] is based on sharing decision making with all professionals in the school, realizing that there are boundaries that reserve some decisions for the singular attention of the principal. This means that the boundaries should be determined and shared early on so that the staff understands the parameters within which they can make decisions' (Hord & Sommers, 2008, p. 10). Louis, Kruse, and Bryk (1995) identify six key attributes for building leadership capacity in a professional learning community. These are: (a) emphasis on interactive leadership, (b) teacher support and involvement, (c) modelling of the school’s vision as embedded in daily activity, (d) fostering a culture of purposeful professional development, (e) conflict management, and (f) whole faculty/staff study groups. Stoehr, Banks, and Allen (2011) identify the following characteristics in schools where shared and supportive leadership exist:

- Building and district administrators participate in professional development.
- Administrators and teachers use the words we and us rather than you and they.
- Meetings are not bogged down with items best left for administrative council or e-mail.
- Teachers have a say in the process or next steps.
- Teachers, administrators, and community members regularly go on “Teacher to Teacher Walk-Throughs” to collect data and reflect on their practice. (p. 20)

### 2.7.3 Collective Responsibility

There is broad agreement in the literature that members of a professional learning community should (to the extent that they can) consistently take collective responsibility for students’ learning (King & Newmann, 2001; Leithwood & Louis, 1998; Stoll & Louis, 2007). It is assumed that such collective responsibility helps to sustain commitment and
renders accountable those who do not do their fair share, while easing isolation (Newmann & Wehlage, 1995). PLCs engage school staff at all levels in processes that collectively seek new knowledge and ways of applying that knowledge to their work. Collegial relationships can contribute to creative and appropriate solutions to problems, strengthening the bond between principal and teachers and increasing their commitment to improvement efforts (Morrissey, 2000).

2.7.4 Reflective Professional Inquiry

This involves reflective dialogue (Louis, Kruse, & Bryk, 1995) or, in other words, having conversations about serious educational issues or problems with a view to the application of new knowledge in a sustained manner. What might be called de-privatisation of practice is also often considered important in this process (Louis, Kruse, & Bryk, 1995). This involves frequent examination of teachers’ practices, through mutual observation and case analysis, joint planning and curriculum development and the collective seeking of new knowledge (Hord, 2004). Tacit knowledge should constantly be converted into shared knowledge through interaction (Fullan, 2005) and new ideas and information must be used to find solutions that address pupils’ problems (Hord, 1997).

2.7.5 Collaboration

This concerns the involvement of staff in developmental activities with consequences for more than one person. It goes beyond superficial exchanges of help, support, or assistance (Louis, Kruse, & Bryk, 1995). For example, DuFour, using the American administrative language of schools, suggests a school's five third grade teachers might study state and national standards, the district curriculum guide and student achievement data to identify
the essential knowledge and skills that all students should learn in an upcoming language arts unit. They might also ask the fourth-grade teachers what they hope students will have mastered by the time they leave third grade (aged around nine). On the basis of the shared knowledge generated by this joint study, the third-grade team could agree on the critical outcomes that they will make sure each student achieves during the unit (DuFour, 2004). The link between collaborative activity and achievement of shared purpose is often highlighted (for example: Newmann & Wehlage, 1995). Interdependence should be central to such collaborations. Better teaching practices are considered by advocates of PLCs to be unachievable without collaboration and shared purpose. However, this is not to deny the existence of micro-politics. Conflicts are to be expected, but they may be managed more effectively in professional learning communities. Indeed, as Hargreaves notes:

> [p]rofessional learning communities demand that teachers develop grown-up norms in a grown-up profession – where difference, debate and disagreement are viewed as the foundation stones of improvement (2003, p. 163).

### 2.7.6 Group, as Well as Individual, Learning is Promoted

Teachers can feel challenged by there being a PLC in a school for any number of reasons. They might struggle with conflicting views as to the nature of effective teaching, with vague interpretations of educational goals, or with uncertainty as to whether or not their levels of professional knowledge are sufficient (Kelchtermans, 1996).

Although these issues, among others, seem to offer valuable opportunities for in-depth educational discussions, teachers often deal with such professional conflict by avoiding interactions and engaging only in superficial politeness (Hargreaves, 2001). In a PLC
teachers are (or ought to be) learners alongside their colleagues (Louis, Kruse, & Bryk, 1995). Collective learning can enable people to overcome such conflicts. In other words, the school as a learning community engages in serious dialogue and deliberates about information and data, interpreting it communally and distributing it amongst its members. However, it is important to note that these characteristics are intertwined and do not operate separately (see pages 9, 11 and 35 [Louis et al, 1995; Hord, 2004]).

2.8 History of the Emergence of Professional Learning Communities.

The term PLC first emerged among researchers as early as the 1960s when some offered the concept as an alternative to the isolation seemingly endemic in the teaching profession in the United States. During the late 1980s the focus on reform in schools began to shift from a traditional approach where teachers worked in isolation, much like independent contractors within a school, to an approach that focused more on collaboration, accountability, and efficacy. The immediate reason for this reform was the report A Nation at Risk, issued by the National Commission on Excellence in Education. This painted a dismal picture of the state of education in America, claiming: 'The educational foundations of our society are presently being eroded by a rising tide of mediocrity' (p. 5).

As a result of this report school reform initiatives began to take shape across the United States (Cohen & Hill, 2001; DuFour & Eaker, 1998; DuFour, DuFour, & Eaker, 2008; Hord, 1997). The excellence movement that followed failed to provide new direction but, instead, simply required schools to do more: more days of work, more hours of work in the day, more credits, more rigorous courses, more homework, more frequent testing and generally more effort for teachers (DuFour et al., p. 34). This movement sought to move
American public schools to new heights of achievement, but ultimately failed (Deschens, Tyack, & Cuban, 2001; see also: DuFour & DuFour, 2012, p. 58).

Another round of reform initiative was soon to follow. This renewed the imperative for change in American schools. In 1989 the then President of the US, George H. W. Bush, held an education summit with the nation’s state governors. This led to the development of the programme known as Goals 2000. Six national educational goals, designed to initiate reform in American schools, were proposed as a result of the summit (DuFour & Eaker, 1998). The restructuring movement that followed focused on developing national goals and standards as well as 'providing site-based local autonomy to achieve these goals' (DuFour et al., 2012, p. 59). In 2004 Hill and Ball reported that, despite the enactment of new standards and the effort to hold schools accountable for the performance of students, problems with reform efforts and anxiety about their impact continued to grow (Hill & Ball, 2004). While accountability was often called for, by politicians and other community/educational leaders in the 1990s, there was little consensus on what standards should be used to evaluate performance and specific incentives or sanctions used to motivate students, teachers and administrators were often not clarified (Newmann & Wehlage, 1993). The quest for successful and sustainable reform became an issue for schools and school districts around the country. Newmann and Wehlage (1993) suggests that reform efforts, even those with 'millions of dollars and political will behind them… have failed to make much of an impact in the classroom' (p. 2). He goes on to conclude that transformation of schools will come only through cultural change.

As many individual schools and American school districts began to explore research that might make them more effective, school change became a center of focus (Hord, 1997). However, Hord has described the response of many schools and school districts as
exhibiting 'a quick fix mentality' that led to many 'being poorly prepared for their plans for change and therefore implementing change in a superficial and less-than-high-quality way' (p. iv). Nonetheless, the six most often valued outcomes of restructuring were outlined by Newmann in 1991 as: authentic student achievement, equity, empowerment, communities of learning, reflective dialogue, accountability, and structure and culture (Newmann, 1991). The gist or essence of such reform typically involves: 'a vision of school as a place where students learn and adults teach, where the role of educators is to serve, not be served' (Barth, 1990, p. 46). In addition, it has been claimed that the development of professional learning communities for teachers is necessary, because 'only a school that is hospitable to adult learning can be a good place for students to learn' (Barth, 1990, p. 46).

Rosenholtz (1989) brought further attention to the topic with her empirical research on teachers’ workplace conditions. She described effective school workplaces as being those that most encouraged collaboration. These are places where teachers share and analyse with each other their instructional practices and where teachers share ideas to improve the quality of instruction. Most importantly, Rosenholtz found that students’ achievements and levels of success increased as teachers shared ideas and improved their instructional practices. Furthermore, Rosenholtz found that in most traditional school settings teachers functioned as individuals in isolation who rarely shared ideas, not seeking or offering professional assistance. Instead, they insulated themselves, so they did not have to disclose their inadequacies and convinced themselves that their problems were particular to them: ‘teachers avoid help seeking if they view it as potentially embarrassing or stigmatising and if it threatens their sense of professional adequacy’ (Rosenholtz, 1989, p. 430).
2.9 The Roots of Professional Learning Communities

To understand PLCs better one must look at both research and theory from within and outside the realm of education. The concept of the PLC has roots that can be traced to the work of figures such as Little (1982), Peter Senge (1990), and Etienne Wenger (2000). Senge (1990) in his book, *The Fifth Discipline*, a work initially developed concerning corporate organisations and structures, stated that ‘The organizations that will truly excel in the future will be the organizations that discover how to tap people’s commitment and capacity to learn at all levels in an organization’ (p.4). From this body of literature derived the foundational concepts of professional learning communities. One part of the literature concerning PLCs takes the form of research on the links between school improvement efforts and relationships among teachers in the workplace. In a focused ethnographic study of six urban, desegregated schools, Little undertook seminal research that examined schools as workplaces and specifically considered: ’organisational characteristics conducive to continue “learning on the job”’ (1982, p. 325). The schools involved in the study were selected because of their involvement in whole-school staff development, with varying levels of success. Little found that continuous professional development is more likely when:

- *Teachers engage in frequent, continuous, and increasingly concrete and precise talk about teacher practice.*
- *Teachers are frequently observed and provided with useful (if potentially frightening) critiques of their teaching.*
- *Teachers plan, design, research, evaluate, and prepare teaching materials together.*
- *Teachers teach each other the practice of teaching* (1982, p. 331).

Schools that are more successful and adaptable are those where ’interaction about teaching is consciously and steadily focused on practice, on what teachers do, with what aims, in what situations, with what materials, and with what apparent results’ (Little, 1982, p. 334).
By-products of such interactions included increased mutual respect and fewer barriers to discussion among teachers.

Any examination of the roots of PLCs must also lead to the work of Etienne Wenger, by whom they were referred to as communities of practice and social learning systems. Wenger has suggested that the success of organisations depends on their ability to design themselves as social learning systems and also to participate in broader learning systems such as those in, a region, or a consortium for a shared purpose. According to her:

> Communities of practice are the basic building blocks of a social learning system because they are the social ‘containers’ of the competences that make up such system. By participating in these communities, we define with each other what constitutes competence in a given context: being a reliable doctor, a gifted photographer or an outstanding teacher (2000, p. 229).

Wenger defined communities of practice as groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise on this by interacting continually. Communities of practice, she concluded, were not a novel idea, but could be found throughout history.

> Since the beginning of history, human beings have formed communities that share cultural practices reflecting their collective learning: from a tribe around a cave fire, to a medieval guild, to a group of nurses in a ward, to a street gang, to a community of engineers interested in brake design. Participating in these ‘communities of practice’ is essential to our learning. It is at the very core of what makes us human being capable of meaningful knowing (2000, p. 229).

While communities of practice occur naturally in organisations, 'leading knowledge organisations are increasingly likely to view communities of practice not merely as useful auxiliary structures, but as foundational structures on which to build organisations' (Wenger, MacDermott, & Snyder, 2002, p. 21). Through the work of communities of practice developing strategies, solving problems, spreading ideas as to best practice and developing skills, the organisation can experience a greater degree of development
(Wenger, MacDermott, & Snyder, 2002). If participants share ideas, experiences and knowledge that lead to new approaches to solving problems then, in the long run, communities of practice can both develop the capabilities of organisations and foster professional development for participants (Wenger, 2000; Wenger, MacDermott, & Snyder, 2002). Community of practice is in many ways akin to the ‘dialogue community’ approach to education of Chalmers and Keown (2006). Such communities can be very helpful in improving knowledge and understanding and in examining personal and collective values, attitudes and beliefs.

Theories on learning organisations and systems thinking provide another element in the conceptual foundations of PLCs. As already noted above, from its publication in 1990, Peter Senge’s book *The Fifth Discipline* became a driving force in changing schools and other educational settings (London, 1996). Senge’s focus was on systems thinking in a so-called learning organisation, any situation ‘where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together’ (Senge, 1990). Senge has claimed that the greatest challenges confronting organisations in the late twentieth century and thereafter involves fundamental cultural changes. Addressing these challenges requires what he calls collective learning. Organisations must be able to learn in order to survive. In particular, attention became focused on the idea of engaging teachers in teams intended to create/develop shared visions to guide their work, in the hope of allowing them to function as collaborative groups in order to improve teaching and evaluate its effectiveness. As complex systems, schools may function best when each person is expected to work collectively to solve problems, seeking continually to improve by utilising the expertise of other team members. In the United States these teams became identified with 'learning communities' and Astuto, Clark, Read,
McGree, and Fernandez (1993) have labelled the process of educators coming together to seek and share knowledge and make improvements to their practices the creation of professional communities of learners.

To summarise, the PLC approach to teaching aims to shift the focus away from teacher-centered instruction. Ideally, the focus becomes student-centered, with teachers working collaboratively and interdependently to achieve specific shared goals, which generally bringing about collective capacity building, engaging in inquiry into gaps in pupils’ learning and, through reflective practice, developing effective instructional practices to meet the needs of all. Schools, and the authorities that provide them in some parts of the western world, slowly began to invest time and resources in restructuring in the 1990s and thereafter so teachers’ efforts could be concentrated on enhancing curriculum knowledge, sharing ideas and improving standards and assessment (Darling-Hammond, 1998)

Rosenholtz (1989) conducted a study of 78 diverse elementary schools in the US to examine them as workplaces. She identified two types of school, ‘learning-enriched schools’ and 'learning-impoverished schools'. In the latter teachers work in isolation and their sense of having the ability to bring about meaningful change is greatly diminished as a result. In learning-enriched schools, Rosenholtz found, educators work in collaborative groups apparently focused on improving teaching and learning. These groups created shared goals that concentrated on students’ achievements and levels of learning. The study suggested that collaboration amongst teachers led to improved pedagogy, and increased levels of efficacy and commitment on the part of teachers. These things, in turn, resulted in increased levels of achievement on the part of pupils.
From 1990 to 1995 researchers at the Center on Organisation and Restructuring of Schools at the University of Wisconsin-Madison investigated the most effective way to restructure schools in order to boost students’ achievements. They analysed data for the five-year period from over 1,500 elementary, middle and high schools throughout the United States, as well as conducting field research in 44 schools, from 22 districts, in 16 states. In their report (Newmann & Wehlage, 1995) they recognised that there was no simple recipe for improvement that worked in all areas consistently. However, they found that the schools most successful in restructuring were those that functioned as professional learning communities but cautioned that building learning communities required certain conditions and a well-defined mission.

Similarly, in 1995, Lee, Smith and Croninger, also working for the Center on Organisation and Restructuring of Schools, released a report on successful school restructuring efforts. Their work involved 11,000 students in 820 schools across the United States. They found that schools characterised as having PLCs engaged students in higher levels of tasks. In these schools, teachers and students were more committed to the goals and mission of the school, and staff worked more cohesive in their attempts to improve classroom instruction. Also, according to the report, through being exposed to PLCs, students’ achievement levels increased in all the core subjects and achievement gaps between subgroups were decreased (Lee, Smith, & Croninger, 1995).

In Learning by doing DuFour, DuFour, Eaker, and Many defined a professional learning community by saying that it involved: 'Educators committed to working collaboratively in on-going processes of collective inquiry and action research to achieve better results for the students they serve' (2006, p. 217). This approach focuses on results-oriented goal setting for each member of the organisation in order to achieve high levels of learning by
all students. Members of a PLC are expected to work interdependently to achieve agreed common goals that are focused primarily on students’ learning. Thus, collaboration in and of itself is not the key. Instead, what matters is that collaboration is focused on classroom practices that are expected to lead to more effective learning. That is to say, learning is driven by what teachers and pupils do in classrooms. Therefore, the common and agreed upon goals should be translated into classroom practices.

### 2.10 Benefits of Professional Learning Communities

Both teacher researchers and scholars concerned with how teachers work often claim that collaborative learning communities or support networks to be imperative for the success of teacher inquiry as a collective force in educational research and school renewal (for example: Snow-Gerono, 2005). Describing predominantly Hispanic schools on the Texas-Mexico border, Reyes, Scribner, and Scribner (1999) outlined the apparent benefits of professional learning communities. In these schools, which were at one time characterised as under-performing, the creation of PLCs seemed to assist staff in overcoming the problems that had accompanied past reform efforts and, further, to increase students’ levels of achievement. School staff learned to develop their own capacities in order to produce improved outcomes from year to year, despite changes in their schools and surrounding communities that made teaching and learning more challenging.

Thiessen and Anderson (1999) have discussed means of creating learning communities in which learning by teachers is connected to school improvement and improved learning on the part of students. They have called for collaboration, integration and inquiry in schools, as well as continuous engagement in actions intended to challenge the conditions, the relationships, the divisions of responsibility and control and the teaching and learning
practices that shape a school. Through such inquiry, they suggest, schools become stronger, more productive places where teaching can improve and where increases in learning are evidenced by all students. DuFour and Eaker (1998) also highlight the apparent benefits of professional learning communities, encouraging schools to reflect on their collective capacity to address the learning needs of their students. They conclude that efforts to bring about improvement can succeed only when colleagues support each other in getting through the inevitable difficulties associated with school reform. I discuss below some specific benefits that may come from having a PLC in a school.

2.10.1 Increased Professional Knowledge

The first benefit, according to Vescio, Ross, and Adams (2008), is that a PLC can increase professional knowledge and, therefore, enhance students’ levels of learning. Teachers can increase their professional knowledge when they surround themselves with others who share a common interest in always looking to improve teaching techniques.

Cranston (2009) has stated that in a PLC learning is not the end to an activity, but, rather, the start of a life-long commitment. Teachers should look continually to improve their professional knowledge and then be eager to share that knowledge with their colleagues for the benefit of students. In an interview conducted by Graham in 2007 a teacher stated that she had experienced 10 times more growth as a teacher during one year when she was part of a PLC because she was able to see things through many more eyes (those of the five people in the PLC). She realised that the more her PLC acted as a group, the more they could learn from one another (Graham, 2007).

The Organisation for Economic Cooperation and Development [OECD] has stated that not only is life-long learning important, but if teachers are given time for professional
development during every school day, and not just on designated days throughout the year, they should be able to focus on problems, research them, and, ultimately, share their results with the rest of the learning community (OECD, 2004). Andree, Darling-Hammond, Orphanos, Richardson, and Wei (2009) suggest that Arkansas is a leading state when it comes to having/encouraging PLCs. By 2009 96% of its teachers were involved in such professional learning. In order for teachers to renew their state teaching licenses they had to have 60 documented hours of continuing education each year. Four professional development days were provided for developing PLCs within each school or district. The authorities in Arkansas apparently hoped that learning new practices in PLCs would result in better performance by teachers and, ultimately, higher levels of achievement amongst students.

2.10.2 Improved Communication

It is often hoped that creating a PLC will lead to the improvement of communication among staff members. As lines of communication open up, trust should also increase. Graham (2007) has stated that his study showed that, as the members of a learning community learned from each other, so they also grew to trust each other more. This process continued to work in a spiral pattern as the more they learned to trust each other, the more they would open up and communicate with one another and so on. When trust was seemingly fully established among the members of the community they were able to discuss more substantive issues. The higher the level of trust among group members, the more substantive issues the community members seemed to be able to discuss. DuFour et al. (2008) have developed this point by claiming that it can be empowering if members of a team realise the important contributions they can make to the team when trust and respect are evident.
Coburn (2003) went one step further when discussing communication and PLCs. She has stated that not only is communication within a learning community beneficial, but communication among *several* learning communities is of even greater benefit. She claims that overlapping PLCs can help not only individual schools, but groups of schools to maximise their knowledge of ways of improving teaching and learning. McLaughlin and Talbert (2006) have echoed this point by stating that when PLCs operate in this manner, knowledge can be created, shared, organised, revised and, ultimately, passed on to other communities. The Annenberg Institute for School Reform (Simmons, 2005) emphasised the same point by claiming that when PLCs are able to share information, they can create stronger bonds among all those involved because they are collectively discussing the best ways to teach and reach all students.

### 2.10.3 Reduced Isolation

Another benefit to building a PLC may come from ending the isolation that is often said to be rampant in school culture. The National Commission on Teaching and America's Future [NCTAF; a body founded in 1994 and subsequently renamed Learning Forward] has stressed the importance of having a school culture which not only eliminates isolation but actually fosters collaboration among those with different experiences. Young teachers should not operate in isolation and come to expect this to be normal. Instead, they should be able to learn new and innovative ideas from others (NCTAF, 2005). Teachers with more experience may be led out of isolated classrooms to share their teaching experiences with younger teachers who have less experience. Looking back on my own practice as an instructional leader, I used to include all the concerned subject teachers in the interview board (when a new teacher is selected) and tried to respect the opinions of the
inexperienced teachers as much as those more experienced in the selection procedure. As a result, it was easy for the young teachers to collaborate with others and they subsequently felt it was their responsibility to help newcomers.

Elmore (2000) has stated that 'schools and school systems that are improving directly and explicitly confront the issue of isolation by creating multiple avenues of interaction among educators and promoting inquiry-oriented practices while working toward high standards of student performance' (p. 32). PLCs can provide an opportunity for teachers to interact in groups in a way which could be considered to confront the issue of isolation. Through such interaction, teachers may continue to build a culture of mutual respect and trustworthiness contributing to both individual and school improvement and they can also exhibit increased commitment to their work. Darling-Hammond (1998) cited research reporting that teachers who spend more time collectively studying teaching practices were more effective overall at developing higher-order thinking skills and meeting the needs of diverse learners. In these professional learning communities, teachers supported one another’s improving professional practice. In most cases, teachers made informal visits to colleagues’ classrooms and engaged in group discussions. Teachers sought advice and opinions about effective approaches to working with students and about sharing instructional materials.

DuFour et al. (2008) have described teachers’ isolation as a barrier to students’ learning and, in a follow up report for the NCTAF Fulton, Yoon and Lee (2005) added to this by claiming that the biggest barrier to improved learning was the stand-alone classroom. They even went so far as to state that if teachers want to improve the learning that occurs in schools, they must be involved in PLCs.
DuFour et al. (2008) have described several ways that PLCs could help to break down teachers’ experiences of isolation. First, no single teacher has all the answers when it comes to knowing how best to teach. As a result of being in a PLC the teacher has someone to turn to when challenges come his/her way. Teachers thus realise they can learn from their colleagues. When they work their way out of their isolated classrooms they learn that others are there to help. Second, by being involved in PLCs teachers may begin to realise they are in teams working for the common good. An isolated teacher may find it difficult to see that others around him/her are also working to address pupils’ needs. In a PLC teachers can see that they are in teams and should come to believe their teammates are available to help them and, ultimately, the students to succeed.

2.10.4 Increased Accountability

It could be said that teachers hold their students accountable for the work they do, but often do not themselves want to be held accountable by others in their profession. Kleinhenz and Ingvarson (2004) suggest that teachers (in countries where such a process applies) often regard the annual review conducted by administrators as invalid and even, at times, insulting to their teaching practices. They often feel that such reviews are merely snapshots of the work done in the classroom and not indicative of their actual teaching abilities. Kleinhenz and Ingvarson (2004) do not deny annual reviews may be snapshots, but they contend that this should not be an excuse to let a teacher continue without any accountability. Through forming a PLC all the teachers in a school can be held accountable throughout the year, not only by administrators but also by peers who work closely together to meet commons visions and goals.

Johnson and Ridley (2008) have claimed that teachers need to hold themselves accountable to a high standard for several reasons. Foremost on their list is integrity. When a teacher
participates in a PLC it shows he/she is willing to be held accountable for all aspects of his/her teaching, which may include teaching methods, assessments, and grading. Accountability may help to strengthen the curriculum by bringing the teachers of each department or grade together to discuss how best to teach. Hord (2009) also combines accountability with integrity and truthfulness.

2.10.5 Stress Reduction

Stress is all around us and can be found in almost any occupation, but the stress a teacher feels may be particularly often accompanied by feelings of isolation and alienation (Wilhelm, Dewhurst-Savellis, & Parker, 2000). Botwinik (2007) has claimed it is easy for teachers to become overstressed and to leave the profession as a result. When teachers feel they have the weight of the world on their shoulders, they begin to feel stressed by everything happening around them. The NCTAF (2005) has reported that almost one in every two teachers in the US leaves the teaching profession in his/her first five years of teaching. Novice teachers are often left to fend for themselves, leaving them overly stressed and ultimately prone to burning out (NCTAF, 2005). New teachers only have what they have learned in their college education on which to draw. When novice teachers are on their own in classrooms, it can be easy for them to get discouraged if everything does not go as planned.

Schlichte, Yssel, and Merbler (2005) have stated that teacher educators should encourage networking and collaboration among students in their college classes so that when they get out into the teaching field they have bonds with fellow teachers. These authors conducted a study on first year teachers and their attrition rates. Their case study of two first year teachers revealed two opposed experiences (Schlichte, Yssel, & Merbler, 2005). One felt lonely and isolated. Her input in her school was not only unappreciated, it was not even
asked for. The second teacher was placed in a school where collaboration was widely accepted and practised. Her opinion was often sought in the group and she was considered to be the expert in her field of education. After the first year, the lonely, isolated teacher resigned. She felt as if she had been dumped in a school and expected to teach in her own isolated world (Schlichte, Yssel, & Merbler, 2005). Thus, being part of a PLC can be a good way to reduce stress if it works as in the first case described above.

2.10.6 Continuity

A prime benefit of PLCs may be that they can provide improved ideas as to ways in which students can learn. When conducted properly PLCs can reduce turnover and ensure continuity in the curriculum. As a result, students’ learning may be improved. Drago-Severson (2007) has stated that many American school principals consider turnover of teachers to be one of their worst problems. They described turnover as a challenge since it meant bringing in new teachers every year with a resultant break in the continuity of the programme. However, the principals also said turnover could be a benefit because it allowed new teachers with new ideas to invigorate the current staff. PLCs may allow new teachers to be ‘plugged into’ a system and thus ‘brought up to speed’ very quickly.

2.10.11 Students’ Results

Successful professional development, because it is specifically designed to improve students’ levels of learning, should be evaluated continuously, primarily to measure the effect it has on achievement (Elmore, 2005). PLCs are a means to an end: the goal is not to be a professional learning community (Morrissey, 2000). The key purpose of having a professional learning community is to improve teachers’ effectiveness, for the benefit of
students. Concern with learning and the commitment to improved levels of achievement ought to be the first and most essential attributes of those involved in PLCs (Thiessen & Anderson, 1999). Advocates of PLCs place learning and achievement at the foundation of their work on school improvement. DuFour et al. (2008) are of the opinion that the professional learning community model follows from the assumption that the core mission of formal education is not simply to ensure that students are taught, but to ensure that they learn. This simple shift (from a focus on teaching to one on learning) has potential implications for schools. As DuFour et al. (2008) have stated, in a well-run, goal-driven PLC, there is a commitment to help all students to succeed, not only those who are apparently naturally gifted. It is easy to see success in gifted students as measured through grades but the efforts of teachers working together in a PLC can mean the needs of more typical students (those not gifted) may be met.

*Professional learning communities judge their effectiveness on the basis of results. Working together to improve student achievement becomes the routine work of everyone in the school. Every teacher team participates in an ongoing process of identifying the current level of student achievement, establishing a goal to improve the current level, working together to achieve that goal, and providing periodic evidence of progress* (DuFour, 2004, p. 5).

Many studies have shown that there is modest evidence that PLCs have an impact on teaching (for example: Dunne, 2000; Englert & Tarrant, 1995; Hollins, McIntyre, DeBose, Hollins, & Towner, 2004; Louis & Marks, 1998; Strahan, 2003). What does the evidence tell us about the effects on students? In educational systems demanding accountability the success or failure of a PLC will be determined by its apparent success in enhancing students’ achievements. This might seem to make it incumbent on educators to demonstrate how their work in learning communities improves students’ standards of learning.
Researchers who have examined the relationship between the extent of teachers’ participation in PLCs and students’ levels of achievement suggest that learning improves as a result (Andrews & Lewis, 2002; Bambino, 2002; Berry & Montgomery, 2005; Vescio, Ross, & Adams, 2008). A study that explored the links between teachers’ learning, their instructional behaviour and students’ outcomes suggested that engaging in an on-going learning process led teachers to identify and carry out practices that resulted in increased graduation rates, improved college admission rates and resulted in higher academic achievement for students (Ancess, 2003). Andrews and Lewis (2004) found that in schools with a genuine sense of community there was an increased sense of work efficacy, in turn will lead to increased levels of classroom motivation and work satisfaction, and greater collective responsibility for students’ learning. The relationship between teachers’ participation in PLCs and students’ levels of achievement suggest that learning improves as a result (Andrews & Lewis, 2002; Bambino, 2002; Berry & Montgomery, 2005; Vescio, Ross, & Adams, 2008).

The same authors also found that where teachers developed a professional learning community it not only enhanced the knowledge base of the group, but also had a significant impact on their work in classrooms, resulting in more achievement on the part of pupils (2004). Hord (1997) has claimed that in schools characterised by professional learning communities the staff had worked together and changed their classroom pedagogy. As a result, they engaged students in highly intellectual tasks and students achieved greater gains in math, science, history and reading than those in traditionally organised schools. The work of the Center on Organisation and Restructuring of Schools (Newmann & Wehlage, 1995) comprises four complementary pieces of research, including rigorous three- and four-year longitudinal case studies, as well as surveys and collection of test data.
Its work covered 1,500 elementary, middle, and high schools throughout the United States, with field research in 44 schools in 16 states. The result of the four-year study concluded that high-quality student learning is achieved in classrooms through authentic pedagogy (instruction and assessment), and students of all social backgrounds benefit equally, regardless of race, gender, or family income.

2.11 A Critical Reflection on PLCs

Advocates of PLCs often trumpet their supposed capacity to bring about a shift from isolated or individual approaches to teaching to collaborative or community-oriented approaches, a transformation that is said to result from a collective initiative aimed at empowering teachers and to have the ultimate effect of increasing their autonomy for example: (Riveros, Newton, & Burgess, 2012). However, while pro-PLC authors typically assume that this transition is likely to be unproblematic and an unalloyed good for teachers and students it remains to be seen if this is always and everywhere so. The pro-PLC literature can tend to leave me one with unanswered questions. For example, what exactly are educators pursuing when they endeavor to transform schools into PLCs? Indeed, is PLC so vague and bland a concept as to be of little or no fundamental value? DuFour (2004), a leading proponent of PLCs, himself acknowledges the wide assortment of organisational structures that claim professional learning community status. It can appear as though many who are interested in promoting professional learning communities have more concern with that process than any end product. All too often, the focus appears to be on the transition (Tarnoczi, 2006). Analogously, this might be like urging people to take up arms in the cause of some revolution or other but with no clear idea what kind of society one wants to see replace the current regime: perhaps an unwise move.
The frequent use of such words as commitment and willingness in characterising members of professional learning communities by DuFour, DuFour, Eaker, and Many (2006) and other authors who promote PLCs indicates that these authors are evangelical but that is not tantamount to their having any clear vision of the future. Further, the recurrent emphasis on modifying individuals may lead us to wonder whether PLCs and their advocates have the potential to become coercive and, in turn, whether or not this might actually stifle individual creativity and diminish personal freedom. Do these activities (those involved in establishing and operating a PLC) include interventions intended to modify attitudes, beliefs and personality, notably through the imposition of positive affect?

Most pro-PLC authors claim that PLCs are developed to support improvement and change within, between and across schools and educational system. But what are the techniques that professional learning communities employ to shape teaching behaviour and bring about these supposed improvements? Given the emphasis that supporters of professional learning communities place on the technical aspects of teaching, programming, and scheduling, it would be reasonable to assume that the primary control technologies are embedded in structures and procedures. In other words, for all the talk of promoting autonomy on the part of teachers, the exercise of power might simply be disguised. History (and not simply the history of education) is littered with examples of revolutions that shifted rather than significantly changed the balance of power. Revolution can, as often as not, mean changing old masters for new.

Those who support professional learning communities stress the importance of developing a common direction, a direction that reflects the interests of all stakeholders. Many writers go so far as to identify the construction of a common direction as the key component of a
successful professional learning community (Andree, Darling-Hammond, Orphanos, Richardson, & Wei, 2009; Bryk, Cambrun, & Louis, 1999; DuFour, 2004; DuFour, DuFour, Eaker, & Many, 2006; Garet, Porter, Desimone, Birman, & Yoon, 2001; Hord & Hirsh, 2009). DuFour and Eaker list shared mission statements, shared vision statements, shared values and shared goals as the four pillars of a professional learning community. The emphasis is clearly on the word shared. This might seem to imply that all members of the community are encouraged to participate, and all views are given voice. Yet schools continue to operate under legislative mandates and these mandates essentially determine or strongly influence any school’s mission (Tarnoczi, 2006). In a certain way the pro-PLC literature (and there really is little or no work available on PLCs that is not pro) presents the reader with a kind of paradox. On one hand, there is a mandated vision of education that represents the interests of educational authorities. On the other hand, these same authorities advocate a process designed to encourage a commitment to change. Tarnoczi claims that the changes that educational authorities seek to produce through PLC are not educational innovations; rather, they seek increased (unthinking?) commitment to an established vision, a vision of education conceived by those educational authorities themselves. Thus, when they participate in developing mission statements and commit to certain common belief statements, teachers are committing to changing their own behaviour (Tarnoczi, 2006). But, at the same time, questions related to examining the social, political and environmental implications of educational practices are consigned to the shadows. Thus, we do not find much about the instances where expected outcomes differ from actual outcomes.

Another troubling aspect of the pro-PLC literature is that in calling for the adoption of processes that encourage teachers to participate in the development of unifying elements,
such as a single all-encompassing vision statement, writers supporting professional learning communities appear unquestioningly to accept that any school can, or should, exist with a single shared understanding. Örtenblad (2002) notes that, in supposing an organisation can be defined as having a single purpose, unique experiences of individuals in the organisation are devalued and marginalised. According to Fenwick (2001), the employees are assumed to reflect critically in the learning organisation, but only on the surface and not on such themes as power structures and that organisation’s fundamental ideology. Further, Fenwick argues that the learning organisation neither acknowledges nor values the unique experiences of each individual in the organisation. We may have grounds for thinking that PLCs in schools sometimes operate in such a way. Being free only to agree is not really freedom at all.

Professional learning community literature often refers to the need for teachers to embrace constant change. Haberman (2004) takes the call for continuous improvement to a not uncommon extreme when he describes what it took for teachers to be successful in a professional learning community. He writes, 'Teachers continually increased their workloads. No matter how high the output, they continually pressured themselves to create new programs, develop new courses, publish books and articles, and produce more research’ (p. 53). Thus, continuous learning, improvement and innovation are consistently represented as being essential aspects of the educational process and professional learning community discourse has elevated the need for change in such a way and to such an extent that it becomes an unproblematic, self-evident “truth.” Typically, references to uninterrupted change are framed as something unquestionably beneficial for teachers and students, even though the actual advantages are left unspecified (Tarnoczi, 2006).
When professional learning community discourse links educational success with perpetual innovation it enforces the view that teachers cannot, and should not, feel grounded as educational experts. This correspondingly encourages teachers to view the knowledge they have and their teaching practices as deficient and in need of improvement. Does emphasis on the supposed need for continuous change construct teachers as being in a state of perpetual deficit? It could certainly seem to be so. But, to make matters worse, the nature of the deficit is something left to the teachers to determine. As a result, might not teachers tend to develop anxiety? And if a constant call to arms against a supposedly terrible but frustratingly vague enemy causes fear and uncertainty in teachers, will such fear not breed self-doubt, with the obviously counterproductive effect of reducing their levels of efficacy?

For as long as professional learning community rhetoric holds individual teachers responsible for deficits in students’ achievements that are not theirs (the teachers’) it risks doing more harm than good. For example, in India teachers simply do not have the ability to alter what they are required to teach; the syllabus is provided to them. They have no authority to alter structural components of the education system that might affect learning, such as number of hours of instruction, compulsory attendance, class size, or even whether or not a school temporarily closes (and such closures, related to extreme weather conditions, security fears in certain areas and for other reasons, are common). They do not control broader economic and fiscal factors like the impacts of child poverty and educational funding. They are limited, by professional development opportunities, in their ability to improve their own skills. All these considerations can have some greater or lesser influence on a child’s ultimate educational achievement. Passing the buck or seeking to blame others is an unedifying sight in any walk of life. It is perhaps especially so in education where so much rests on formal success or failure at a young age. PLCs, if they
are to have value, must encourage teachers not to pass the buck with cheerful abandon – but the opposite extreme (refusing to admit that there are things in a child’s life over which no teacher has sway) is equally unhelpful.

The point is that since it is often extremely difficult, from a research perspective, to attribute gains in student performance to any one influence in a school (because so many potential factors can influence performance, including familial or socioeconomic dynamics outside of a school’s control), the benefits of professional learning communities may be difficult to measure objectively and reliably. However, DuFour and Eaker dismissively respond to concerns that external factors limit the efficacy of teachers, insisting that they can work harder (DuFour & Eaker, 1998).

2.12 Conclusion

Michael Fullan has quipped: ‘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 to discover how to do this their future is assured’ (Fullan, 2007, p. 92). This is almost certainly so, and PLCs could be one of the best methods available to bring about continuous learning in a school. But this ought not translate into their becoming, in an old phrase, a stick with which to beat teachers. Skytt (2003), a PLC practitioner and member of the Alberta Teachers' Association, testifies that ‘my personal experience in the process tells me that when teachers work in this type of environment, great things are possible... empower[ing] teachers to be the leaders in school improvement’ (n.p. [para. 12]); this is the ideal, but such utopias are not built easily.
From the literature that I have reviewed there emerges a clear picture of what a PLC is and why having/being one could be beneficial for a school. As this chapter concerned the benefits of PLCs the second part of literature review (ie the next chapter) will investigate another aspect; that is leadership and efficacy. We have already seen in this chapter that leadership is an important aspect of PLC and I explore its nature and significance in greater detail below.
Chapter 3

Literature Review: Part Two: Leadership and Efficacy

A. Leadership

3.A1 Introduction

Leadership is often said to be critical for organisational change (for example: Harris, 2004). The contributions of leaders in education are crucial to initiatives aimed for improving students learning. Some research suggests that leadership is second only to classroom instruction as an influence on student learning (Leithwood & Riehl, 2003). By 2018 it seemed a growing body of evidence suggested that when schools and groups of schools with the necessary capacity set about organising themselves as PLCs, and are compared with counterparts that do not, PLCs have a consistently positive impact on student achievement results (Hord & Sommers, 2008; Sparks, 2005). The role that the principal and other leaders can play in the creation and development of such a community endeavour is obvious. It is abundantly clear that collegial activities focused on staff learning, cannot easily happen across the entire school staff without the principal’s support and guidance (Hord & Sommers, 2008; Wells & Feun, 2007). Because principals play potentially significant roles in PLCs so they may help to ensure priorities for learning are determined by the community and always relate to the needs of students. Before entering into particular discussion on the influence of a principal’s leadership role in PLC, I would like briefly to discuss educational leadership in general.
3. A2 History of Ideas About Leadership Traits in Education

Leadership has long fascinated humankind and has been the topic of extensive literature for centuries. What makes a great leader? This is a question people have often asked. During the early part of the twentieth century organisational behaviour theory was dominated by the scientific management movement. The worker was assumed to be a passive instrument of management. Motivation was not conceptualised as a serious problem since members of the organisation were assumed to be motivated by the goal of economic gain (for example: Taylor, 2006; Northouse, 2007; Kanigel, 1997; Bolman & Deal, 1997).

However, the final quarter of the twentieth century was characterised by growing concern with human motivation in organisations. As a result of the research conducted by members of the human relations movement, theorists were beginning to challenge the assumption that workers were only motivated by the desire for economic gain. For example, evidence from the Hawthorne Studies (Roethlisberger & Dickson, 1974), among others, led to the conclusion that the way workers felt about themselves, their fellow workers and their organisations were important factors in production effectiveness and efficiency. Oyedele and Olufemi (2011) are of the opinion that personal motivation is what pushes employees to work without external pressure. To motivate is to provide employees with a motive to do some tasks. It is to cause or provoke somebody to act, either positively or negatively. Maslow (1943) said that people work not only for financial compensation, but also to make new friends, to have some degree of security, for a sense of achievement, to feel important in society, to have a sense of identity and, most especially, to have job satisfaction. Employees who have most job satisfaction are those whose esteem needs are fulfilled in
the fullest way. In other words, concern for financial reward is important, but the so-called human dimension is typically more important in motivating people.

However, Miles (1965) challenged the human relations approach and advocated the human resources approach. Miles claimed that if management involves employees in making decisions, these will be carried out in an efficient and effective way. But Miles (1965) also indicated that the human resources model is built on the assumption that organisations’ members are important sources of ideas, problem solvers, decision makers and controllers. The purpose of encouraging participation is to utilise these important human resources and improve organisational decision-making, performance and control. That is to say, the efficiency and performance of staff and their commitment to organisational objectives are fostered by good human relationships at work.

The human resources model might seem particularly appropriate for educational organisations for many reasons. First, every educational institution, as must be the case with any formal organisation, needs human beings to execute its programmes and achieve educational goals and objectives. Secondly, to be able to achieve these objectives, the principal, who is the chief of school administration, has to ensure that the personnel with whom he/she works know their roles and the goals that will give appropriate opportunities for growth and recognition. Thirdly, teachers very often have a great deal of autonomy and freedom to operate their classes in their own way but still need to be held accountable for the result of their activities (Vasithan, & Chauhan, 2011). Therefore, good personnel management practices in educational institutions are vital.
McGregor (1960) developed the thesis that the nature of such management practice is largely the result of the assumptions that managers make about the human beings in an organisation. He developed and compared two sets of contrasting assumptions that he labelled theory X and theory Y. In both, it was assumed that managers had the responsibility to structure the elements of the organisation so as to facilitate the achievement of organisational goals.

3.A2.1 Theory X ('authoritarian management')

In this theory, which has been dismissed as counter-productive in most modern practice, according to Bobic and Davis (2003), managers assume employees are inherently lazy, will avoid work if they can and that they inherently dislike work. As a result of this assumption, managers believe that workers need to be closely supervised and comprehensive systems of control have to be developed. A hierarchical structure is assumed to be needed at every level. According to this theory, employees will show little ambition without an enticing incentive programme and will avoid responsibility whenever they can. According to McGregor (1960), if the organisation’s goals are to be met, theory X leaders rely heavily on threats/coercion to gain their employees’ compliance. Use of this theory may lead to mistrust, highly restrictive supervision and a punitive atmosphere. The theory X leader tends to believe that everything must end in blaming someone. He/she thinks all prospective employees are only out for themselves. Usually these managers feel the employee's sole interest in the job is money. They will blame a subordinate first in most situations, without questioning whether it may be the system, policy, or lack of training that deserves the blame. A theory X leader believes that his or her employees do not really want to work, that they would rather avoid responsibility and that it is the leader's job to structure work and energise the employee. Theory X is self-perpetuating in that it promotes
superficial harmony, but results in apathy and indifference, which then “proves” people are apathetic and need to be controlled. Theory X has at its core leadership by the “superior” few. However, contrary beliefs about human nature and motivations can lead to different principles around which another leadership theory can be built, as discussed below.

McGregor felt that the application of theory X practices, whether harder or softer, was often dysfunctional and inappropriate and, in many instances, resulted in poor performance and reduced effectiveness and efficiency. McGregor (1957) insisted that managers operating under theory X assumptions were generally ineffective because they attempted to motivate people through control, salary, fringe benefits, or [in]security, using either the threat of withdrawal or the promise of increase of these rewards. He argued that, when people in organisations reach a stage where their social esteem and self-fulfilment needs are dominant but not being met they feel frustrated, discontented, alienated and poorly motivated. He advocated a different theory of personnel management based on different assumptions, which he called theory Y (McGregor, 1957).

3.A2.2 Theory Y (‘participative management’)

Theory Y leaders are in the Maslow (1968, 1971) and Kohlberg (1981) Conventional Stage. Leaders at this stage can be described within the framework outlined by Argyris (1993). Argyris (1993), believes that for workers to attain psychological success there are three essential requirements.

1. Individuals must value themselves and aspire to experience an increasing sense of competence, this, in turn, requires that they strive continuously to find and create opportunities in which they can increase the awareness and acceptance of themselves and others.
2. Organisations must provide opportunities for work in which people are able to define immediate goals, define paths to these goals, relate these to the goals of the organisation, evaluate their own effectiveness and constantly increase the degree of challenge at work.

3. Societies and cultures influence individuals and organisations, through the process of acculturation, to place a high or low value on self-esteem and competence, the process of acculturation, in turn, is a function of a society’s norms and values as well as its economic development (pp. 33-34).

Leadership theories that fall under the auspices of theory Y would include those advocating transformational, holistic, and moral leadership. These styles of leadership acknowledge the relational aspect of leadership and followership. They recognise the higher needs of the whole person, such as self-actualisation. While a person practicing theory X can accomplish change through an autocratic style, theory Y focuses on higher order change, altering attitudes, beliefs, values, and needs. Burns (2003) describes quantitative, first-order change as insufficient. Rather, there must be qualitative, higher order change for comprehensive and pervasive progress.

Thus, it becomes the responsibility of management to provide the structures that will make it possible for people to feel accepted and valued and to feel that they can best work towards their own goals by working towards the organisation’s goals. This approach is consistent with the human resources approach advocated by Miles (1965). He assumed a broad base of human competence in the organisation, which needs to be utilised. It is through the utilisation of human potential that it is possible to achieve more effective decision-making and implementation of decisions and, therefore, better motivated and better performing personnel. These assumptions are the background to a common view of principals being figures whose leadership behaviours can contribute to positive (or negative) organisational climate and learning environments.
3.A3  Further Developments in Leadership Theory in the Literature

In the scholarly literature early paradigms of leadership included hierarchical and pyramid-type structures with a personal focus on the leader and a utilitarian or materialistic ethical perspective, in essence people are assumed to act only for the promise of personal gain (Rost, 1991). Early theories offer some insights into the qualities of successful leaders but there has been a shift in focus from the generic characteristics and behaviours of the individual to recognition of the importance of responding to different situations and contexts and leaders’ roles in relation to followers (Bolden et. al., 2003). Thus, by 2018, a number of leadership scholars and writers had begun to emphasise the importance of considerations such as collaboration, the common good and global concern as important components of leadership for the twenty-first century (Rost, 1991). However, leadership is often difficult to define and evaluate. Leaders have a multitude of roles to fill and many duties to perform each day, there are thus many traits and behaviours that may create effective leaders. The research on leadership can, therefore, be seen to fall into the following primary leadership categories: great man/person, trait, situational and transformational models and these theories are briefly described and discussed below.

3.A3.1  The Great Man/Person Theory

This theory centers on the belief that leaders are exceptional people, born with innate qualities, destined to lead. The theory was based on the assumption that great leaders were born predisposed to leadership. It was also key to this body of theory that these leaders would arise when the need was present. That is, if a cause or situation was present that needed a leader, he/she would arise (Lippitt, 1969). The specific term great man theory was originally associated with the nineteenth century Scottish historian Thomas Carlyle (1841) who declared, ‘The history of the world is but the biography of great men [sic] (p.
127). Most subsequent writing in this particular theoretical tradition has worked by gathering lessons from biographical accounts of heroic political leaders, military commanders, or the like and, more recently, business leaders (White, 2011).

3.A3.2 Trait Theory

The first major refinement of the great man/person theory was a diverse collection of trait theories, which sought to identify what were believed to be the essential psychological traits that could differentiate leaders from followers and contribute to the success or failure of leaders (White, 2011). The trait theory of leadership focused on matters such as personality, physical appearance, social background, intelligence and ability (Taylor, 1994). Supporters of this theory believed that leaders were born with certain traits that made them naturally effective leaders. Hackman and Johnson (2000) have stated that many earlier studies performed to evaluate the specific traits of these highly effective leaders produced inconclusive results, but with more advanced statistical analyses. Some researchers (Northouse, 2004; Rost, 1993; Gardner, 1990) have suggested that certain traits or attributes appear to be present in many effective leaders.

Hackman and Johnson (2000) list the following three traits as the most evident in effective leaders: interpersonal factors, cognitive factors, and administrative factors. Interpersonal factors include items such as integrity, sensitivity, consistency, emotional stability, self-confidence, communication skills and conflict management skills. Cognitive factors are said to be related to leadership in that more intelligent leaders are better at problem-solving, decision-making, critical thinking and creativity. Finally, administrative factors are such considerations as having the ability to plan and organise, as well as being able to perform oneself most of the tasks regularly required of followers.
3.A3.3 Situational Leadership

Supporters of situational theories have argued that different situations actually require different kinds of leaders (Bottery, 2004). Lippitt (1969) has stated, ‘Leadership must be flexible in style to meet the need of a particular situation’ (p. 2). In situational leadership, the capacity to lead an organisation is dependent on the situation or organisation. The following four situational approaches are briefly discussed below: Fiedler’s contingency model, path-goal theory, Hersey and Blanchard’s situational leadership and leader-member exchange theory.

3.A3.3.1 Fiedler’s Contingency Theory: Fiedler’s contingency theory shows the relationship between the leader’s orientation and style and group performance under differing situational conditions. The theory is based on determining the orientation of the leader (relationship or task), the elements of the situation (leader-member relations, task structure, and leader position power). The leader found to be most effective was the one who changed from a low or moderate to a high level of control on the leader-member relational scale. Fiedler found that task-oriented leaders were more effective in low and moderate control situations and relationship-oriented managers were more effective in moderate control situations (Burns, 2003). According to Fielder’s contingency model, three factors determine the influence a leader has over followers. Position power, which refers to the leader having the power to give reward or punishment, means that leaders with more position power will have greater influence over the follower. Task-structure refers to the flexibility or lack of flexibility in how a follower performs a task and leader-member relations, which refer to the relationship - loyalty, affection, trust, and respect - between the leader and follower, are also vital (Hackman & Johnson, 2000).
3.A3.3.2 Path-Goal Theory: The path-goal theory of leadership employs the ‘expectancy model’ of work motivation. This proposes that a person’s motivation depends on his or her assessment of whether the effort would lead to good performance, the probability of a reward- either material or psychological- as a result of good performance and positive valence (Gill, 2008). Path-goal theory relies on the intersection of the follower’s assumed needs, abilities, values and personality, with the structure and clarity of the task. The leader determines the proper leadership style in each situation depending on the structure of the task and a follower’s experience, skill, confidence and commitment. When an inexperienced or unsure follower must perform an unstructured task, the leader must use a directive leadership approach. If the follower is skilled but lacks confidence or commitment in performing a structured task, the leader must use a supportive leadership style. Next, if followers are unsure and the task is unstructured, the leader must use a participative leadership style. Lastly, if a skilled follower is set to perform an unstructured task, the leader must use an achievement-oriented leadership style designed to show confidence in the follower to perform well (Hackman & Johnson, 2000).

3.A3.3.3 Situational Leadership Theory: Situational leadership theory focuses on two primary types of behaviour on the part of leaders: task and relationship behaviour (Hersey, & Blanchard, 1982). Hersey and Blanchard (1969, 1982) suggest that these behaviours are very similar to the considerations and initiation of structure which are well grounded in leadership literature (e.g., Cartwright, & Zander, 1960; Halpin, 1959; Katz, Maccoby, & Morse, 1950 cited in Warren, John, & Stephen, 1990). In SLT followers with low readiness, those who are unskilled or unmotivated, require the leader to use telling, which is providing specific instructions followed by close supervision. If the follower is willing but does not have the proper skills, the leader must use selling, which includes explaining
and providing opportunity for clarification, but requires less supervision. If a follower is skilled and able, but has low motivation, the leader should use *participating*, which gets the follower involved in decision-making, creating more motivation. Lastly, if the follower is high skilled and motivated, the leader should use *delegating*. In delegating a leader simply gives the follower the responsibility to make and implement decisions (Hackman & Johnson, 2000).

### 3.A3.3.4 Leader-Member Exchange Theory:

Leader-member exchange theory focuses solely on the relationship the leader and follower develop. When followers first join an organisation they either become part of the leader’s in-group or part of the leader’s out-group. Simply stated, the in-group contains followers who are trusted and allowed to participate in decision-making and to help to shape the organisation’s future. Members of the out-group are simply expected to perform their duties and are not allowed the autonomy or participation that the members of the in-group are allowed (Hackman & Johnson, 2000).

### 3.A3.3.5 Transformational Leadership Theory:

Over the four decades from approximately 1970 to 2015, the concept of leadership became increasingly complex and elaborate. Considerable debate emerged over the most suitable model for educational leadership. Transformational leadership is concerned with getting everyone involved in decision-making. ‘The overriding element of successful leadership is to involve people in the process of leading’ (Horan, 1999, p. 21). Most explanations of transformational leadership begin with distinguishing it from transactional leadership. In transactional leadership, the leader is concerned with the basic needs of the person through a reward system in exchange for favourable group or organisational outcomes. While transformational leadership also seeks to satisfy these needs for the follower, its aim
extends to reaching the higher level needs through empowerment and inspiration. A transformation or transformative process is one leading to changes or reorganisation of relationships or structures within a working environment in an effort to improve effectiveness or usefulness (Cohen, 2009). Theories of transformational leadership typically use the following five terms when describing good leaders: creative, interactive, visionary, empowering and passionate (Hackman & Johnson, 2000).

In a very well-known transformational theory, Kouzes and Posner (2002a) list and describe what they consider the five practices of exemplary leaders. A good leader should: Model the Way (be interactive), Inspire a Shared Vision (be visionary), Challenge the Process (be creative), Enable Others to Act (be empowering) and Encourage the Heart (be passionate). Model the Way refers to leading by example. Leaders establish principles concerning the way people (constituents, colleagues and customers alike) should be treated and the way goals should be pursued. They create standards of excellence and then set an example for others to follow. Inspiring a Shared Vision means the leader is able to formulate, discourse on and create enthusiasm for a vision of the organisation. To create a desire to strive for the organisation’s goals, the leader must motivate the followers by relating to their personal goals and ambitions. Challenging the Process refers to the leader’s ability to look for and choose innovative ways to improve the organisation. The leader must study the organisation and its people to determine the best course for improvement. The category Enabling Others to Act refers to the leader’s ability to encourage teamwork and create trust and to empower followers to work toward the organisation’s goals. Lastly, Encouraging the Heart refers to the leader’s resilience in motivating and encouraging followers through the exhaustion and frustration that often occurs with change. Transformational leadership
is one of the most popular leadership styles in the field of education. Thus, under the title of educational leadership I will deal with its importance in the field of education.

3.A4 Educational Leadership

The question of how leadership can influence educational outcomes received significant interest from educators and scholars in the mid 1990s and thereafter (Aas, Brandmo, & Bryant, 2016). Thus, educational leadership became a priority for policy agendas internationally (Pont & Moorman, 2008). It can play a key role in improving school outcomes by influencing the motivations and capacities of teachers, as well as a school's climate and environment. Effective school leadership has been said to be essential to improve the efficiency and equity of schooling. While the quality of teaching most strongly influences levels of pupil motivation and achievement, it has been often claimed that the quality of leadership matters in shaping or influencing the levels of motivation of teachers and quality of teaching in the classroom (Muijs & Harris, 2003). A vital and, some argue, increasingly dominant aspect of education is the role of leadership (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005). Many writers have stressed that this is an important factor in promoting and sustaining positive change in education. Sarason (1990) emphasises the importance of strong leaders to confront intractability of schools. Gerhard Huber (2004) points to the central role of school leadership for developing and ensuring the quality of schools. Performing Beyond Expectations [PBE], a large-scale international study undertaken from 2007 to 2010 by a research team comprising scholars from both the United States and the United Kingdom (Hargreaves & Harris, 2011), explored how 18 organisations across three sectors, business, education, and sport achieved exceptionally high levels of performance, given their history, size, client base, and previous standards. Education is different to other sectors in that schools often cannot change
employees or students but must work with existing resources to perform beyond expectations. The evidence from the PBE study suggests that a key factor in performance beyond expectations is a collectivisation of leadership in which the strengths of everyone involved in the work of an organisation are marshalled. Leadership is the glue that can hold the organisation’s vision and practice together, support those working with students, which can be the cause of change that makes systems work.

Leithwood, Harris, and Hopkins (2008), summarising the main findings from the empirical studies undertaken in educational leadership, described what they called ‘strong claims’ about successful leadership. They are seven in number.

1. School leadership is second only to classroom teaching as an influence on pupil learning.
2. Almost all successful leaders draw on the same repertoire of basic leadership practices.
3. The ways in which leaders apply these basic leadership practices not the practices themselves demonstrate responsiveness to, rather than dictation by, the contexts in which they work.
4. School leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions.
5. School leadership has a greater influence on schools and students when it is widely distributed.
6. Some patterns of distribution are more effective than others.
7. A small handful of personal traits explains a high proportion of the variation in leadership effectiveness (Leithwood, Harris, & Hopkins, 2008, pp. 27-28).

I would like to highlight more the fourth and fifth claims, namely: ‘School leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions’ and ‘School leadership has a greater influence on schools and students when it is widely distributed’. It is at this point the importance of PLCs becomes evident.
3.A4.1 Distributed Leadership and Education

In a study of patterns of leadership distribution, Leithwood et al. (2007) explain distributed leadership as a paradigm shift from ‘focused leadership’ (where leadership function is traditionally located in those to whom “heroic” capabilities and “charismatic” qualities are attributed) to a model that explicitly acknowledges the presence of non-administrative leaders so as to better understand their contribution to organisational functioning. The essence of this position can be stated as follows.

*Distributed forms of leadership and their contribution to organisational functioning and outcomes are a significant preoccupation of leadership scholars and practicing educational leaders alike* (Leithwood, 2007, p. 1).

Distributed leadership was a concept very much “in vogue” with researchers, policy makers, educational reformers and leadership practitioners alike by 2015/2016. While there seemed to be widespread interest in the idea of distributing leadership there are competing and sometimes conflicting interpretations of what distributed leadership actually means (Leithwood et al., 2007). However, Harris (2004) has also noted that the literature supporting the concept of distributed leadership remains diverse and not necessarily consistent. Distributed leadership assumes a set of direction-setting and influence practices potentially 'enacted by people at all levels rather than a set of personal characteristics and attributes located in people at the top' (Fletcher & Kaufer, 2003, p. 22). Leadership, from this perspective, resides in the human potential available to be released within an organisation. It concentrates on expertise wherever it exists in the organization, rather than seeking this only through formal position or role (Harris, 2004).

School leadership responsibilities gets ever-wider in range number: instruction, school culture, management, strategic development, micro-politics, human resources, and
external development (Portin, 2004). By the early twentieth-first century, any one principal could have difficulty successfully managing all these matters on his or her own and thus could be extremely difficult for a single individual to properly administer and lead a school. And, hence, distributed leadership began receiving greater attention and increased support in educational discourse (Gronn, 2000; Harris, 2004; Spillane, 2006). Harris (2004) argues that successful heads recognise the limitations of a singular leadership approach and adopt a form of leadership distributed through collaborative and joint working. Models of distributed leadership conceptualise it as a set of practices that can and should be enacted by people at all levels rather than a set of personal characteristics and attributes located in people at top (Fletcher & Kaufer, 2003). However, Gronn’ s (2010) overview of four research projects leads him to conclude that principals retain considerable power: 'Certain individuals, while they by no means monopolized the totality of the leadership, nonetheless exercised disproportionate influence compared to their individual peers' (p. 74). Bottery (2004) asks how distribution is to be achieved, 'if those in formal positions do not wish to have their power redistributed in this way' (p. 21). Harris (2005b) argues that distributed and hierarchical forms of leadership are not incompatible, but claims it is evident that distribution can work successfully only if formal leaders allow it to take root. However, Harris (2014) makes it clear that leadership is not giving away authority or control, nor is delegation, but providing an opportunity for the informal leaders to come forward. In other words, distributed leadership is empowering others to bring their expertise to the service of the organisation. The distributed perspective offers a new and important theoretical lens through which leadership practice in school can be reconfigured and re-conceptualised (Harris, 2004).
The school improvement literature similarly points towards high degrees of involvement and collaboration as the main levers of change (Harris, 2005b). Evidence from the literature suggests that distributing leadership to teachers or teacher leadership can have positive effects on transforming schools as organisations and on helping to diminish teacher isolation (Hargreaves, 1994; Little, 2003; Schlichte, Yssel, & Merbler, 2005).

Research on distributed leadership may also lead us to consider the PLC. School improvement research has suggested that an organisation’s ability to develop a distributed leadership largely depends on its ability to foster and nurture professional learning communities or ‘communities of practice’ (Holden, 2002). Further evidence suggests that where teachers share good practice and learn together, the possibility of securing better quality teaching is increased (Lieberman, Saxl, & Miles, 2000). Such collaboration and collegiality are at the core of distributed leadership and have been shown to have positive effects upon teachers; self-efficacy and levels of morale (MacBeath, 1998).

There was a growing understanding in the early twenty-first century that leadership might better be embedded in various organisational contexts in school communities, not centrally vested in a person or an office (Mulford, 2003). To illustrate, an American study, undertaken by McLaughlin and Talbert (2001), examined principals’ effects on teachers’ communities, instructional practices, and careers but found no instances of leaders who created extraordinary contexts for teaching by virtue of their own unique visions; nor did the study reveal any common patterns of strong principals’ characteristics. Successful principals turned out to be men and women with varied professional backgrounds who worked in collaboration with teacher leaders and showed respect for the teaching culture (McLaughlin & Talbert, 2001).
The importance of distributed leadership becomes more evident in research conducted by Crowther, Hann, McMaster, and Ferguson (2000) who claim that teacher leadership is an important factor in improving the life chances of students in disadvantaged high schools. Silins and Mulford (2002) similarly concluded that student outcomes are more likely to improve where leadership sources are distributed throughout the school community and where teachers are empowered in areas of importance to them. ‘It is teachers in classrooms rather than the school and how it is organised or led that makes the difference’ (Silins & Mulford, 2002, p. 561). Other research findings also suggest that empowering teachers to take on leadership roles enhances teachers’ self esteem and work satisfaction, which in turn leads to higher levels of performance due to higher motivation, as well as possibly higher levels of retention in the profession (Gronn, 2002).

One of the challenges of distributed leadership could be that while it has a strong theoretical basis and is widely advocated in the literature, contemporary examples of it in action are hard to find (Harris, 2005a). Some operational models of distributed leadership [DL] practice was certainly emerging by 2015/2016 but for many schools the shift from vertical to lateral forms of leadership was gradual. A number of authors have suggested that much current theory and research on DL takes insufficient consideration of the dynamics of power and influence in which it is situated (Brown, Rutherford, & Boyle, 2000; Gordon, 2010; Hartley, 2009). However, what might be called the dark side of DL involve misused power and increased workload as teachers have to shift their attention from classroom teaching. Lack of a well-understood definition (Gronn, 2002; Harris, 2004; Hartley, 2009) brings up the possibility that this is just another name for shared leadership (Fletcher & Kaufer, 2003) or team leadership (Zaccaro, Rittman, & Marks, 2002), or democratic leadership (Woods, 2004). One might be tempted to think that if distributed leadership
were practiced, as theory demands, reaching a conclusion at crucial points would be very slow. Answering many of such concerns Harris (2014) makes it clear that DL’s aim is to show how we can get teachers working *interdependently* not *independently*. It is not about giving away formal authority or control but concerns how formal leaders give opportunities for informal leaders to come forward.

3.A4.2 Instructional Leadership

The seemingly unending search for insights into the nature of school leadership that makes a difference to students learning has engaged scholars in studying a variety of leadership models over decades. In this search for the most suitable role for principals, two major approaches of conceptual leadership models have dominated: instructional leadership [IL] and transformational leadership [TL] (Hallinger, 2011; Huffman, Hipp, Pankake, & Moller, 2014; Leithwood, Harris, & Hopkins, 2008; Marks & Printy, 2003). Syntheses of the global literature on educational leadership support the conclusion that, among these competing models, instructional leadership has demonstrated the strongest empirically verified impact on students learning outcomes (Bell, Bolam, & Cubillo, 2003; Hallinger, 2011; Huffman, Hipp, Pankake, & Moller, 2014; Leithwood, Patten, & Jantzi, 2010). In the context of an increasing global trend towards strengthened school accountability (Huffman, Hipp, Pankake, & Moller, 2014), this conclusion could seem to stress the importance of instructional leadership as a focus for school policymakers and practitioners. It also provides a rationale for school personnel focusing on enhancing their capacities for instructional leadership as a lever for school improvement (Hallinger & Wang, 2015; Shatzer, Caldarella, Hallam, & Brown, 2013). The work of instructional leaders is to ensure that every student receives the highest quality instruction each day. Doing so requires that instructional leaders lead for the improvement of the quality of teaching and for the benefit
of students learning. It is specifically a type of leadership that has been shown to have a
great effect on school achievement.

Two predominant conceptual models of instructional leadership emerged during the 1980s
in the USA. One was developed by Bossert, Dwyer, Rowan, and Lee (1982) at the Far
West Lab for Research and Development in San Francisco, and a complementary model
was developed by Hallinger and Murphy (1985).

In their seminal review of the literature, Bossert, Dwyer, Rowan, and Lee (1982) more
clearly defined ‘instructional management.’ Instructional management was conceptualised
as actions and strategies employed by principals that are intended to have an impact on the
school’s instructional organisational and learning climate with the goal of improving
learning outcomes for students. They chose the term ‘instructional management because
they inferred that this role of the principal revolved around managerial functions concerned
with the coordination and control of curriculum and instruction. Their instructional
management framework became an influential model that continued by 2015/2016 to guide
researchers in the field (Hallinger & Wang, 2015). Several features of the Bossert
framework are worthy of note

- The model gives priority to a specific domain of the principal’s activities,
instructional management.
- Approaches to instructional leadership are shaped by personal
  characteristics of principals. These characteristics range from demographic
  factors (eg. Prior professional experience, gender, years of tenure as
  principal) as well as attitudes or dispositions (eg. self-efficacy, resilience,
  optimism, openness to learning).
- Principal leadership is framed within an organisational context, thereby
  reorganising that leadership is influenced by organisational features such as
  school and district size and complexity, socio-economic status of the
  community, and socio-cultural features of the education environment. Leaders do not operate in a vacuum; their work is moderated or shaped by
  features of the context in which they work.
• The principal’s effects on student outcomes are also mediated by features of the school.
• The ultimate effectiveness of the principal’s efforts is based upon the impact achieved on student learning and development (Hallinger & Wang, 2015, pp. 26-27).

Although Bossert and his colleagues initially employed the term instructional management, instructional leadership became the preferred name among the scholars due to the recognition that principals who operated in this way tended to rely more on expertise and influence than formal authority to achieve a positive impact (Hallinger & Wang, 2015).

Another early attempt to provide a clear definition of instructional leadership was in the work of Hallinger and Murphy (1985). This highlighted three dimensions of instructional leadership. Specifically: it should define a school’s mission, manage the instructional programme and develop a positive learning climate. These dimensions were further delineated into 10 instructional leadership functions. They are illustrated as a figure below:

![Instructional Management Framework](image)

Figure 1. Instructional Management Framework: Hallinger and Murphy 1985, p. 225

What matters in instructional leadership, according to Mitchell and Castle (2005), is a principal’s capacity to lead teachers in processes of critical inquiry, collective reflection, and problem solving. Such principals understand their roles as instructional leaders to be
as much about bringing visibility to the knowledge, skills, and attitudes of staff members as about imparting new knowledge.

An emphasis on instructional leadership is consistent with Li, Hallinger, and Walker's argument that the primary strategy for principals' instructional leadership is to promote professional dialogue among the instructional staff (Li, Hallinger, & Walker, 2015). The traditional assumption behind the title *principal* was that he or she had more skill and knowledge than anyone in the building and would guide others in how to teach. Much has changed in the schooling enterprise, but our expectations of the principal remain the same. He or she is often expected to be an educational visionary, offering direction and expertise to ensure that students learn.

*You must spend as much time observing classroom instruction as you possibly can so that you can accurately assess the effectiveness of your teachers. Your presence in the classrooms serves as evidence that student achievement and improvement of instruction truly are your top priorities* (Kafele, 2015, p. 39).

At the same time, many other responsibilities (Ediger, 2014) also fall to the principal. These include dealing with student discipline, building security and cleanliness, athletics, relationships with parents, personnel supervision, test scores, and meeting yearly progress goals. These responsibilities may sometimes force a principal to be intimately involved in one which causes him/her to neglect another. On the other hand, teachers often know more about pedagogy, curriculum, and students’ learning than the principal him/herself. In this case, a principal can act as an instructional leader and promote collegiality through facilitating teachers’ learning (Hoerr, 2007). Barth (1990) proposed a model for collegiality. He argued that the real source of improvement in a school is from within. Barth says that if students are to grow and learn, their teachers must grow and learn, too.
He discusses four aspects of collegiality: teachers talking together about students, teachers developing curriculum together, teachers observing one another teach, and teachers teaching one another. Thus, when the work of various theorists (DuFour & Eaker, 1998; Fullan, 2006; Hord, 1997; Newmann & Wehlage, 1995; Senge, 1990; Sigurðardóttir, 2010) proposes that professional learning communities adopt what is essentially a constructivist approach to engaging school staffs in meaningful learning. This, in turn, is expected to lead to increased achievement on the part of the pupils.

3.A4.3 **Transformational Leadership**

Transformational leadership [TL] had been the subject of systematic inquiry in non-school organisations for several decades before the 2000s (Marks & Printy, 2003). Among the different styles of leadership in education, TL had gained considerable attention from organisational researchers and academics by 2015/2016 (Mittal, Dhar, Adcroft, & Adcroft, 2015; Yu, Leithwood, & Jantzi, 2002). Many school reform initiatives assume significant capacity development on the part of individuals, as well as whole organisations. They depend, crucially, on high levels of motivation and commitment to solve the often complex problems associated with their implementation. As a consequence, whether a reform initiative actually improves the quality of education or simply becomes what has been called, another ‘fatal remedy’ hinges on the work of implementers (Yu, Leithwood, & Jantzi, 2002). Those providing leadership for reform in schools must, therefore, be capable of influencing teachers’ levels of commitment to change. Transformational leadership practices have such influence (Phipps & Prieto, 2011) because, transformational leadership emphasises a leader’s ability to recognise the potential skills of an employee and engage the complete person, not just particular traits (Allen, Grigsby, & Peters, 2015).
When a principal provides evidence that he or she understands the need to empower teachers, there can tend to be increased motivation and commitment towards common goals (Leithwood, Patten, & Jantzi, 2010; Sergiovanni, 1994). Transformational leadership has also been found to have an impact on teachers’ perceptions of school conditions, their individual commitment to change, and organisational learning and students’ outcomes (Hallinger & Heck, 1998). Looking at the organisational and psychological factors in teachers learning Beverborg, Sleegers, and Van Veen (2015) contended that TL can have direct and indirect effects on teacher learning as mediated by teamwork process. An important aspect of understanding the model is that it does not assume that a principal can independently create these conditions. Leadership, is therefore, shared among teachers and does not rely solely on the principal (Alimo-Metcalfe, & Pritchett, 2008). Second, the model is predicated on understanding the needs of staff rather than coordinating and controlling them. Personal issues, such as individualised support, intellectual stimulation, and personal vision, contribute to influencing people using bottom-up, rather than top-down approaches (Leithwood, Jantzi, & Steinbach, 1999). Leithwood (2012) is of the opinion that the primary aim of the TL model is to achieve the performance of organisational members is a function of their motivation, ability and the settings in which they work. Key functions of leaders in this include assisting teachers and other colleagues to develop further their motivations and abilities, so that they can better accomplish organisational goals, as well as to create and sustain supportive work settings, which, in turn, should enable and support those improvement efforts. Leithwood (2012) also claimed that the pattern of leadership that persuaded teachers to stay in their schools was ‘fully consistent with a transformational model of school leadership’ (p. 27).
Another claim the promoters of TL make is that it positively affects school climate (Avci, 2015; Hallinger, 2011; Price & Moolenaar, 2015). Building and sustaining a successful school learning climate has since long been regarded a pivotal task of educational leaders and a vital lever to improve student learning and achievement. How to build such learning-oriented climates pervades discussions on education around the globe (Price & Moolenaar, 2015). There are researches which found that the behaviour of principals was especially influential on school climate, as the specific strategies used to manage the campus influence the experience of the teachers and the overall work atmosphere (Owens, 2004; Vos, Van der Westhuizen, Mentz, & Ellis, 2012). In addition, Bird, Wang, Watson, and Murray (2010) discovered that teachers’ reported feelings of engagement were strongly related to their levels of trust in the school, their colleagues, and their principals. Price and Moolenaar (2015) claimed that transformational leadership was positively related to teachers’ perceptions of their school’s climates of innovation.

3.A4.4 Integrative Leadership

However, amidst the seeming certainty that leadership matters, there was much that remained opaque or even obscure about effective educational leadership (Leithwood & Riehl, 2003). Schools often operate like corporations, dealing with activities, from planning, creating strategies, recruiting and advertising, to managing revenues, teaching/non-teaching staff, and students (Gochhayat, Giri, & Suar, 2016). In order to be effective in educational leadership one has to have the skills, knowledge, and competencies relevant to the complex nature and demands of the institution in which one is a leader. Accordingly, the conceptualisation of leadership needs to be revisited and new dimensions have to be added to ensure the effectiveness of that leadership. Looking at the ever-growing literature on leadership theories in education I see the possibility of a new model emerging.
One thing is clear, these theories are not conflicting explanations of the leadership process. Most are complementary and only seem different because they are oriented to different aspects of the same phenomena (Silva, 2015). Yukl (2008), Avolio (2009), and Day and Sin (2011) are some of the authors who have expressed the need for integration of different leadership theories. According to these authors, an integrative approach is quite feasible, at least in very simple terms. Models of group leadership have been proposed that are not different explanations of the same phenomena but different perspectives on it. We can thus assume that instead of many forms there is a single form of good leadership. I proceed next to suggest how an integrative model of leadership could achieve coordinated administrative and learning strategies in an educational institution.

3.A5 The Role of the Principal in PLC Leadership

The principal has an essential role in building a PLC in any school (Ontario Principals' Council, 2009). Principals have been often referred to as the critical gatekeepers to school improvement because they control structures and environments that determine how receptive teachers are to change (Melanie, Morrissey, & Cowan, 2004). Educational research shows that most school variables, considered separately, have at most small effects on learning (Neumerski, 2013). The real payoff comes when individual variables combine to reach critical mass. Creating the conditions under which that can occur is the job of the principal. Thus, we can say that effective leadership is about facilitating change centered on teaching and learning. Creating a collaborative culture for action that focuses on improving student achievement is a complex undertaking. Principals are the first ones who need to understand how and why PLCs can provide an effective infrastructure for continuous school improvement. PLCs are an instrument for facilitating enhanced learning, teaching, and leadership capacity at all levels of the education system (Ontario Principals' Council, 2009).
Council, 2009). To institutionalise this concept, researchers propose the need to develop capacity through a community of leaders, which necessitates increased responsibility, greater decision-making, and more accountability for results among staff (Muijs & Harris, 2003; Pont & Moorman, 2008; Silins & Mulford, 2002; Zaccaro, Rittman, & Marks, 2002).

3.A6 Leadership Practices of PLC Supporting Principals

What types of leadership are needed to develop and sustain the embedded PLC processes in a school? Leadership is an important resource for PLCs, because the principal’s level of commitment and his/her support for distributed leadership are valuable if a PLC is to work (Hairon & Dimmock, 2011). Research suggests that, among many factors that contribute to a student’s academic performance, teaching quality matters most (Hord & Hirsh, 2009). Therefore, the primary aim of a principal in establishing a PLC should be to let the teachers know that they are expected to keep their skills up-to-date through collaborative study. To integrate the use of PLCs into a school’s continuous improvement efforts the principal has to work consciously to develop high levels of professional trust and collaboration among the staff members (Betts, 2012). ‘Principals of PLCs are learners among learners. In their roles as instructional leaders, effective administrators model an understanding of both the theory and practical application of collaborative inquiry action’ (Ontario Principals’ Council, 2009, p. 18).

3.A6.1 Setting Directions; Shared Purpose

One of the principal’s most important roles is setting directions for the school. This aspect of leadership includes performing actions aimed at developing goals and inspiring others with a vision of the future. Looking at the story of the development of PLCs in schools it seems clear that members of staff are unlikely to come to the principal and ask to start a PLC in a school. Usually, it is the principal, through professional reading and development
experiences and networking with colleagues, who becomes convinced of the value of a PLC (Ontario Principals' Council, 2009). But no matter the source of the initiative, it is the principal who makes the differences by setting the school’s direction and starting the collaborative culture of a PLC.

3.A6.2 Creating Shared Belief; Values and Vision

Hord and Sommers (2008) say: ‘Not only the principal involved in creating the vision with the staff, but the principal continuously communicates the vision to all stakeholders, articulating powerful images that foster commitment to the vision by all’ (p. 10). Schools can enhance their effectiveness and improve their outcomes when they are learning organisations and engage in active organisational learning (Leithwood & Louis, 1998; Nembhard & Tucker, 2016). DuFour, DuFour, and Eaker (2009) observe that while the term organisation evokes images of structure and efficiency, community suggests more a group linked by common interest and a sense of identity, belonging, and involvement. Typically, a sense of identity, belongingness and involvement emerges when beliefs, values and visions are shared.

3.A6.3 Developing People (Continuous Improvement)

Ernest Boyer, one of the most influential figures in the advancement of public education and teacher training once observed:

*When you talk about school improvement, you are talking about people improvement. That is the only way to improve schools, unless you mean painting the buildings and fixing the floors. But that’s not the school: it is the shell. The school is people, so when we talk about excellence or improvement or progress, we are really taking about the people who make up the building* (in Sparks, 1984, p. 35).

According to Leithwood, Day, Sammons, Harris, and Hopkins (2006), one of the core practices of successful leaders is developing people. The principal of a school with a
functioning PLC understands the importance of supporting teachers in a collaborative culture. Collaboration as a concept offers considerable promise and has a way of foregrounding itself as democratic, reciprocal, sustainable and mutually beneficial for people in the field of education (Chan, 2016). The principal should support the learning required in initiating a PLC, not only with professional development but also by understanding the emotional needs of each staff member.

Another way to develop people’s capacity as continuous learners is to serve as a role model. PLC principals continue to build their own capacity to lead the PLC project by attending professional development opportunities and participating as members of collaborative teams themselves. When principals value professional growth, teachers are more likely to participate in professional development (Ontario Principals' Council, 2009, p. 20).

3.A6.4 Redesigning the School’s Organisation to Have a Collaborative Culture

Another way in which a principal can make a difference when building a PLC is in redesigning the organisation of the school (Ontario Principals' Council, 2009). When we think of re-culturing schools, collaboration is an excellent place to start: we must shift from a culture of teacher isolation to a culture of deep and meaningful collaboration, says Eaker (2002). Structuring the organisation to facilitate collaborative work is a priority in leading a PLC and it is the principal who makes the change to a collaborative culture possible (Council, 2009). The key aim of PLCs is to create effective teaching and learning teams, this can perhaps most easily and successfully be achieved when there is true collaboration.

3.A6.5 The Principal as an Instructional Leader

The most important role of the principal in a school with a PLC is to manage the instructional programme (Ontario Principals' Council, 2009). According to Zepeda (2014), strong instructional leadership promotes excellence and equity in education and entails
projecting, promoting, and holding steadfast to the vision; gathering and allocating resources; communicating progress and supporting the people, programmes, services, and activities needed to implement and achieve the school’s vision. Some research suggests that there is correlation between instructional leadership behaviours and student learning (Leithwood & Seashore-Louis, 2011). Achievement will not improve without instructional improvement. Therefore, every step the principal takes in building a PLC contributes to the practice of his/her becoming an effective instructional leader. ‘Leading the instructional program in a PLC means setting directions, building collaborative relationships, developing the instructional and leadership qualities of teachers, and managing the instructional program. Principals apply these practices within their roles as instructional leaders’ (Ontario Principals’ Council, 2009, p. 22).

3.A6.6 Distributing Power and Authority

PLC principals assert their effectiveness by diffusing leadership to a larger set of stakeholders, namely, teachers. Diffusing leadership is different to delegating work and duties just to get things done or to lighten the load. Diffusing leadership entails trust, collaboration, support, and extending the boundaries of authority beyond the position of the person who holds the title of principal (Zepeda, 2014). A PLC principal not only supports teachers’ leadership, but also supports and actively engages in team development as a way to engage more teachers in school leadership (Moller & Pankake, 2013). This has been described as attempting: ‘to promote, build, and sustain quality teacher leadership, principals must align teacher leadership with professional learning’ (Moller & Pankake, 2013, p. 12).
3.A7 Approaches that can Support Strong Learning Communities

Hord and Hirsh (2009) illustrate the following approaches of principals as that which support strong learning communities:

- Emphasise to teachers that you know they can succeed—together.
- Expect teachers to keep knowledge fresh.
- Make data accessible.
- Teach discussion and decision-making skills
- Show teachers the research
- Take time to build trust (this list adapted from Hord & Hirsh, 2009).

3.A8 Conclusion

It is obvious from the foregoing that a principal’s leadership plays an invaluable role in creating and nurturing a PLC in a school. PLCs become most successful when school leadership positively supports and encourages them. That said, there are many gaps in our knowledge about the relation between leadership and PLCs. For example, much literature speaks about leadership as important for PLCs, yet we know very little about whether PLCs are helpful for principals in developing their own leadership qualities or styles. If we could answer this question it would be valuable for the principals involved in PLCs. Research into the influence of principals’ leadership has been promising. It has often been suggested to have an influence on a wide range of school and student outcomes including teachers’ level of efficacy. I shall now discuss teacher efficacy in general and what the literature says about the influence of a PLC on the level of teacher efficacy in a typical school.
B. Efficacy

3.B.1 Introduction

In the course of a working life we are forced to face a vast number of decisions, problems and challenges. Therefore, researchers, especially scientific psychologists, have often been concerned to look at how people adapt and adjust to life’s challenges. It has been noted that most of the important models of human learning, cognition, emotion, personality, and social interaction are influenced by each individual’s capacity for adaptively responding to environmental changes. This is often referred to as competence (Maddux, 1995). The study of belief about personal competence and the role of such beliefs in human adaptation and adjustment has a long history (for example: Sternberg & Kolligian Jr, 1990; Zimmerman, Bandura, & Martinez-Pons, 1992).

3.B.2 Development of Efficacy Construct

Self-efficacy [SE] theory (Bandura, 1977, 1999, 2006) is one of the more enduring in a long tradition of personal competence on efficacy theories. The concept of self-efficacy was pioneered by Albert Bandura (1997) who characterised it as the extent to which people believe they can organise and execute actions necessary to bring about a desired outcome. Self-efficacy is fundamentally concerned with the execution of control rather than the outcome action produces. Bandura (1994) defined perceived self-efficacy as ‘people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that effect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave’ (p. 1). According to Bandura (1997) ‘Unless people believe they can produce desired effects by their actions, they have little incentive to act. Efficacy belief, therefore, is a major basis of action. People guide their lives by their
beliefs of personal efficacy’ (pp. 2-3). There are diverse effects of people’s beliefs about their efficacy on behaviour. It affects how much effort people put forth in any endeavour, how long they will persevere in the face of obstacles and failures, how resilient they are to adversity, how much stress and depression they experience in coping with taxing environmental demands, and their levels of accomplishment. If people believe they have no power to produce results, they will not attempt to make things happen (Bandura, 1997).

There are two critical elements in the definition that Bandura presented. First the individual’s belief about his/her ability may or may not align with his/her true ability in a particular task. Bandura calls this efficacy expectation. Secondly, the idea that individuals use their efficacy judgments when referring to a task or its outcomes. When deciding on a course of action people consider what they stand to gain or lose from performing it. This weighing of expected consequences is the central aspect of efficacy expectation. Bandura’s (1977) insight — that people’s behaviour is also influenced by their perceived capability to perform the behaviour — was a seminal addition to social learning theory and has had tremendous influence on psychological theory and research (Williams, 2010).

The foundational tenets of SE have, historically, fallen between the two stools of locus of control (Rotter, 1966) and social cognitive theory (Bandura, 1977). As with other social–psychological frameworks, the emphasis in these two theories is on human agency, the idea that we are able to exercise control over actions that affect our lives (e.g., Bandura, 1997). Self-efficacy theory — a component of social cognitive theory — focuses on the interrelationships of self-efficacy, outcome expectancies and behaviour (Bandura, 1997).

Self-efficacy affects every aspect of life. By determining the beliefs, a person holds regarding his or her power to affect situations, it can strongly influences both the power a
person actually has to face challenges competently and the choices that a person is most likely to make (Kaklauskas, 2015). Perceived self-efficacy affects human functioning not only directly, but also through its impact on other important classes of determinants. These determinants include goal aspirations, incentives and disincentives rooted in outcome expectations, and perceived impediments and opportunity structures in social systems (Bandura, 2009). It is important not only for individual people, but also for groups. Bandura (1997) states that ‘a high sense of personal efficacy is just as important to group-directedness as to self-directedness. In collectively oriented systems, people work together to produce the benefits they seek. Group pursuits are no less demanding of personal efficacy than individual pursuits’ (p. 32).

3.B3 Sources of Self-Efficacy

People’s beliefs about their efficacy are constructed from four principal sources of information (Bandura, 1994). They are: mastery experience, vicarious experience, verbal persuasion, and psychological arousal. Bandura asserts that when there is a strong sense of efficacy this will strengthen one’s subsequent efforts and adverse beliefs about efficacy will weaken one’s self-efficacy in future (Bandura, 1977, 1986, 1997). Therefore, it is important to deal with each of these influences of levels of SE separately.

3.B3.1 Mastery Experience

Among the sources of self-efficacy beliefs mastery experiences may be the most potent (Tschannen-Moran & Hoy, 2007). Bandura stated that the most effective way of developing a strong sense of efficacy is through mastery experiences (Bandura, 1997).

*Enactive mastery experiences are the most influential source of efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed. Successes build a robust belief in one’s*
personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established (Bandura, 1977, p. 80)

3.B3.2 Vicarious Experience

Bandura claimed: ‘People do not rely on enactive experience as the sole source of information about their capabilities. Efficacy appraisals are partly influenced by vicarious experiences mediated through modelled attainments’ (Bandura, 1997, p. 86). Observing someone else perform a task or handle a situation can help one to perform the same task by imitation, and if he or she succeeds in performing a task, the observer is likely to think that he or she will succeed as well because of seeing that the task is not too difficult. Observing people who are similar to oneself succeed can increase belief that one can master a similar activity. Bandura (1997) expressed the opinion that, although vicarious experiences are generally weaker than direct ones, there are times when vicarious influences can override the impact of direct experience. For example, people who are convinced of their ineffectiveness may also be quicker to accept their own subsequent failures if they see similar others fail. Further, people with low levels of efficacy may be motivated by the success of another person who does a similar task.

3.B3.3 Verbal Persuasion

Social persuasion serves as another means of strengthening people’s beliefs that they possess the capabilities to achieve what they seek (Bandura, 1997). When other people encourage and convince you to perform a task, you may tend to believe that you are more capable of performing it. Thus, constructive feedback is important in maintaining a sense of efficacy as it can help to overcome self-doubt (Schunk & Rice, 1993). In Bandura’s own words: ‘It is easier to sustain a sense of efficacy, especially when struggling with difficulties, if significant others express faith in one’s capabilities than if they convey doubts’ (Bandura, 1997, p. 101).
3.B3.4 Psychological and Affective States

Moods, emotions, physical reactions, and stress levels may influence how a person feels about his/her personal abilities (Greenberger & Padesky, 2015; Schwarzer, 2014). According to Bandura (1997) ‘in judging their capabilities, people rely partly on somatic information conveyed by physiological and emotional states’ (p. 106). Somebody who is extremely nervous may begin to doubt him/herself and develop a weak sense of self-efficacy. If confident, he/she may feel no anxiety or nervousness at all and may even experience a sense of excitement that fosters a greater sense of self-efficacy. It is the way people interpret and evaluate emotional states that is important in influencing their developing self-efficacy beliefs (Pekrun & Perry, 2014). For this reason, being able to diminish or control physiological and affective states may have positive impact on self-efficacy beliefs. A person who expects to fail at a task, or finds the task too demanding, will experience a set of emotional cues: racing heart, blushing, sweating, headaches, etc. If these physiological cues are persistent and severe enough, they can contribute to a sense of weak self-efficacy in employees.

3.B4 Why Self-Efficacy is Important

Self-efficacy can have great impact on how people feel, think, behave, and motivate themselves. People who have heightened senses of self-efficacy see challenging problems as tasks to be mastered, rather than threats to be avoided. They can develop greater intrinsic interest and focus in their activities, set themselves challenging goals and demonstrate a stronger sense of commitment to these since people often quickly recover their self-efficacy following setbacks and disappointments (Bandura, 1994). A strong sense of efficacy enhances human accomplishment and personal well-being in many ways.
(Tahmassian & Jalali Moghadam, 2011) as well as enhancing the capacity to respond effectively to challenging and stressful situations (Delany et al., 2015).

People with little sense of self-efficacy avoid difficult tasks and view them as personal threats; have weak commitment to their goals and believe that difficult tasks and situations are beyond their capabilities; dwell on personal failings and negative outcomes, rather than how to succeed and quickly lose faith in their personal abilities and easily develop depression and stress (Bandura, 1994). In addition, people who possess high levels of self-efficacy have a tendency to learn and achieve more than those with low self-efficacy, ‘even when actual ability levels are the same’ (Ormrod, 2008, p. 137).

3.B5 Teacher-Efficacy and Why it is Important

Teacher efficacy is a simple idea, but one with significant implications. A teacher’s efficacy belief, defined as the self-judgment of his or her capabilities to bring about desired outcomes of students’ levels of engagement and learning, even among those students who may be difficult or unmotivated (Tschannen-Moran & Hoy, 2001) had, by the 2000s, come to be regarded as a relevant and a worthy variable in educational research especially in relation to teacher performance and student achievement gains during the early twenty first century (Good & Brophy, 2003). This important construct has proved to be powerfully related to many meaningful educational outcomes such as teachers’ levels of persistence, enthusiasm and commitment and their instructional behaviour, as well as students’ outcomes, degrees of motivation, and self-efficacy beliefs (Tschannen-Moran & Hoy, 2001). Teachers’ levels of self-efficacy have been found to have an association with how they interact and work with struggling students (Gordon, 2001), their classroom management styles (Zee & Koomen, 2016), and general academic performance (Klassen
& Tze, 2014). In studying the role teacher self-efficacy plays in their learning and development of their teaching practices. Thoonen, Sleegers, Oort, Peetsma, and Geijsel (2011) determined that a teacher’s sense of self-efficacy appeared to be the most important significant factor in explaining his/her learning and teaching practices. They also found that sense of self-efficacy seemed to influence engagement in professional learning activities. That is to say, when teachers believe strongly in their capacity to achieve a desired result, they are more engaged in professional learning activities.

Teacher efficacy can be defined as teachers’ beliefs about their abilities to organise and execute courses of action necessary to bring about desired results, or the extent to which the teacher believes he or she has the capacity to affect students’ performances (Bandura, 1977; Tschannen-Moran & Hoy, 2001). Efficacy affects the effort teachers invest in teaching, the goals they set, and their levels of aspiration. Teachers with strong senses of efficacy tend to exhibit greater levels of planning and organisation (Tschannen-Moran & Hoy, 2001). Teacher efficacy has also been shown to be related to many other behaviours that have the potential to have positive impacts on students’ achievements. For instance, teachers with high levels of efficacy are more open to new ideas and are more willing to experiment with new methods, better to meet the needs of their students (Protheroe, 2008). Research also suggests that teacher self-efficacy may underlie critical instructional decisions including the use of time, classroom management strategies and questioning techniques (Bray-Clark & Bates, 2003; Gibson & Dembo, 1984). Teacher efficacy has also been shown to be a strong predictor of commitment to teaching (Coladarci & Breton, 1997), adoption of innovations (Hsiao, Tu, Chang, & Chen, 2011) and higher levels of planning and organisation (Allinder, 1994). Higher levels of self-efficacy allow teachers to be less critical of their students when they make mistakes (Ashton & Webb, 1986) and
exhibit more enthusiasm about teaching (Allinder, 1994). There is a positive correlation between collaboration among educators and high sense of self-efficacy (Ross, 1992). Thus, teacher efficacy has emerged as an important variable in educational research. Studies have also shown that a teacher with a strong sense of efficacy may tend to take more risks, set higher standards for him/her self and the students and concerned this can provide the potential for higher academic gains among learners (Wood & Bandura, 1989). Students of efficacious teachers have generally outperformed those in other classes. Ashton and Webb (1986) used surveys, interviews, observations, and school documents in an extensive study of teacher efficacy. They concluded that their findings ‘strongly support the hypothesis that teachers’ sense of efficacy is related to student achievement’ (p. 138). Henson (2002) has claimed that ‘students of efficacious teachers generally have outperformed students in other classes’ (p. 138).

3.B6 Professional Learning Communities and Teacher-Efficacy

While there is limited empirical evidence linking PLCs to teacher efficacy (Voelkel Jr, 2011) such evidence as is available seemingly shows that collaboration among teachers can enhance their levels of efficacy (Schleicher, 2016). If the school’s environment is conducive to positive growth and provides the teacher with opportunities for success, then the likelihood is that his/her sense of self-efficacy will increase. Bandura (1997) suggested that teachers’ self- and collective efficacy are formed from four sources.

- **Mastery experience**: teachers’ interpretations of performance successes and failures affect perceived self-efficacy and can influence motivation to engage in professional development activities.

- **Vicarious experience**: teachers at any career stage may benefit greatly from professional development that involves competent and credible models. Modeling that
exhibits effective teaching and coping strategies can boost the efficacy of beginning teachers, but also the efficacy of experienced teachers if the models teach them even better ways of doing things.

- **Verbal persuasion:** teachers who are persuaded verbally that they possess the capabilities to master skills and strategies for overcoming challenges in the classroom are more likely to extend and sustain greater effort than if they dwell on past failures.

- **Interpretation of physiological and affective states:** acknowledging the role of physiological indicators, like stress, in teachers’ efficacy is important since positive emotions can raise efficacy beliefs and increase the likelihood that teachers will choose to engage in more challenging tasks, such as new skill or strategy development through professional learning opportunities.

An evidence-based foundation for improving teachers’ self- and collective efficacy can only be built if attention is paid to the sources of such efficacy at the very foundation of the construct. Building on the work of Bandura, Hoy (2000) discusses other factors that can have an impact on a teacher’s sense of efficacy. These can be listed as follows.

**Vicarious experiences.** For example, a teacher might observe another teacher using a particularly effective practice and thus feel more confident that, through its use, she/he could be more successful in reaching her/his students.

**Social persuasion.** In a school setting, this could take the form of either pep talks or feedback that highlights effective teaching behaviours while providing constructive and specific suggestions for ways to improve. However, such “persuasion” is likely to lose its positive impact if subsequent teacher experiences are not positive.
Hoy (2000) views the school setting itself — especially the ways in which teachers new to the profession are socialised — as having a potentially powerful impact on a teacher’s sense of efficacy. For example, if a new teacher views asking for help as not only normal, but desirable, this can be an important way to ensure that such a new teacher does not experience a series of failures that in turn affect mastery experiences, the prime determinant of a sense of efficacy. A key component in improving teachers’ efficacy has been the incorporation of their collaboration in PLCs. These professional groups provide opportunity for dialogue and reflection as a form of professional development focused on exploring and implementing research-based best practices for both teaching and learning (Munoz, 2008). Such communities of teacher-learners can avail of the opportunity to build lasting effectiveness and potential for high student achievements. DuFour, DuFour, Eaker, and Karhanek (2004) explain that:

> [t]wo of the most significant steps a school can take to foster self-efficacy among staff are to stop the isolated, private practice of independent subcontractors and to insist on collaborative teams in which members share practices and their results — successes as well as failures ... When teachers are able to identify problem areas in the learning of their students, to find colleagues who have been more effective in addressing that area, and to lean into and learn from one another, a school has created a fertile ground for self-efficacy essential to PLCs (pp 185-186).

### 3.B7 Conclusion

In this second part of the literature review, I attempted to introduce theories on leadership and efficacy in general and to discuss how leadership might be important in the implementation of a PLC and in achieving a level of functionality that will benefit the school and ultimately students’ learning. As leaders it is critical that both principals and teachers have comprehensive understandings of the characteristics of PLCs so that they can identify and perform their roles. The collaborative efforts of a PLC can have the power to change the formerly isolative nature of teaching into a highly collegial process. As a result,
the improved achievement of every student, and the improved efficacy of each teacher, becomes the responsibility of the entire team. The PLC, therefore, becomes a vehicle for attaining the vision of improved levels of teacher efficacy so that all students are given equitable opportunities to attain higher achievements in learning. Having concluded these general discussions of the literature and certain relevant concepts I turn next to the specifically Indian context. I hope the next chapter will give the reader a better understanding of Indian education in general and why this study is relevant in the Indian context.
Chapter 4

An Overview of the Educational History of India and the Background to this Study

4.1 Introduction

The development of education is a continuum. It can be thought of as a stream, flowing through the present into the future. Educational research, in general, is undertaken with two major goals. Firstly, to understand some educational phenomenon and, secondly, to transform it (Panda, 2009). It is essential to know something about the educational system of India and its history to understand this research. India has a long history of organised education. The development of the education system in India can be broadly divided into three stages: the pre-British period, the British period and the post-independence period (Keay & Mitra, 1978). The pre-British period was dominated by the Gurukuls (meaning the family of the teacher and from which we get the word guru). These were traditional Hindu residential schools. The Guru was regarded as a Rishi (Sage) or Acharya (one who practises what he professes). He was more respected than the king in feudal or pre-modern Indian society because without him it was impossible to attain knowledge (Sharma & Sharma, 1996). The current system of education, with its western style and content, was introduced and funded by the British from the nineteenth century. In this chapter I look briefly at the development of the education system from the time of British rule. I look also at professional development opportunities for teachers in India.
### 4.2 Education under British Rule

The development of the education system during the British period (roughly, the early 1700s to the 1940s) was determined by the needs of the colonial powers. The end of the eighteenth century and the beginning of the nineteenth was the period of consolidation of the industrial revolution in Europe generally and Britain in particular. British intellectuals argued for the spread of English language and culture in the colonies. Utilitarians, evangelists and liberals, for their various reasons, favoured the spread of English education (Sundaram, 1946). The debate between the Anglicists (who supported education in English) and the Orientalists (who favoured local languages) with regard to India ended when Lord William Bentick (who owed his title to being second son of the Duke of Portland and was then the Governor-General of India) asking Thomas Babington Macaulay (who was then a member of the Governor-General’s Executive Council) for his opinion. In 1835 Macaulay articulated the goals of British imperialism most succinctly by saying:

> [w]e must do our best to form a class who may be interpreters between us and the millions whom we govern, a class of persons Indian in blood and colour, but English in taste, in opinions, words and intellect (quoted in Chakrabarti, 2000, p. 83).

There were at least three important considerations that had significant bearing on the policy adopted by Bentick. The first was the view that the British could derive political benefit from some Indians receiving English language education. Amongst those who held this opinion was Charles E. Trevenlyan who, in 1838, noted that ‘the spirit of English literature cannot but be favourable to the English connection’ and argued that this would stop Indians from treating British people as foreigners and make them, ‘intelligent and zealous co-operators’ (quoted in Chakrabarti, 2000, p. 88). Secondly, the framing of the Anglicist education policy was guided by the practical administrative needs of the colonial power. At the time of passing the Charter Act 1833, the East India Company (which then ruled
large parts of the Indian sub-continent on behalf of the British-Irish crown) was in serious financial difficulties. One method suggested of reducing costs was to cut down expenditure on European employees and instead employ Indians, at much lower salaries. The 1833 Charter opened lower order Civil Service jobs to Indians. But this required English-speaking clerks.

Thirdly, promoting English language education was seen as an important way of expanding British markets in India by encouraging western values and tastes. As Macaulay noted, ‘by wearing our broad cloth and working with our cutlery, they should not be too ignorant or too poor to value and buy English manufactures’ (quoted in Chakrabarti, 2000, p. 89). Macaulay's advice to Bentick, whose subsequent ruling led to the establishment and growth of English language education in India, was an expression of the direct needs of the ruling colonial power. As stated above, the introduction of English language education in India was primarily motivated by the politico-administrative and economic needs of the British in India. However, its advocates were convinced that the spread of English would bring about significant changes in the social and political environment of India and their cause was not entirely self-interested.

In 1837, English replaced Persian for certain official purposes and in 1844 Lord Hardinge (Charles Hardinge, first Baron Penshurst, Governor-General, 1844-1848) announced a preference for English speaking Indians in the Company’s Civil Service (Chakrabarti, 2000). These two steps effectively downgraded education in languages other than English. However, it should be noted that British intellectuals such as J. Duncan and William Jones were attracted to Indian literature. The result was the establishment of the Asiatic Society
of Bengal in 1784, a Sanskrit College in 1791 and the Bombay branch of the Royal Asiatic Society in November 1804.

4.3 Elitism, Nehruvianism and Development

The Anglicist education system was first developed in the three major urban centers: Bombay, Calcutta and Madras. By linking entrance and advancement in government service to academic education, colonial rule contributed to the legacy of an education system geared to preserving the position and prerogatives of the more privileged. In the early 1900s, the Indian National Congress (commonly known as Congress) called for national education, placing an emphasis on technical and vocational training. In 1920 Congress initiated a boycott of government-aided and government-controlled schools and founded several ‘national’ schools and colleges. These failed, as the rewards of British-style education were so great that the boycott was largely ignored (Lall, 2005). The irony is that local elites benefited from the British education system and eventually used it to expel the colonisers. Jawaharlal Nehru (first prime minister of India and a prominent figure in Congress) envisaged India as a secular democracy with a state-led command economy. Education for all and industrial development were seen as crucial tools to unite a country divided on the basis of wealth, caste and religion, and formed the cornerstones of the anti-imperial struggle. Following independence in 1947, school curricula were thus geared to serving the twin goals of promoting inclusiveness and national pride, placing emphasis on the fact that India’s different communities could live peacefully side-by-side as one nation (Lall, 2005). The legacies of this Nehruvian approach to education were substantial. By the early twenty-first century perhaps most notable was the entrenchment of the pluralist/secularist position. Subsidised quality higher education through institutions such as the Indian Institutes of Technology [IITs] and Indian Institutes of Management [IIMs]
played a major part in bringing to reality the Nehruvian vision of a self-reliant and modern Indian state, and some of these ranked amongst the best higher education institutions in the world by the 1990s (Sharma & Sharma, 1996). In addition, policies of positive discrimination in education and employment improved access for hitherto unprivileged social groups to quality education. It has been argued (Nourbakhsh, 2015) that, while access for some marginalised communities continued to be limited by 2017, the upward mobility of some Dalit and tribal households resulting from positive discrimination in educational institutions and state patronage has created role models that had helped democracy to survive in India.

4.4 Post-Independence Period

After independence, education became the responsibility of the States. Central government’s only obligations were to co-ordinate technical and higher education and specify standards. This continued until 1976, when education became a joint responsibility of the states and the center through a constitutional amendment. The center was then represented by the Ministry of Human Resource Development’s Department of Education and, together with the States, it became responsible for education policy and planning (Lall, 2005).

The National Policy of Education (1986) and revised Programme of Action (1992) envisaged that free and compulsory education would be provided for all children up to 14 before the commencement of the twenty-first century. The then government of India made a commitment that, by 2000, 6% of the Gross Domestic Product would be spent on education, of which half would be spent on the primary education. Article 45 of the Directive Principles of the State Policy (2002) made a commitment to ensuring free and
compulsory education for all, however, this did not significantly translate into action and school enrolments and participation remained dismally low for decades after independence. Nonetheless, the aim of elementary education being made a fundamental right by the eighty-third Constitutional Amendment (2000), and the Supreme Court’s insistence that states had to provide hot cooked meals in schools, did improve enrolments, especially among girls.

*The Government of India has assigned high priority to the education sector not only to achieve the Universalization of Elementary Education by 2010 but also to improve the quality of education at all levels. Also due to policy of economic liberalization and globalization it becomes all the more necessary to improve the quality of human capital to face the new challenges and competition in the world of work* (National Council of Education Research and Training, 2006).

Initiatives such as the District Primary Education Programme [DPEP] (1994), the Mid-Day Meal Scheme (1995) and programme known as the *Sarva Siksha Abhiyan* (2001) had positive impacts on elementary education, specifically in rural areas. The eighty-sixth Amendment to the Indian Constitution made education a fundamental right for all children aged 6-14. However, access to pre-school education for children under six was excluded from the provisions, and supporting legislation had not been passed years later (Nordic Recognition Information Centers, 2006).

Because of initiatives taken by the states and the center, the education system in India expanded considerably over the five decades after independence. But by the early 2000s the country still had many problems. Net enrolment rate in primary schools and secondary schools was not satisfactory. The dropout rate was 34.9 % at the primary level, 52.9 % at the upper primary level and 62.6% at high school level in 2002-2003 (Ministry of Human Resource Development, 2003, 2005). However, some improvement was visible in a later survey which indicated a dropout rate of 25.09% at the primary level, 42.68 % at the upper primary level and 56.71% at high school level (Ministry of Human Resource Development,
The adult (15 and above) literacy rate in India was 48.2% in 1991 and had increased to 61.0% in 2001 and to 66.0% in 2007-08 (Ministry of Human Resource Development, 2008).

In 2017, when India celebrated its seventieth year of independence, the extent of improvement was very evident. The eleventh Annual Status of Education Report [ASER] (ASER, 2017) showed that enrolment in the 6-14 age group had increased to 96.9% and in the 15 – 16 age group to 84.7%. Provision of schooling facilities within a convenient walking distance had also increased and this could be one of the reasons for the overall increase in enrolment. Figures in the eighth All India School Education Survey (NCERT, 2016) showed there were 11,37,833 habitations, of which 10,38,194 (91.24%) had primary education facilities within a distance of 1 kilometer; this included 66.30% which had these facilities in the habitation itself. Overall, 96.20% of India's rural population had access to primary stage education facilities within walking distance by 2016 (NCERT, 2016).

However, despite efforts to incorporate all sections of the population into the Indian education system, through mechanisms such as positive discrimination and non-formal education, large numbers of young people were still without schooling in the early twenty-first century. Although enrolment in primary education had increased, it was estimated that at least 35 million, and possibly as many as 60 million, children aged 6–14 were not in school (Lall, 2005). According to a report by the Montreal-based United Nations Educational Scientific and Cultural Organisation [UNESCO] Institute for Statistics and Global Education Monitoring, India saw 47 million pupils of secondary and higher secondary school-going age drop out of school in 2016. According to this report, the enrolment in class 10 was 77%, but enrolment in class 11 only 52%. Despite the efforts of successive governments, six million children aged 6-13 were estimated to be outside the
school system (Sarin, 2016). Severe gender, regional, and caste disparities continued to exist by 2017 (Goodnight, 2017). Another challenge to put alongside high drop-out rates for the required period was dealing with low levels of learning and achievement. Does schooling automatically mean learning? Even if every child in India attended school for the required period would he/she learn anything to speak of? State and central government policies provide more schools and better infrastructure, but research suggests that schooling does not mean learning (Banerji, 2017). The ASER report on India in 2016 showed that only about half of students in fifth grade could read text meant for children in second grade (Pratham Education Foundation, 2017). Simply put, this means that five years of schooling did not even translate to two years of learning for more than half of the children who had come that far. Inadequate school infrastructure, poorly functioning schools, high levels of teacher absenteeism, large number of vacancies for teachers, and inadequate funds were all contributory factors in causing this problem (Singal, 2006).

Furthermore, even by 2017 there was no common school system in India. Instead children were channeled into private, government-aided and government schools on the basis of social class and ability to pay. At the top of this structure were English-language schools affiliated to the prestigious Central Board of Secondary Education [CBSE], the Council for the Indian Schools Certificates Examination [CISCE] and the International Baccalaureate [IB] examination boards. These offered globally recognised curricula. Those who could not afford private schooling attended English-language government-aided schools affiliated to state-level examination boards. On the bottom rung were the poorly managed government schools, which cater for the children of the impoverished majority. Therefore, while education for all was safeguarded by the Constitution, and a majority of Indian people had access to educational resources by the early twenty-first
century, the quality of the education that young people in Indian received varied widely, according to their means and backgrounds.

### 4.5 Administration of Education

As noted earlier, the Central and State Governments have joint responsibility for education in India, with freedom for State Governments to organise education within a national framework of education. By 2018 educational policy planning was under the overall charge of the central Ministry of Human Resource Development which included the Department of Elementary Education and Literacy and the Department of Secondary and Higher Education. The Ministry was guided by the Central Advisory Board of Education [CABE]. The education ministers of the various States were members of the CABE. The National Council of Education Research and Training [NCERT], founded in 1961, defined the National Frame Curriculum for classes I - XII. It also functioned as a resource center in the field of school development and teacher education. State Councils of Educational Research and Training [SCERT] were the principal research and development institutions in the States. At secondary level, school boards in each state set examination standards in accordance with the national framework. CBSE and CISCE covered all of India except the National Institute of Open Schooling (UNESCO, 2003, 2004).

### 4.6 National Policy on General Education

As previously noted, under the Indian Constitution education was a state matter until 1976. Central government could only provide guidance to the states on policy issues. In 1976 the Constitution was amended. (UNESCO, 2003). Initial attempts to design a national education policy began in 1968, but it was only in 1986 that India as a whole had a uniform National Policy on Education (Kumar, 1988). The National Policy on Education of 1986,
modified in 1992, defined the major goals for elementary education as universal access and enrolment, universal retention of children up to 14 and substantial improvement in the quality of education. The National Policy of Education of 1992 also aimed at vocationalisation of secondary education and greater use of educational technology (UNESCO, 2003). These policies were subsequently added to by several programmes such as the DPEP launched in 1994 and the National Campaign for Education for All (Sarva Shiksha Abhiyan) launched in 2001/2. Finally, the Right of Children to Free and Compulsory Education Act [RTE], came into force in April 2010. According to the RTE every child in the age range six to 14 was to be provided with eight years of elementary education in an age appropriate classroom in the vicinity of his/her neighbourhood (Right to Education Act, 2009).

In 1979-80, the Government of India’s Department of Education launched a programme of non-formal education [NFE] for children in the six to 14 years age group, who could not or did not attend regular schools these included working children, children from areas without easy access to schools. The initial focus of the NFE scheme was on ten educationally backward states. Later, it was extended to urban slums, and hilly, tribal and desert areas in other states. By contrast, at the other end of the scale, children attending urban schools, especially middle and upper class children in private schools, were subjected to extreme competition from a very early age in order to qualify for admission to the best schools. By 2012 the Indian Government was preparing the universalisation of secondary education, the main aim being to provide high quality secondary education to all Indian adolescents up to the age of 16 by 2015, and senior secondary education up to the age of 18 by 2020.
4.7 School Education

A uniform structure of school education, known as the 10+2 system, was adopted by all the states and Union Territories [UTs] of India following the National Policy on Education of 1986. Elementary school, classes I–VIII, is recognised as the period of compulsory schooling, with the Constitutional amendment making education a fundamental right. A majority of the states and UTs had introduced free education in classes I-XII by 2012. In States/UTs where education was not free for classes IX and above by 2012, the annual fee varied considerably (Central Advisory Board of Education, 2012).

In India by 2017, pre-school covered two to three years. The elementary stage consists of a primary stage comprising classes I-V (in some states I-IV), followed by a middle stage of education comprising classes VI-VIII (in some states V-VII or VI-VII). The minimum age for admission to class I of the primary school was generally five or six. The secondary stage consists of classes IX-X, and a senior secondary stage of schooling, comprising classes XI-XII, existed in all states. In some states/UTs XI-XII classes were attached to universities/colleges. The number of working days of school education in a year was generally more than 200. Various incentive schemes offering mid-day meals, free textbooks, free uniforms, scholarships (especially for girl students), free bicycles etc. have been introduced by the Government of India and State Governments from time to time to improve enrolment and increase the retention of children in schools and by decreasing the student dropout rate.
4.8  Historical Perspectives on Teacher Education in India

Though teacher education in the modern sense of a programme of education, research and training of persons to teach from pre-primary to higher education level is found only in a later stages of Indian history (Mohanty, 2013), the history of Indian teacher education may be divided into five parts.

- Vedic Period: 1200 B.C to 600 B.C.
- Buddhist Period: 600 B.C. to 1200 A.D.
- Muslim Period: 1200 to 1700
- British Period: 1700 to 1947
- Post-independence Period: 1947 to date (Mohanty, 2013).

4.8.1 Vedic Period

The Vedic period was that during which the Vedas, the oldest scriptures of Hinduism, were composed. During this period Brahmins (i.e. priests who belong to the highest caste in Hinduism) served as teachers. It was considered their duty to learn and teach and thus teaching was a hereditary concern. The system of education was Gurukul-centered and there is no evidence that teacher training existed in any formal sense (Sing, 2010).

4.8.2 Buddhist Period

Training of teachers became more elaborate during the Buddhist period. A monk or a Bhikkhu was placed under the charge of two superiors who were qualified by learning, character and standing, known as the Upadhyaya and the Acharya (Mohanty, 2013). The Upadhyaya was the instructor who taught the young Bhikkhu sacred texts and doctrine, while the Acharya assumed the responsibility for his conduct and discipline.
4.8.3 Muslim Period

Akbar, a contemporary of England/Ireland’s Queen Elizabeth, and undoubtedly the greatest of Mughal emperors, contributed greatly to organising education on a systematic basis (Khan, 1992). He treated all his subjects alike and opened many schools and colleges for Muslims as well as for Hindus throughout his empire. He also introduced curricular changes in an attempt to recognise students’ individual needs and the practical necessities of life. He introduced Persian as his court's language and this gave incentive to Muslims as well as Hindus to learn Persian. Akbar’s successors Jahangir and Sha Jahan accepted the same policy towards education. But Aurangazeb, who reigned as Mughal emperor from 1658 to 1707, had a different attitude. He gave orders to destroy Hindu schools and temples (Mukerji, n.d).

But, in general, the coming of the Mughals, Islamised Mongols who dominated India from approximately 1526 until the East India Company displaced them in the mid and late eighteenth century, gave educational and cultural activities in India a great fillip. The Mughal education system consisted of primary and secondary schools, and even colleges. Some of these were established and maintained by the Mughal government, while others depended upon private philanthropy (Schimmel & Waghmar, 2004). There was a primary school attached to every mosque where elementary reading, writing and arithmetic and knowledge of the Quran, were taught. In addition to these, there were secondary schools or colleges (Schimmel & Waghmar, 2004). Babur, the first Mughal ruler, was a man of literary taste and possessed perfect knowledge of Persian, Arabic and Turkish. He had a love for education and built number of educational institutions (Yadav, 2013). However, the chief aim of Muslim rulers in India was to propagate their religion. There was no formal system of teacher training and education was a public affair (Mohanty, 2013).
4.8.4 British Period

The first institutions for training teachers in India were started by Danish missionaries (Mohanty, 2013). Initial training efforts emphasised the improvement of knowledge of subject matter rather than methods of teaching.

**Monitorial System (1830s):** The idea of formal teacher training originated in an indigenous technique called the Monitorial System which was based on the principle of mutual instruction. According to this system, each class was split up into small groups and one pupil (monitor) was being placed in charge of the class. The monitors gained some proficiency in teaching and class control and this often enabled them to teach independently in their later life (Mohanty, 2013).

**Woods Despatch (1854):** Popularly known as the Magna Carta of English Education in India this advocated the establishment of teacher training institutions and proposed giving stipends to pupil-teachers for the first time (Aggarwal, 2009). However, the Despatch left of the securing properly qualified teachers for schools to each presidency. In the 30 years following the Despatch, there were only two training institutions for secondary (English) school teachers credited in the whole of India (Mohanty, 2013).

**Hunter Commission (1882):** Lord Ripon (George Robinson, first Marquis of Ripon, the then Governor-General/Viceroy of India [the terms Viceroy and Governor-General as effectively interchangeable]) appointed the first Indian Education Commission on February 3, 1882 under the Chairmanship of Sir William Hunter, a member of the Executive Council of the Viceroy. Examining the recommendations of the commission, the importance of training teachers was accepted by all concerned. However, due to
controversy in England as to what type of training should be introduced in India, progress was slow (Mohanty, 2013).

**Resolution on Educational Policy (1904):** The chief-architect of the educational policy published on March 11, 1904 was Lord Curzon (George Curzon, first Marquis of Kedleston and Governor-General from 1899 to 1905). The year 1904 may be considered an important landmark in the history of the educational development in India. In this resolution Lord Curzon directed the Provincial Governments to spend larger sums of money on primary education and stopped the system of aiding primary schools based on examination results (known popularly as payment-by-results, which had been introduced by the Hunter commission in 1884). More importantly, specific importance was given to the training of teachers. Steps were taken to establish training centers for primary teachers. Curzon also gave importance to raising the standard of living of primary school teachers by restructuring their pay scale.

**Sadler Commission (1917):** The Sadler Commission, also known as Calcutta University Commission of 1917, was appointed under the chairmanship of Michael Sadler, an academic historian and Vice-Chancellor of the University of Leeds. This report emphasised the role of universities in setting up departments of education for the professional training of secondary teachers and the need to establish a demonstration school attached to each training college (Mohanty, 2013). The Sadler Commission became very significant in the sense that it specifically recommended the foundation of 25 teacher training colleges all over India. It also recommended the creation of a teacher education department in the University of Calcutta.
As a result of the Sadler Commission, 13 of India's 18 extant universities in 1932 set up faculties of education. Andhra University offered a new degree from 1932 and Bombay University was the first to institute a post-graduate degree in education, in 1936 (Dyer, 1996).

**4.8.5 Independence Period**

Independence, on 15 August 1947, marks a defining moment in the history of India. Together with the joy of independence India and its national leaders had to face the hard reality of division in the country. Transformation of the economy, reducing unemployment, and food shortages became main priorities for the young India. The energy of the nation was largely diverted to healing the wounds of partition. Therefore, after 1947 there was a period of stagnancy in the Indian teacher education system. In 1948 Nehru, the first prime minister of India, established the University Education Commission. This new commission made valuable suggestions regarding pre-service and in-service education of teachers and on ways to link the programme of teacher preparation to the university system (Mohanty, 2013).

**University Education Commission (1948-49):** This commission was appointed under the chairmanship of philosopher Sarvepalli Radhakrishnan. Though the commission was mainly concerned with university education, it did also make recommendations concerning teacher training. Teacher training colleges were to be remodeled and training college staff should be recruited only from those who possessed sufficient teaching experience (Radhakrishnan, 1949).
The Review Committee on Education (1960): This committee made major recommendations on post-graduate studies in education and research, the education of administrators and the qualifications of teacher educators. Although most of the suggestions of this committee were accepted, only some were enacted because teacher education was no one’s exclusive responsibility (Mohanty, 2013).

Kothari Commission (1964-1966): Another important milestone in the history and development of Indian education system came with the ad hoc commission set up by the Government of India to examine all aspects of education in India. The major recommendations of the Kothari commission were organised under eight headings.

1. Education and National Objectives.
2. Equalisation of Educational Opportunity.
3. Educational Structure.
4. Curricular Improvement.
5. Improvement in the Methods of Teaching.
7. Teacher Education.
8. Status of Teachers.
(Bhatnagar & Commission, 1967).

The commission remarked, ‘A sound programme of professional education of teachers is essential for the qualitative improvement of education’ (Kothari Commission, 1964, p. 18). To improve teacher education the commission recommended an end to isolation of teacher education from university life, schools and other institutions. The necessity of improving
methods of teaching was highlighted in the report and it was suggested that individual library work, preparation of review report, case studies, project work, discussions and seminars should form an integral part of the work of teacher training. It was also suggested that the student teachers should be given opportunities to observe good teaching (Kothari Commission, 1964). This commission also emphasised the need for efforts to be taken to raise the economic social and professional status of teachers and to encourage talented youths into the profession and therefore, it recognised an urgent need to reform the scale of pay of teachers.

The National Commission on Teachers [NCT] (1983): The NCT studied in-depth the problems of teacher education and the status of teachers in Indian society. The NCT’s main recommendations were directed at lengthening the period of training, changing selection procedures of teachers and making the pedagogy of teacher education meaningful through enrichment of theory courses and more practical work (Mohanty, 2013).

The Acharya Ramamurthy Review Committee (1990): This explicitly stated that in-service and refresher courses should be related to the specific needs of the teachers and the Yashpal Committee Report in 1993 also emphasised this (Sonwane, 2015).

The reports/commissions listed above all, to some extent, shaped the climate of teacher education in India in the early twenty-first century (Mehta, 2016). Considering the complexity and significance of teaching as a profession it was unlikely that any one document would revolutionise Indian education but the national curriculum frameworks of 1988 and 2000 proposed using teachers as a tool for achieving national goals and emphasised their potential role in all major national initiatives. The national curriculum
framework of 2005 recommended a paradigm shift by introducing constructivist approaches to teaching and learning. The need to practice so-called child-centered methods and for teachers to acquire updated knowledge were also stressed (Mehta, 2016).

4.9 Professional Development Opportunities for Teachers in India

Teachers are central to the educational programme of a nation. No educational programme is likely to be successful without proper education of teachers. Every effort towards the transformation of improvement of education may fail without good teachers. The quality of education in a society depends on the quality of its teachers, and the quality of teachers, in turn, depends on the education teachers themselves have had and the opportunities they receive for the continuous learning which we can call professional development [PD]. In assessing all the reform documents, both pre- and post-independence, one thing is clear, very little importance has historically been given to the ongoing or in-service professional development of teachers. A clear example in this regard can be seen in the report on teacher education produced by the Supreme Court of India entitled Vision of Teacher Education in India Quality and Regulatory Perspective (Verma, 2012). Though this report discussed different aspects of teacher training it said nothing about the need for ongoing or in-service professional development. Another example can be seen in the document Restructuring and Reorganisation of the Centrally Sponsored Scheme on Teacher Education: Guidelines for Implementation (Ministry of Human Resource Development, 2012). This speaks at length about the role of teachers in reforming elementary education and recognises the need to pay attention to teacher education. But in this 142-page document no plan is proposed for the ongoing professional development of teachers.
4.10 Need for Professional Development for Teachers

The development of teachers becomes a necessary concern when we look at different documents that the Indian Government has produced concerned with teacher education (Bhatnagar & Commission, 1967; Ministry of Human Resource Development, 2012; Dyer, 1996; Kaur, Aggarwal, & Sohi, 2017; NCERT, 2016; Verma, 2012). The Yashpal Committee Report (1993) observed that inadequate teacher preparation ‘leads to unsatisfactory quality of learning in schools’ (Yashpal, 1993, p. 4). At the time of writing, in 2017, official reports continued to note the fact that there was an intense mismatch of students learning achievements and their grade levels (Pratham Education Foundation, 2017). At higher education level, in 2016, it was suggested that only about 25% of technical graduates were suitable for employment in the IIT/IIM sector, and 64% of the employers hiring new graduates were only partially satisfied with the quality of these graduates (Sarma & Sandeep, 2016). These claims suggested that Indian education was suffering dilution of quality. Focusing on the qualitative aspects of teachers such as their performance and professional development opportunities could be a way to get the best outcomes for students (Sarma & Sandeep, 2016).

However, in India, as in other places, teaching is not as prestigious or esteemed as professions like medicine, engineering or law, and it often appears to be low on the list of career options for young graduates. In the group interviews and PLC meetings teachers openly shared the fact that teaching was not their first career choice. According to The Times of India only 0.6% of those who took the All India Pre-Medical Entrance Test could complete it and demand to enter medicine far exceeds the number of places available with many of those who fail turning to teaching instead (Nagarajan, 2015). As a result, some teachers seemed chronically uninterested in their profession. Studies such as those of
Ramachandran, Pal, Jain, Shekar, and Sharma (2005) and Bennell and Akyeampong (2007) pointed to very low levels of teacher motivation in India. Bolitho and Padwad (2013) have observed that preparation for, induction into and PD during teaching in India are significantly lacking. Professional preparation opportunities for teachers are limited to short pre-service teacher education courses such as the Bachelor of Education degree, with limited field exposure and little practical relevance. Right from the first day a teacher is expected to handle responsibility independently and autonomously. There were very limited opportunities and support for PD on the part of serving teachers (Bolitho & Padwad, 2013). PD was generally seen as consisting of one-off, isolated, short-term and infrequent training events. Educational administrators and school managers relate PD to teachers’ ability to teach prescribed courses, manage their classrooms and ensure good performance on the part of students in examinations (Bolitho & Padwad, 2013). Bolitho and Padwad (2013) (using the abbreviation CPD for continuing professional development which, for brevity, I have usually called PD) also observed:

the broader notion of CPD as a lifelong process of learning, both formally and informally, based on teachers’ conscious initiative and voluntary efforts and supported by schools and authorities, the process by which ... teachers review, renew and extend their commitment as change agents ... and by which they acquire and develop critically the knowledge, skills, planning and practice... through each phase of their teaching lives is largely missing in Indian teacher education (p. 7).

The PD needs of individual teachers are diverse. Therefore, PD cannot be understood as in-service training [INSET], which often lack relevance for individual teachers as far as their needs and interests are concerned. Another worrying fact is that the state is seen as the sole provider of PD and officially sanctioned programmes as the only channels of PD. Teachers are led to believe that PD is the state’s responsibility and that they are incapable of doing anything to organise if for themselves (Bolitho & Padwad, 2013).
It is also important to note the fact that teachers’ professional development does not happen in isolation and that various stakeholders in education play different roles in it. Though teachers are at the center of their own PD, other stakeholders must perceive it as being of value. For example, if a principal of a school does not have a positive view of PD individual teachers may not get support and opportunity for it even if the individual teacher is interested in PD. In the India of 2017, PD of teachers was largely controlled by the school administration in the sense that schools have a strong say in what PD activities teachers may be allowed (and supported) to undertake (Padwad & Dixit, 2013). Padwad and Dixit (2013) in their study observed that:

> schools operate within an ‘expert culture’ in the sense that teachers are expected to follow the advice of experts and authorities and not to rely on their own knowledge and skills. Teachers are supposed to work as ‘just teachers’ who should do what others like experts, principals, and educational authorities say. In other words, teachers function in a climate of very limited autonomy and agency. Therefore, teachers seem to be unaware of their potential to develop professionally. In short, the overall CPD environment seems to suffer from a dual problem – on the one hand, schools, administrators and the system do not seem to encourage and support CPD activities beyond participating in the mandated INSET programmes, while on the other, teachers themselves seem to lack enthusiasm and initiative for doing more than what is mandated or taking responsibility for their own professional development (Padwad & Dixit, 2013, p. 12).

### 4.11 Need for and Relevance of this Study

From the points mentioned above it should now, I hope, be obvious extent of the need for this study. By the early twenty-first century, expansion of knowledge in all fields of learning was taking place at an ever increasing pace. Each day new developments, new facts, new theories, and new methods seem to come to light. It is obvious that the knowledge, skills and competencies attained by teachers during their pre- and initial training periods are no longer entirely sufficient for their whole professional careers. They
need to undertake continuous professional updating in various schemes and programmes to maintain their competence levels.

Professional development of teachers is not one shot, one size fits all event; rather it is an ongoing learning process in which teachers engage themselves out of their zeal and interest to learn how best to perform their teaching and to satisfy the learning needs of their students (Mishra, 2013, p. 188).

Thus, PLCs become the focus of attention as a system and structure apparently capable of supporting teachers’ professional development. The twenty-first century’s standard-driven educational environment requires the deepening of teachers’ content knowledge alongside the development of subject-specific teaching practices consistent with children’s learning (Dogan, Pringle, & Mesa, 2016). Many PD activities do not adequately consider how teachers make sense of their experiences (Drago-Severson, 2012), do not include provisions for long-term support and do not offer challenges that promote teachers’ learning in ways that would allow for growth (Dogan, Pringle, & Mesa, 2016). Over the period circa 2000-2017 much credence came to be given to the development of PLCs as a means of supporting and improving knowledge and skills (Cohen, 2009; Donaldson Jr, 2008; Drago-Severson, 2012; DuFour & DuFour, 2012; Hord, 1997; Rosenholtz, 1989). Ideally, the result would be increased efficacy on the part of teachers in meeting students’ needs.

4.12 An Introduction to the Study Schools

To get a better picture of my research, I think it is also important to get a clear view of the two schools studied. For anonymity, I named these schools St. David’s School and St. Joseph’s School. These schools are owned and administered by the Carmelite Fathers of Delhi province. These schools are affiliated to the Council of the Indian School Certificate Examinations (ISCE).
The mission of the Carmelites in establishing educational institutions such as these schools is to provide for underprivileged children with a view to bringing about a social transformation. Most of the students in these schools are born to illiterate or partially literate parents living in remote and backward villages. To these parents, English is essentially a foreign language though in mainstream Indian society English is a major means of formal and informal communication. This can mean that the villagers on whom these schools focus as their educational targets are insulated from global cultural and socio-economic trends in very significant ways. As a result, most of these villagers are still guided by tradition and conservatism. The villages are largely inhabited by farm workers who are not much concerned about technological developments and global cultural transformations. Women in these villages typically have no higher ambitions than being good homemakers since they have never been exposed to other possibilities. The failure of government initiatives to make any serious and significant educational progress, leading to major social transformation, has necessitated the presence and action of non-governmental and missionary organisations. Given the facts noted above it quickly becomes obvious that the educational initiatives described in this work have serious cultural and social implications despite the presence of serious limiting factors. The fact that this mission is a herculean task becomes clear only when one seriously starts to contemplate the complexity of the problem. The challenge is enormous since what is being attempted is an intra-generational transformation. The fundamental aim is to empower the typical illiterate villager's sons and daughters to speak English as well as their mother tongue and to enable them to pursue their studies in English, in the hope of their having opportunities for exposure to and employment in a global culture and economy. The intended transformation amounts to making the immediate progeny of a ploughman into technically-minded, medical professionals, army officers, bureaucrats, etc. This is
seen in the fact that large number of students who have passed through these schools have gone on to high profile position in very prestigious professions. Chapter Six below provides more details on the individuals schools separately.

4.13 Conclusion

In the India of 2018, as noted above, principals struggled with the challenge of building school climates that encouraged and improved professional development. The main defect of the then existing professional development opportunity in India (which were barely adequate, at best) was that all initiatives came from the top and, therefore, were often not capable of meeting the needs of individual teachers (Bolitho & Padwad, 2013). While researchers have investigated for more than 100 years the importance of building healthy school climates that support learning (Drago-Severson, 2012), it is important to find a model that will help the principals to improve their leadership styles in ways which could, in turn, enable them to shape their priorities and practices to promote school climates capable of supporting teachers’ learning and ongoing professional development. In undertaking this work it seemed to me important, even necessary, therefore, to present a model of what future practice to Indian might be to its educational leaders. My principal goal in my research, through and case studies of PLCs, was to establish if PLCs could be instrumental in making significant and lasting changes in the fields of educational leadership and teachers’ professional development. It was my hope that the stories of these two schools developing into professional learning communities would add to the body of knowledge already available generally on school leadership and professional development and provide a model for Indian schools specifically to improve their learning climates, especially in the matters of leadership and teachers’ professional development.
Chapter 5

Methodology

5.1 Introduction

The purpose of this study was to examine the effects of operating PLCs in schools in northern India. More specifically, this study examined the effects of a PLC on principals’ leadership styles and on teachers’ levels of self-efficacy. The nature of a PLC and the supportive role a principal can play in establishing one were outlined in the review of literature (see especially: DuFour & Eaker, 1998; Fleming & Leo, 199; Hipp & Huffman, 2007; Hord, 1997; Hord & Sommer, 2009; Huffman, 2003; Wells & Feun, 2007; York-Barr & Duke, 2004). Various researchers (for example: Goddard, Hoy & Woolfolk-Hoy 2000; Pajares, 2000; Tschannen-Moran & Barr, 2004) agree that a teacher’s sense of efficacy affects his or her attitudes toward education. Roughly speaking, teachers with high levels of self-efficacy use productive teaching practices. Thus, to the extent that it proved possible to do so, I examine in subsequent chapters whether or not there are correlations between participation in a PLC, a principal’s leadership style and levels of self-efficacy on the part of teachers. This chapter describes the methods employed in order to examine such correlations between.

5.2 An Overview of the Concept of Research Method

Rist proposes that because research is more than simply data gathering, selection of a method should aim at understanding the phenomena under observation, rather than the specific data (Rist, 1977). Method involves a related set of assumptions that reflect how a researcher views reality. How this reality is articulated through research depends on his/her choice of method. In turn, choice of method is, to some extent, reflective of what the
researcher wants to uncover. As established earlier, what this thesis attempted to uncover were the effects of operating PLCs in schools in northern India and, more specifically, a PLC’s effect on the leadership quality of the principal and the efficacy of teachers. To explain the rationale for my research method I begin with a short introduction to the nature of research and research methods and outline some, but not all, key forms of research and research methods.

5.3 The Meaning and Purpose of Research

Research can be understood as any systematic and rigorous process of enquiry which aims to describe phenomena and to develop and test explanatory concepts and theories. Ultimately, it aims to contribute to a body of knowledge. It is systematic and methodical and ought to be ethical; research can help solve practical problems and increase knowledge. The purpose of research is to discover answers to questions through the application of appropriate procedures. The main aim of research is to find some truth that is hidden, and which has not been discovered as yet (Kothari Commission, 2011). According to Collis a piece of research can satisfy any or all of the following needs: review or synthesise existing knowledge, investigate existing situations or problems, provide solutions to problems, explore and analyse more general issues, construct or create new procedures or systems, explain new phenomenon and generate new knowledge (Collis, 2013). Though each study has its own specific purpose[s], we can enumerate some general objectives of research as follows.

a) To gain familiarity with a phenomenon or to achieve new insights into it.

b) To portray accurately the characteristics of a particular individual, situation or a group.
c) To determine the frequency with which something occurs or with which it is associated with something else.

d) To test some hypothesis as to a causal relationship between variables (Kothari, 2011).

5.4 Different Types of Research

There are different types of research, taking into consideration the nature of the researcher’s theoretical framework. The basic types are as follows.

5.4.1 Exploratory

Exploratory research is defined as initial research into a hypothetical or theoretical idea. It is undertaken when few or no previous studies exist. The aim is to look for patterns, hypotheses or ideas that can be tested and will form the basis for further research. Exploratory research can come in two principal forms: either as research into a new topic or by taking a new angle on an existing topic. The results gained from exploring a new topic can often be unexpected and startling. New angles can refer to new ways of looking at things, either from a theoretical perspective or be understood as new way of measuring something.

5.4.2 Descriptive

Once the groundwork is established, the newly explored field needs more information. The next step is descriptive research, defined as attempting to explore and explain while providing additional information about a topic (Anderson, 1998). This is where research tries to describe what is happening in more detail, filling in missing parts of the picture and expanding our understanding. For example, a researcher wants to know why children in Community A have a higher rate of school non-completion than those living in Community
B. To find out the reasons for the differences in dropout rates in these two communities, the investigator surveyed residents about their lifestyle, noted the types of businesses that were present in the community and the typical educational backgrounds of the parents. The researcher found that unemployment was a major factor in Community A, there were higher rates of illiteracy in this community and residents tended to send their children to work at a very early age. In Community B, on average, residents had better employment prospects, compared to residents of Community A. Community B residents did not send their children to work.

In such research as much information is collected as possible instead of guesses simply being made or elaborate models developed to predict the future. The what and how, rather than the why, are the objects of concern here. The main characteristics of this method are that the researcher has no control over the variables; he/she can only report what has happened or what is happening. Quantitative techniques are most often used to collect, analyse and summarise data. Thus, we can define descriptive research as any study designed to depict the participants in an accurate way. More simply put, descriptive research is essentially about describing the people who take part in the study.

There are three ways a researcher can go about doing a descriptive research project. They are these.

- **Observational**, defined as a method of viewing and recording the participants.
- **Case study**, defined as an in-depth study of an individual or group of individuals.
- **Survey**, defined as a brief interview or discussion with an individual about a specific topic.
5.4.3 Analytical

Analytical research is a specific type of research that involves critical thinking skills and the evaluation of facts and information relative to the research being conducted. It often extends the descriptive approach to suggest or explain why something is happening. In descriptive research the researcher has only to report what is happening or what has happened. In analytical research the research has to take the already available facts or information and analyse them to make a critical evaluation of the subject. For example, too much burning of fossil fuel is seen as a problem to solve. Its solution is switching to forms of alternative energy like solar and wind power. But, what is the deeper cause of too much burning of fossil fuel? Why is the system not already self-correcting, since we now know burning of fossil fuel causes climate change? Analytical questions such as these are needed so we can find the root causes of self-destructive behaviour. Once root causes have been identified it may be possible to act more decisively: curing the disease as opposed to treating the symptoms. An important feature of this type of research is its concern with locating and identifying the different factors (or variables) involved.

5.4.4 Predictive

The aim of predictive research is to speculate intelligently on future possibilities, based on close analysis of available evidence of cause and effect within a set of variables. There are several important differences between explanatory and predictive research. Explanatory research typically applies statistical methods to test causal hypotheses using a priori theoretical constructs. By contrast, predictive research applies statistical methods and/or so-called data-mining techniques, without preconceived theoretical constructs, to predict future outcomes. Since predictive research is involved with the forecasting (predicting) of a likelihood of something happening it usually begins with, or leads to, an
understanding of what will happen, given that the current circumstances are already known. This research usually involves some form of human behaviour, decision-making or condition. For example, if we know that pupils aged 13-16 in inner-city schools, are prone to high dropout rates, predictive research might assess (or predict) a relationship between age or gender and likelihood of not graduating from high school. This type of research has become increasingly popular in medical research over time (Waljee, Higgins, & Singal, 2014).

5.5 Research Approaches

Just as research is carried out in a variety of contexts and by people with quite different understandings of and reasons for conducting it, so research can be approached in different ways. Many researchers routinely combine a number of approaches. Thus research approaches can be categorised in the following way.

➢ Quantitative/qualitative.

➢ Applied/basic.

➢ Deductive/inductive.

5.5.1 Quantitative Research

The quantitative approach is a distinctive research strategy. In broad terms, it is often described as entailing the collection of numerical data. It also provides a view of the relationship between theory and research as deductive and involves a predilection for the natural sciences; it also demands an objective conception of reality (Bryman, 2012). This approach involves inquiry into an identified problem being measured with numbers and analysed using statistical techniques. The goal of quantitative approach is to determine whether the predictive generalisations of a theory hold true (Mason, 1996). Quantitative
research establishes (or, rather, aims to establish) statistically significant conclusions about a population by studying a representative sample of that population when the population consists of the entire group being studied (Creswell, 2003). It does not matter if the population is broad or narrow, only that it includes every individual who fits the description of the group being studied, for example: the entire population of India which in 2012 was 1.22 billion (Gribble, 2012). Since it is usually impractical to conduct a census (to include everyone in the population), because of constant turnover and resource constraints, a representative sample is chosen from a population. If chosen properly, the sample will be statistically identical to the population and conclusions for the population can be inferred from the sample (Zikmund, 2001).

Quantitative research is usually either experimental or descriptive. Experimental research tests the accuracy of a theory by determining if the independent variable[s] (being the variable[s] controlled by the researcher) cause some effect[s] in the dependent variable[s] (the variable[s] being measured for change) (Campbell, 1963). Surveys, correlation studies and measures of experimental outcomes are often used to establish causality within a credible confidence range. By contrast, descriptive research measures the sample at a moment in time and simply describes the sample’s characteristics. Although this is not seen as a statistically robust exercise, a good description of the variable[s] can help the researcher evaluate the statistical output in the proper context (Creswell, 2003). The emphasis in quantitative research is on collecting and analysing numerical data; it concentrates on measuring the scale, range, frequency etc. of phenomena. The main steps in quantitative research could be illustrated as follows.
5.5.1.1 Strengths of Quantitative Research

The strengths of quantitative methods lie in their capacity to assess the statistical significance of relationships between variables, their high degree of statistical validity and reliability and their suitability for examining or assessing individual facts or events in the context of theory based on large numbers of observations. The use of quantitative methods is appropriate when testing hypotheses that seek to explain or predict events or when seeking to answer questions about how much, or how often a phenomenon occurs (Perl & Noldon, 2000). This type of research, although harder to design initially, is usually highly detailed and structured and results can be easily collected and presented statistically.

5.5.2 Qualitative Research

Qualitative research is a form of research in which the researcher, or a designated co-researcher, collects and interprets data, making the researcher as much a part of the process as the participants and the data they provide (Corbin & Strauss, 2014). Creswell describes
qualitative studies as subjective processes of inquiry such as interviews, narratives, phenomenology, ethnographies, the use of grounded theory or case studies (Creswell, 2003; see also: Patton 2002). Qualitative research utilises an open and flexible design and in doing so stands at odds with the understanding of rigor typically deemed important by those engaged in quantitative research (Creswell, 2013). Qualitative studies derive knowledge primarily from the contextual perceptions of participants. In such studies the data collection is open-ended, and the researcher strives to develop associated themes, theories, and patterns (McFarlane, 2010).

Unlike quantitative studies, which usually have results sections reporting outcomes, many qualitative theoretical traditions consider writing the analysis of a topic by the researcher to be a component of the research itself. The processes of analysing and writing about the topic are inherent parts of the method. The researcher’s own stance is bound up with how he or she reports what has been learned as a result of conducting the study. But the degree to which the researcher reveals his or her own standpoint in relation to a topic depends on his or her theoretical orientation. The more constructivist the approach, the more attention will be paid to the relationships between the researcher and the topic and the participants in the study (Perl & Noldon, 2000). Rather than design an experiment and artificially control the variables (which may not even be possible in many situations) qualitative researchers use anthropological or ethnographic methods to study the participants or subjects. It is typically assumed that as little intrusion as possible should occur in qualitative research and a researcher may sometimes observe the participants unnoticed (Creswell, 2003).
Qualitative research is more subjective than quantitative research and involves examining and reflecting on the less tangible aspects of a research subject, such as values, attitudes and perceptions. It is designed to reveal a target audience’s range of behaviours and the perceptions that drive it with reference to specific topics or issues. It uses in-depth studies of small groups of people to guide and support the construction of hypotheses. The results of qualitative research are descriptive rather than predictive. Several unique aspects of qualitative research can contribute to its rich, insightful results.

- Synergy among respondents, as they build on each other’s comments and ideas.

- The dynamic nature of the interview or group discussion process, which engages respondents more actively than is possible in a more structured survey.

- The opportunity to probe (for example by saying: ‘Help me understand why you feel that way’) enabling the researcher to reach beyond initial responses and rationales.

- The opportunity to observe, record and interpret non-verbal communication (i.e., body language, vocal intonation) as part of a respondent’s response, which is valuable during interviews or discussions, and during analysis.

- The opportunity to engage respondents in such things as projective techniques and exercises, overcoming the self-consciousness that can inhibit spontaneous reactions and comments. The main steps in a qualitative research can be illustrated as follows.
5.6 The Basic Differences Between Quantitative and Qualitative Research Methods

Quantitative and qualitative research methods differ primarily in:

• their analytical objectives;

• the types of questions they pose;

• the types of data collection instruments they use;

• the forms of data they produce and

• the degree of flexibility built into a study's design.

With the help of a table these differences can be illustrated more clearly.

Figure 3. The main steps in qualitative research: adapted from Bryman (2012, p. 384)
5.7 Mixed Methods Studies

Many definitions of mixed methods are available in the literature (for example: Johnson & Onwuegbuzie, 2004; Creswell & Clark, 2007). For the purposes of this discussion, the definition proposed by Creswell, Klassen, Plano Clark, and Smith serves as a convenient starting point for considering mixed methods research designs. According to them, a mixed methods study involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research (Creswell, Klassen, Plano Clark, & Smith, 2011). The mixed methods approach includes aspects or instances of both qualitative and quantitative research (McFarlane, 2010). For present purposes, mixed methods research is defined as ‘the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study’ (Johnson & Onwuegbuzie, 2004, p. 17). A mixed methods study can be distinguished from a mixed methods research programme in which a researcher may change from using quantitative and qualitative studies over time as the programme progresses (Ponterotto, Mathew, & Raughley, 2013). It is important to note that mixed method designs involve not only specific quantitative and qualitative procedures, but also their underlying research paradigms (worldviews) and philosophies. In this type of research, data collection involves the gathering of numeric information from instruments and textual information from interviews or other narrative sources (such as documentary archives) (Ary, Jacobs, Sorensen, & Walker, 2013). Creswell contends that the rationale for mixed method research is that the research problem can only best be understood if collection and interpretation of data can take place in diverse ways (Creswell, 2003).
5.7.1 Mixed Methods Research Design

A piece of mixed methods research can be defined as one that assumes more than one or worldview should be used to study a phenomenon and whose research method focuses on collecting, analysing both quantitative and qualitative data in a study or series of studies (Creswell & Clark, 2007). It is a procedure for collecting, analyzing, and mixing both quantitative and qualitative research and methods in a single study to understand a research problem (Creswell, 2013).

Figure 4. Research Plan: logical description of how data would be collected and analysed to address the research question[s] (adapted from Creswell, 2013).

5.7.2 Types of Mixed Methods Research Design

A mixed methods researcher thinks through decisions and selects a design that reflects the various demands of interaction, priority, timing, and mixing. Here I briefly look at various design options and how these vary in dealing with such matters. According to Creswell (2013) there are six mixed methods designs/strategies.
a. Sequential Explanatory

- This design is characterised by the collection and analysis of quantitative (QUAN/quan) data followed by the collection and analysis of qualitative data. Priority is typically given to the quantitative data, and the two methods are integrated during the interpretation phase of the study.

- Purpose: To use qualitative results to assist in explaining and interpreting the findings of a quantitative study.

b. Sequential Exploratory

- Characterised by an initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis. Therefore, the priority is given to the qualitative aspects of the study.

- Purpose: To explore a phenomenon. This strategy may also be useful when developing and testing a new research instrument.
c. Sequential Transformative

- Characterised by collection and analysis of either quantitative or qualitative data first. The results are integrated in the interpretation phase.

- Purpose: To employ the methods that best serve a theoretical perspective.

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d. Concurrent Triangulation

- Characterised by two or more methods used to confirm, cross-validate, or corroborate findings within a study. Data collection is concurrent.

- Purpose: Generally, both methods are used to overcome a weakness in using one method with the strengths of another.
e. Concurrent Nested

- Characterised by a nested approach that gives priority to one of the methods and guides the project, while another is embedded or nested.

- Purpose: The purpose of the nested method is to address a different question to that which is dominant or to seek information from different levels.

f. Concurrent Transformative

- Characterised by the use of a theoretical perspective reflected in the purpose or research questions of the study to guide all methodological choices.

- Purpose: To evaluate a theoretical perspective at different levels of analysis.
Thus, mixed methods research designs can be classified as in the figure below.

![Figure 5. Mixed methods research designs classified (adapted from Creswell, 2013)](image)

### 5.8 Basic/Applied Research

Basic research is at one extreme on an axis along which research approaches can be located. Typically, basic research (sometimes colloquially referred to as “blue sky thinking”) is driven by curiosity and a desire to expand knowledge. This type of research tends not to be applicable to the real world in a direct way but can enhance our understanding of the world around us. The primary aim of basic research is to improve knowledge generally, without any particular applied purpose in mind at the outset.

Applied Research aims at finding a solution for an immediate problem facing a society or an industrial/business organisation. It is designed from the start with a view to applying its findings to a particular situation.

### 5.9 Deductive/Inductive

We often refer to the two broad methods of reasoning as the *deductive* and *inductive*. Deduction, as with many philosophical ideas, was first discussed as a way of reasoning by the ancient Greeks, in particular Plato. Such enquiry is guided by the theory which precedes it. Theories are speculative answers to perceived problems and are tested by observation.
and experiment. Thus, deductive research moves from general ideas/theories to specific and particular situations. The particular is deduced from the general. This approach offers researchers a relatively easy and systematic way of testing established ideas/theories.

Inductive reasoning, on the other hand, starts from specific observations or sensory experiences and then develops a general conclusion. Induction was the earliest and, even now, remains the most common form of scientific activity. We use it every day in our normal lives as we learn from our surroundings and experiences. We come to conclusions from what we have experienced and generalise from these. That is, we set them up as a rule or belief based on experience. Thus, inductive research moves from particular situations to make or infer broad general ideas/theories. This approach can be very time-consuming, but the reward may come from arriving at a fresh way of looking at a familiar subject.

Figure 6. The process of deductive and inductive reasoning
5.10 Research Philosophies

There are several major questions that require significant consideration by researchers such as how to research and what to research? But central to the any researcher’s answers to such questions will be the way he/she deals with the more basic: why research? (Holden & Lynch, 2004). There are many practical reasons why a researcher may have chosen to engage in research. However, choosing a research methodology, that is, the how of research, involves something much deeper than practicalities – it necessitates a philosophical view on why one researches. For example, an extreme post-modernist’s answer would be that truth does not exist, hence research is redundant as the meaning of anything is indeterminate (Holden & Lynch, 2004). Such a view might make research into a kind of game, simply something to pass the time in a way that is intellectually stimulating. Alternatively, a Marxist’s answer would be along the lines of “I research to advance the class struggle”.

Ultimately, developing a philosophical perspective requires that the researcher make various core assumptions concerning two things: the nature of society and the nature of science (Burrell & Morgan, 1979). The sociological dimension involves a choice between two views of society: regulatory or radical change. Society’s development is seen as either arising from a choice to embrace the status quo or a radical vision from what could be (Holden & Lynch, 2004). In a regulatory view of society, the researcher assumes that society evolves rationally. Society is viewed as unified and cohesive, whereas the sociology of radical change views society as in constant conflict as the majority of people struggle to free themselves from the domination of societal structures (Burrell & Morgan, 1979). These contrasting views are the basis of distinct, and often diametrically opposed, schools of thought; a rational view of society is the basis of modernism but can also be
profoundly conservative, whereas pursuit of radical change underlies such philosophies as Marxism (Holden & Lynch, 2004). The other dimension, one’s view as to the nature of science, involves either a subjective or an objective approach to research, and these two major philosophical approaches are delineated by several core assumptions concerning ontology (reality), epistemology (knowledge), human nature (especially whether it is pre-determined or not), and methodology. Whatever his/her sociological persuasion, the researcher will find that these assumptions are consequential to each other. That is, one’s view of ontology influences one’s epistemological position which, in turn, influences one’s view of human nature. Consequently, choice of method follows the assumptions the researcher has already made. However, the researcher should be aware that these philosophical assumptions may have a significant impact on the answer given to the question: what to research?

Another way to put this may be to say that research philosophy can be understood by embracing the concept of research paradigm. In the words of Johnson and Onwuegbuzie (2004) research paradigm can be defined as a framework which comprises perceptions, beliefs and understandings of the theories and practices used to conduct research (Lewis, Thornhill, & Saunders, 2007). A paradigm can also be characterised as a precise procedure, involving various steps through which a researcher creates a relationship between the research objectives and questions. There are essentially two main research philosophies (or positions) although there can be overlap between the two. Both positions may be identifiable in any research project.

5.11 Positivistic

The concept of positivism is directly associated with the pursuit of objective knowledge. In this approach scientists prefer objectivity over subjectivity (Cooper, Schindler, & Sun, 2006). According to this paradigm, researchers should collect general information and data
from a large social sample instead of focusing on details. A researcher’s own beliefs have no value and ought not to influence the research study. Positivist research mainly involves observations and experiments designed to collect numerical data (Easterby-Smith, Lyles, & Tsang, 2008).

5.12 Phenomenological

Phenomenological approaches, however, involve starting research from the assumption that human behaviour is not as easily measured as anything in the natural sciences. Human motivation is shaped by factors that are not always observable, such as inner thought processes. Motivation may have an interior component that cannot be known from observation of behaviour alone. Furthermore, people place their own meanings on events; meanings that do not always coincide with the way others have interpreted the same events. This view assumes that people will often influence events and act in unpredictable ways that upset any constructed rules or identifiable norms – they are often (so to speak) actors on a human stage and each shape his/her performance according to a wide range of variables. Phenomenological approaches are particularly concerned with understanding behaviour from the participants’ own subjective frames of reference. Research methods are chosen, therefore, to try to describe, translate, explain and interpret events from the perspectives of the people who are the subject of the research. According to this philosophical approach research should give importance above all else to people’s beliefs and values (Easterby-Smith, Lyles, & Tsang, 2008).

It is necessary for the researcher to understand his/her own philosophical position on research issues to understand the different combinations of research methods available to him or her. The research philosophy employed can have an impact on the methods adopted
for the research project. Having discussed some of the essential aspects of research I now outline specific aspects of the methods involved in my study.

5.13 My Research

In view of my understanding of different research methods mixed method is an obvious choice of methodology to learn about the impact of PLC on principals’ leadership style and teachers’ level of efficacy.

5.14 Aim of the Study

The overall aim of this study was to investigate the impact of establishing and operating a PLC on principals’ leadership styles and teachers’ levels of self-efficacy. Specifically, I explored the implementation of a PLC in two north Indian schools and have sought to determine if there is a correlation between a school using a PLC and a principal’s leadership style and if there is correlation between a school using a PLC and teachers’ levels of self-efficacy in that school.

5.15 General Study Design Approach

As discussed above, it is important to design research in an appropriate way and the choices made in doing so rely on existing knowledge about the research question (Johnson & Onwuegbuzie, 2004, p.17). In view of my understanding of different research methods using a mixture was an obvious choice for a case study approach. I determined the case study to be the best method for this study because, according to Yin (2014), ‘case studies are the preferred strategy when the investigator has little control over events and when the focus is on a contemporary phenomenon within some real-life context’ (p. 1). In this instance, the phenomena of study are the relationships between self efficacy, leadership, and professional learning communities. Yin (2014) defines a case study as ‘an empirical
inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident’ (p. 3). Merriam (1998) similarly states, ‘a qualitative case is an intensive, holistic description and analysis of a single instance, phenomenon or social unit’ (p. 17). This specific case study was mixed in its methods and sequential and explanatory in its approach. The mixed methods sequential explanatory approach consists of two distinct phases: a quantitative phase, followed by a qualitative phase (Mann, 2003). In this design a researcher first collects and then analyses quantitative data. The qualitative data are collected and analysed later in the sequence and these should help to explain, or elaborate on, the quantitative results obtained in the first phase. The second (qualitative) phase builds on the first (quantitative) phase, and the two are connected in an intermediate stage. The rationale for this approach is that the quantitative data and their subsequent analysis can provide a general understanding of the research problem. The qualitative data and their analysis refine and explain the statistical results by exploring participants’ views in more depth (Creswell et al., 2008).

Because of the need to look for insights into the development of leadership style in principals and the development of efficacy in teachers the research was exploratory in nature. Gay, Mills, and Airasian (2009) have proposed that mixed methods research allows the ‘synergy and strength that exists between quantitative and qualitative research methods to understand a phenomenon to [be developed] more fully than is possible using either quantitative or qualitative methods alone’ (p. 462). The research method chosen was thus sequential, but with priority or dominance given to the qualitative phase. Mixed methods research can also help to achieve triangulation (Creswell et al., 2008).
5.16 Rationale for a Mixed Methods Design

Case study research is often preferred when examining contemporary events in its real-life contexts. The researcher thus collects a variety of data to yield information (Creswell, 2008; Yin, 2014). Case study research offers an opportunity for the researcher to collect multiple sources of different types of evidence with a methodology that requires triangulation of data. Case study research is beneficial when context is important, and context was established as important for this research in conducting the literature review. I thus first developed a theoretical framework for researching the professional learning community (as defined by DuFour and Eaker 1998) based on the social cognitive theory of Bandura (1977, 1999, 2006), and Leithwood’s (1994) transformational leadership.

Additionally, the study used a mixed-methods design, because this seemed appropriate as a case study requires multiple data sources. According to Rudestam and Newton (2007), the mixed-methods approach ‘combines the rigor and precision of experimental, quasi-experimental, or correlational designs and quantitative data with the depth understanding of qualitative methods and data. Thus, the methods can help inform one another or deal with different levels of analysis’ (p. 51). Patton (2002) adds that either type of research alone has limitations. The research questions for this study were answered using the results from surveys, focus group interviews, and observations of the PLC meetings at the two schools that have explicitly been chosen to implement the PLC model. This study was conducted using multiple data collection and analytical methods in the light of theoretical considerations found in the reviewed literature and given the purpose of the study. Thus an exploratory, sequential, mixed method case study approach was selected, reflecting because such a design seemed the best way to illuminate the phenomena. The rationale for the methodical decision that now follows examines this choice from several perspectives.
5.17 Method Follows an Inquiry's Purposes

The choice of methods for this study came as a result of considering what research would best allow the purpose of the research to be achieved. Creswell et al. (2008) conclude that a mixed-method approach provides more choices and options to consider. Gay, Mills, and Airasian (2009) claim that doing so avoids polemics, and what they call life at the extremes. This stand is supported by others. For example, Huberman and Miles are of the opinion that:

> both quantitative and qualitative inquiry can support and inform each other in important ways. Narratives and variable-driven analyses need to interpenetrate and inform each other. Realists, idealists and critical theorists can do better by incorporating other ideas than remaining pure. (Huberman & Miles, 2002, p. 396)

Mixing methods can prove a useful and novel way to communicate meaning and knowledge (Johnson & Onwuegbuzie, 2004). Because researchers can combine the reliability of statistics with the validity of lived experience and perception. Yin asserts that: ‘mixed methods research can permit researchers to address more complicated research questions and collect a richer and stronger array of evidence than can be accomplished by any single method alone’ (2014, pp. 65-66).

Johnson and Onwuegbuzie echo this belief when they say: ‘research methods should follow research questions in a way that offers the best chance to obtain useful answers’ (2004, pp. 17-18). In other words, only after determining one’s research question[s], can one decide whether mixed research offers the best potential for an answer or not (Yin, 2014). Therefore, it was important that I set out the research questions that guided the study before considering whether a mixed methods approach would be the best way to achieve the purpose of this study. The research questions which guided the study were as follows.
1) How do PLCs operate in north Indian Schools?
   a) What are the factors that help or hinder the creation and development of effective PLCs?
   b) What are the challenges experienced in implementing PLCs in north Indian Schools?

2) Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?
   a) What are the teachers’ perceptions?
   b) What are the principals’ perceptions?

3) Is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy?
   a) What are the collective perceptions of this on the part of members of a PLC?
   b) What are each individual teacher’s perceptions?

5.18 Research Design and Instruments

This research was conducted utilising an exploratory, sequential, mixed methods case study approach. To collect quantitative data from the two schools the instruments used were:

(1) the Professional Learning Community Assessment- Revised [PLCA-R],
(2) the Leadership Practice Inventory [LPI] and
(3) the Teacher’s Self Efficacy Scale [TSES].

These instruments are discussed in more detail in the following section.
In order to answer the first research question (namely, how do PLCs operate in north Indian schools?) I used qualitative research methods based traditions of phenomenology. Qualitative research generates rich, detailed data to present an in-depth view of something in its natural setting (Berdos, 2009). The qualitative researcher acts as the data collection instrument, gathering words or pictures, and reasons for conducting a qualitative study was that my work was exploratory (Creswell et al., 2008). Qualitative studies allow for exploration of a topic about which little may previously have been written, with the researcher seeking to build a picture based on participants’ ideas with the intention of reaching data saturation (Berdos, 2009), to answering the questions that interested me.

I generated qualitative data using an increasingly popular technique in the field of education, namely ethnography or observational research. I chose this method because there can be gaps between what people say they do and what they actually do. The easiest way to overcome this problem is through observation. Another consideration was that there can be some aspects of a situation about which participants do not even consciously think. A simple conversational interview might never bring key truths to light.

One of the difficulties in overt observation is what is known as Hawthorne effect. This is a type of reactivity in which individuals or groups modify or improve an aspect of their behaviour in response to their awareness of being observed. It is almost impossible to filter this out in ethnography. Another difficulty involving this technique is that it is very costly and time consuming since the schools under consideration are geographically far away. To overcome this issue, I considered various communication technologies which can provide synchronous environments. Finally, I decided to use the commercially produced video-
conferencing program Skype for my observation. Sullivan explains the benefits of this mechanism for video-conferencing as follows.

With the vast options of research methods and the rise of technology over the last 50 years, there are more possibilities than ever to gather data in social research. With new technology and new approaches to data collection, there is the need to establish and validate such methods. One example of this is using communication programs, such as Skype, to conduct research in place of face- to- face interactions. These programs could be used for qualitative research to conduct interviews with individuals as well as groups, to hold small focus groups, and much more. With the rise of technology over the last few decades, communication over distance has become much easier and convenient with almost no end in sight. People can now communication in real- time with others pretty much anywhere on the planet not only hearing each other but also seeing one another through the use of computers and smart phones. Videoconferencing is just one way to take advantage of this. Although videoconferencing in its early years left a lot to be desired, these programs have improved immensely and will only continue to do so (Sullivan, 2013, p. 54).

As a result of technological advances by the early twenty-first century many people were connected not only through home computers but also on phones, laptops and in other ways. Further, there can always be a disconnection between what people do and what they say they do. Considering all these facts, I chose to be an overt observer in my data collection, even if only vicariously, via Skype.

Depending on age and other considerations some are more comfortable with the use of such technologies than others, but it seemed to me reasonable to suppose that they were sufficiently ubiquitous by 2015 (when this phase of the work took place) as to be familiar to most of those with whom I would be working. However, there can still be many technical challenges in using Skype for observation. One of the main challenges was that my observations were limited to the camera frame. I thus missed whatever happened outside the frame of the camera. Accuracy and clarity also depended on such factors as downstream and upstream bandwidth of the Internet, quality of the camera, microphone, lighting of the room etc. At the same time, Skype observation has the potential to overcome
or limit the Hawthorne effect in face-to-face observation because there may be less perceived pressure to please an observer who is physically absent. After an initial period of self-consciousness it can be easier to forget that one is speaking in the presence of a camera and thus it may become easier to speak more freely.

In any research, there are ethical concerns that need to be addressed. Conducting research over the Internet offers novel possibilities, but with these come questions of consent. How does a participant give consent online? Since I was physically present in the schools and collected signed consent forms from the participants this question was not relevant in my case but conducting research on the Internet poses another problem: it is very easy to track conversations, locations, and identities. Skype (a commercial company) even has the right to record conversations although it does not make this immediately clear when one signs up to use its services (Fink, 2009). Ultimately, videoconferencing may only be appropriate for certain topics. It may not, for example, be advisable to discuss illegal behaviour when there is the slight chance that someone else is paying attention though discussion of illegality may be important for certain kinds of research. Since my research did not deal with truly sensitive issues which deserved the utmost privacy and, moreover, as I was dealing with groups not individuals this did not prove to be a challenge. However, such matters will certainly be of increasing concern to future researchers.

Although problems have been identified and various solutions have been offered, concerns about the potential use and misuse of the Internet continue to move scholars toward finding ways to maintain ethical integrity in research when using the Internet as a research tool (Berg, 2007, p. 73).

Answering the first of my research questions also involved the use of Olivier, Hipp and Huffman’s revised instrument to examine the professional learning communities’ practices in the participating schools (Hipp & Huffman, 2010). The questionnaire was created to
assess everyday classroom and school-level practices related to identified dimensions of PLCs. The instrument has 52 questions in six sub-scales that evaluate staff participation in shared and supportive leadership, shared values and vision, collective learning and application, shared personal practices, relationships in supportive leadership, and structure of supportive leadership. The instrument uses a four-point Likert scale, ranging from *strongly disagree* to *strongly agree*. Hipp and Huffman found an essential connectedness between collective learning and application, and shared personal practice. According to Hipp and Huffman, ‘the two elements could not be separated, and supportive conditions encompass the other four elements’ (2010, p. 27). By 2015 the instrument had been administered to professional staff in numerous school districts at various levels throughout the United States. Educators and researchers had frequently used this tool to help determine the strength of practices each aspect of a PLC.

### 5.18.1 Validity and Reliability of PLCA-R

The Professional Learning community Assessment-Revised (Olivier, Hipp, & Huffman, 2010) is a revision of the initial professional learning community assessment (Olivier, Hipp, & Huffman, 2003). The widespread use of the instrument provided an opportunity to review the dimensions for internal consistency. Detailed analysis of it as a diagnostic tool had confirmed internal consistency resulting in the following Cronbach Alpha reliability coefficients for factored subscales (n=1209).

- Shared and Supportive Leadership (.94).
- Shared Values and Vision (.92).
- Collective Learning and Application (.91).
- Shared Personal Practice (.87).
- Supportive Conditions-Relationships (.82).
- Supportive Conditions-Structures (.88).
- One-factor solution (.97). (cf. Olivier & Hipp, 2010)
This assessment tool had gone through construct validity testing (by means of expert study and factor analysis) by the time of my using it and had yielded satisfactory internal consistency for reliability.

### 5.18.2 The Leadership Practice Inventory

School change and educational leadership literature clearly recognise the potential influence of any so-called campus administrator[s] on school improvement (Hord, 1992). The leadership provided by such people in a school can be critical in guiding and supporting successful implementation of new policies and/or practices. One of the five things typically said to be necessary for a PLC to be successful is shared leadership (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). In professional learning communities the traditional principal has to be replaced by a shared leadership structure. In such a model, administrators along with teachers, ask questions, investigate problems and seek improvement. Thus, it is important to know if the implementation of a PLC helps a principal to improve his/her leadership style. To answer this question, I measured the leadership competencies of the principals concerned before the implementation of PLC and after a specific number of months of its operation. I used the LPI as my main instrument for this purpose. The LPI (Kouzes & Posner, 2003) is the result of more than 30 years of research on the part of Jim Kouzes and Barry Posner. Their research has been global. They have looked at over 5000 cases of seemingly successful leaders and over 3,000,000 people have completed the LPI (Leadership Challenge, n.d.) with data collected from more than 72 countries.

The version of the survey used for this study was an observer form completed by the teachers regarding their principals. The inventory had content validity in that the questions were closely related to the leadership characteristics they were designed to measure. The
reliability of the inventory was established through test retest reliability. The categories of the instrument returned consistent and stable results with reliability coefficients between .88 and .92 (Kouzes & Posner, 2003). The questionnaire was amended to reflect the cultural context of the Indian school system.

The LPI contained questions pertaining to five categories of leadership described as the Five Practices of Exemplary Leaders by Kouzes and Posner (2002a). The five categories are as follows: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart.

Modelling the Way is best understood as leading by example. These questions pertain to the leader being an active member of the organisation. Inspiring a Shared Vision consists of the leader being a visionary and being able to motivate others to move the organisation toward his/her goals. The questions in this category are very future-oriented and relate to the organisation’s future. Challenging the Process refers to changing the status quo and finding innovative ways to improve the organisation. Questions in this category revolve around the themes of taking chances, setting goals, and learning from success or failure. Enabling Others to Act refers to allowing members of an organisation to do their part. A leader who excels in this category would be exceptional at cultivating individual talents to aid the organisation as a whole. Questions here pertain mainly to relationships with others, listening to others, and empowering others. Lastly, Encouraging the Heart is about the celebration of accomplishments of the group or an individual. Questions in this category are aimed at considering leaders’ actions in celebrating accomplishments.
Table 2. LPI Category Questions

<table>
<thead>
<tr>
<th>Category:</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model the Way</td>
<td>1, 6, 11, 16, 21, 26.</td>
</tr>
<tr>
<td>Inspire a Shared Vision</td>
<td>2, 7, 12, 17, 22, 27.</td>
</tr>
<tr>
<td>Challenge the Process</td>
<td>3, 8, 13, 18, 23, 28.</td>
</tr>
<tr>
<td>Enable Others to Act</td>
<td>4, 9, 14, 19, 24, 29.</td>
</tr>
<tr>
<td>Encourage the Heart</td>
<td>5, 10, 15, 20, 25, 30.</td>
</tr>
</tbody>
</table>

The LPI is a 30-item questionnaire containing five subscales for each of what are called the Five Practices of Exemplary Leadership. Each sub-scale contains six questions, with a 10-point Likert response scale. The Leadership Practices Inventory offers 'Self' and 'Observer' versions and takes approximately 10-20 minutes to complete.

When the LPI is used leaders (in this study, principals) rate themselves on the frequency with which they think they engage in each of the thirty behaviours. Five to 10 other people (in this study, the entire staff of each school) complete another questionnaire, rating the leaders on the frequency with which they think the leaders engage in each behaviour.

**Reliability**

Items in the LPI are highly correlated within each scale and test-retest reliability is high. Internal reliability, as measured by Cronbach’s Alpha, is strong, with all scales above the .75 level. Empirical tests of differences between leaders (using the Leadership Practices Inventory-Self form) and their constituents (using the Observer form) reveal no statistically significant differences (at the .001 level of probability) between these two
groups on Challenging and Modeling. While statistically significant, the mean differences between these two groups on Inspiring, Enabling, and Encouraging have little practical significance, except to note that leaders view themselves as engaging slightly less in Inspiring and Encouraging, and slightly more in Enabling, than do their constituents.

A five-factor solution for the Leadership Practices Inventory (both the Self and Observer versions) was generated by a factor analysis, using principal component analysis with varimax rotation and Kaiser normalization. While some statements loaded on more than one factor, their highest loading was generally with the other statements conceptualised as comprising that factor (scale). These results provide continued empirical support for these various leadership behaviours to be conceptualised within five practices (challenging, inspiring, enabling, modelling, and encouraging).

**Validity**

Respondents have found the LPI to have excellent face validity. Factor analysis results from various analyses reveal that the LPI contains five factors, the items within each factor corresponding more among themselves than they do with the other factors. Concurrent validity of the LPI was also tested and proved. Regression analysis was performed, with leader effectiveness as the dependent variable and the five leadership practices as the independent variables. The regression equation was highly significant ($F = 318.88$, $p < .0001$). The leadership practices explained over 55 percent (adjusted $R^2 = .756$) of the variance around constituents' assessments. Thus, the LPI enables individuals and organisations to measure leadership competencies.
5.18.2 The Teacher’s Self Efficacy Scale

In order to answer the third research question (i.e. is there any relationship between the implementation of PLC and teachers’ levels of self-efficacy?) the TSES was used. The TSES instrument was developed by Tschannen-Moran and Hoy (2001) based on integrated model of teacher efficacy. Authors developed two forms of instruments, long form with 24 items and short form with 12 items. I used the long version of the TSES. For the items, a 9-point rating scale which ranges from 1-Nothing, 3-Very little, 5-Some influence, 7-Quite a bit, and 9-A great deal was selected. The initial study of the instrument with 52 items was administered to a sample of 224 participants (both pre-service and in-service teachers). Tschannen-Moran and Woolfolk Hoy then selected 32 items by conducting principal-axis factoring with varimax rotation and determined three factors for the long version of instrument (Tschannen-Moran & Woolfolk Hoy, 2001). Thus, the instrument included three subscales with each including 8 items. They were as follows.

- Efficacy in Student Engagement: Items 1, 2, 4, 6, 9, 12, 14, 22
- Efficacy in Instructional Strategies: Items 7, 10, 11, 17, 18, 20, 23, 24
- Efficacy in Classroom Management: Items 3, 5, 8, 13, 15, 16, 19, 21

This provided construct validation support for the variable and examine the relationship between levels of efficacy and observable teacher behaviours. The TSES scores for the three sub-scales and the total scale have been found to be internally consistent (Cronbac’s alpha). Studies have confirmed the psychometric properties of the TSES (Klassen et al., 2009; Tsigilis, Koustelios, & Grammatikopoulos, 2010). Construct validity has also been examined by correlating the TSES to the well-established Gibson and Dembo (1984) Personal Teaching Efficacy [PTE] scale, the first major empirical attempt according to
Henson, Kogan, and Vacha-Haase (2001) to develop a data collection instrument able to tap into this potentially powerful variable on the part of teachers.

The TSES was developed along lines suggested by the theoretical description of self-efficacy as originally proposed by Bandura (1977). He proposed that belief in one's abilities was a powerful drive influencing motivation to act, the effort put forth in the endeavor, and the persistence of coping mechanisms in the face of setbacks. Self-efficacy theory, applied in the educational realm, has sparked a rich line of research into how teachers’ self-efficacy beliefs are related to their actions and to the outcomes they achieve (Tschannen-Moran, Hoy, & Hoy, 1998).

**Validity and Reliability**

In order to analyse the instrument, a study was conducted by Nie, Lau, and Liau (2012) on the TSES whereby one hundred nine primary and secondary school teachers participated in the research. The study proved that the factorial structure for TSES is relatively stable across different countries and cultures (Nie, Lau, & Liau, 2012). In addition to the factorial validity, this study also examined the predictive, convergent and discriminant validity. It indicated that TSES had good predict validity.

The sub-components of the third research question were answered through semi-structured interviews. These also served the purpose of providing triangulation as well as to measure the level of efficacy expectations and outcome expectancy.
5.19 Getting the Best of Both Worlds

Mixed methods are often preferred when it is expected that the results from the quantitative or the qualitative work will enhance the other (Henson, Kogan, & Vacha-Haase, 2001). Mixed methods research can simultaneously address a range of confirmatory and exploratory questions that neither qualitative nor quantitative approaches can answer alone. Such research can provide better (stronger) inferences and an opportunity for a greater assortment of divergent views (Creswell & Clark, 2007; Teddlie & Tashakkori, 2009). This design mixes or combines quantitative and qualitative research techniques in order to overcome the limitations of a single design. Ultimately, I thought it was wise to get the best of both worlds (Creswell & Clark, 2007; Teddlie & Tashakkori, 2009). Data collected included results from three quantitative survey instruments as well as qualitative data gathered through semi-structured interviews, observations, and focus group discussions. Bryman has suggested that the weaknesses of any particular qualitative or quantitative method can be offset by mixing the best of both. Thus, by adopting a mixed methods design, I hoped to capitalise on the strengths of both approaches and minimise their respective weaknesses (Bryman, 2012).

5.20 Triangulation of Data

In social research the term triangulation is used to refer to the observation of the research issue from at least two different points. This is most often realised by means of applying different methodological approaches. In this study I have used both triangulation of data as well as investigator triangulation. Triangulation of data combines data drawn from different sources and at different times, sometimes in different places or from different people. Investigator triangulation is characterised by using different observers or interviewers, to balance out the subjective influences of individuals’ views. I believe that
this combination enabled me to get a more complete picture of the phenomenon under consideration.

**Findings**
Compred, interpreted and integrated

![Diagram of Triangulation of Data Sources and Methods](image)

Figure 7. Triangulation of data

### 5.21 Role of the Researcher

Identifying the role played by the investigator in any research is important in aiding the reader’s understanding.

*Participant observers may work in teams, which assists in sharpening insights and generating ideas. Very often, however, researchers work alone. In the process they witness the ‘reflexive rationalization’ of conduct, that is, the continual interpretation and application of new knowledge by people (including themselves) in their social environments as an ongoing process* (May, 2011, p. 170).

At the outset of the research, I conducted a one-day seminar for the teachers (something suggested by one of the principals) at each school separately (I name these for the purpose
of this study St. Joseph’s and St. David’s; these names do no reflect the actual names of
the schools, though the Christian religious associations do indicate that the schools were
both Catholic in nature). The seminar began with an ice breaker game. I invited volunteers
to participate in playing musical chairs. During the first game I took their photographs.
When I had them play a second time the game was played but in a different way. This time
one chair was removed when the music stopped, as usual, but participants could continue
the game. The new rule of the game was that they should share the seat or make it possible
that everyone could sit. During this game I took their photographs. After the game was
over, I showed the photographs through a projector. I asked them to compare these photos.
They noticed that during the first game participants were more self-centered (they were not
smiling; their whole concentration was on the chairs). But during the second game the
participants were smiling, and they were looking at each other; it was more enjoyable. I
was thus easily able to suggest to them that cooperation and collaboration might be better
than isolation/self-centeredness. During the seminar, I introduced the idea of a PLC and
invited the teachers to participate in one. At the end of each seminar I gave those present
the LPI questionnaire to measure the leadership practices of their principal. Each teacher
could express willingness or unwillingness to participate in the PLC. I visited both St.
Joseph’s and St. David’s a second time. A further meeting was arranged for those who
were willing to participate in the PLC. In that meeting, more information and coaching
were given to the group. Additional help was given (if required) to form the PLC under the
leadership of the principal. I attended at least one PLC meeting in each school as an
observer.
5.22 Site and Sample

The population for the study was two sets of school-teachers working with the pupils aged from 4 to 17/18 (often referred to as the K-12 range) and those teachers’ principals involved in the implementation of PLCs. Since implementation of professional learning communities was a criterion for participation, a non-probability sampling procedure was necessary to select participants (Gay, Mills, & Airasian, 2009; Merriam, 2014). Merriam speaks of the appropriateness of this sampling approach by saying: ‘Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned’ (p. 77). The selection of the schools was mainly a matter of location and availability of the respondents. Merriam calls this ‘convenience sampling’ (p. 79).

5.23 Demographic Data

The staff of St. David’s comprised 70 teachers. The sample for the proposed study consisted of all respondents from these 70 teachers who were invited to fill the LPI and TES survey. Some 45.71% of the teachers were in their first to third year of teaching, 12.85% had four to six years’ experience, 21.42% had seven to 10, 17.14% had 11 to 20 and 2.85% had more than 20 years of experience. Approximately 10% of the teachers were male and 90% female. Some 28.57 percent of the teachers had a bachelor degree as their highest degree, 70% had obtained master’s degrees, 1.42% held PhDs and 80.74% had professional teacher training.
The staff of St. Joseph’s comprised 42 teachers. The sample for the proposed study consisted of all respondents from these 42 teachers who were invited to fill the LPI and TES survey. Some 26.91% of the teachers were in their first to third year of teaching, 26.91% had four to six years’ experience, 14.28% had seven to 10 and 33.33% had 11 to 20 years. Approximately 10% of the teachers were male and 90% were female. Some 50% of the teachers had a bachelor’s degree as their highest degree, 40% had obtained master’s degrees, and 78.57% had professional teacher training. Both were co-educational schools.

5.24 PLC Participants

After the survey responses were returned I requested each principal to form PLCs in his/her school. This resulted in the being five PLCs in each. In the first meeting, participants were asked to discuss and formulate a mission and vision statement for the group. To help the discussion a few points were given. For example: Why do we have a PLC? What is our purpose? What are we supposed to be doing? What collective commitments have we made? Is it clear what we stand for? If a PLC is to have a culture that is clearly about learning first, last, and always, it must be clear as to its purpose (Parscale, 2013). Thereafter the groups agreed, with the consent of each principal, to have PLC meetings twice in a month. The meetings were to take place as different times so that colleagues could cover relevant classes when a group met. I observed these meetings once a month for each group through Skype. After one and half years of practice the groups participated in a PLCA-R survey and in LPI and TES surveys for a second time. The PLC groups also participated in focus group interviews. Members for the focus groups were randomly selected from those involved in the PLC’s. Such interviews were aimed at generating rich information about the experience of being part of a PLC. The questions used to guide the focus group were designed to elicit teachers’ opinions about, attitudes
towards, and perceptions of the PLC. The questions were also aimed at finding if the factors that affect self-efficacy (Bandura, 1994) were present in the PLCs.

5.25 Data Analysis and Coding

I conducted quantitative analysis of the survey results. For both the PLCA-R and TES survey results, descriptive analysis was carried out including calculating the mean and standard deviation for each set of results. Data analysis focuses upon three key areas. First, I sought to establish basic descriptive data on the characteristics of professional learning communities. This was done by using the survey results from the PLCA-R which focuses on the perceptions of the staff relating to specific practices observed at the school level regarding shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, and supportive conditions, including both relationships and structures. For the PLCA-R survey results, descriptive analysis and comparison were performed. A Cronbach’s alpha statistical analysis to check for internal consistency of the scales had previously been conducted by the developer of the instrument. I also sought to identify key PLC characteristics present in the school by analysing the mean and standard deviation of responses to each questionnaire item. In addition, correlational analyses were carried out between school responses to different parts of the survey as well as in relation to different school contexts in order to examine the validity of the PLC concept. A correlation analysis was conducted between the PLCA-R and the TSES results using a Pearson’s correlation statistic to examine the impact of teachers' perceptions of efficacy based on their involvement in professional learning communities and determined if this involvement impacted their self-efficacy in a positive or negative manner.
I calculated statistics for the LPI data. Specifically, for the second research question and its two sub-questions, the Pearson Product Moment Correlation Coefficient (Pearson r) was used to calculate the correlation coefficients. The Pearson r was used to calculate correlation coefficients for the cumulative scores on both surveys, the cumulative of each survey compared with each category of the other, and the comparison of each category of the two surveys. The Pearson r correlation coefficients were then evaluated to determine if the results were statistically significant for each of the relationships evaluated.

Survey results were used, (a) to identify the features of professional learning community activities that demonstrated a significant relationship with changes in teachers’ sense of efficacy and (b) to identify any variation in the features of professional learning community activities, along with changes in principals’ leadership quality. In addition, a purposefully selected group of teachers from the same schools participated in qualitative focus-group interviews focusing on the inter-relationship of professional learning community activities, teacher efficacy features, teacher and school characteristics, improvements in individual teachers’ knowledge and skills, and individual teacher instructional behaviour changes, improvement in principal’s leadership quality. The principals of both schools were also interviewed to support the analysis of these relationships.

For coding I used deductive form of analysis, something frequently referred to as a priori coding. Some interview questions were formulated based on the theoretical framework of efficacy. Thus, the four sources of efficacy, according to Bandura (1997), were given a priori codes. I also devised certain codes based on what emerged during the analysis. For example, with the help of ATLAS ti. (the software I used for coding) I found the list of
most frequently used vocabulary items and the number of times each was used. That helped me in building codes. Accordingly, I colour-coded and then analysed the data.

5.26 Ethical Consideration

According to the British Educational Research Association:

*e*ducational researchers should operate within an ethic of respect for any persons involved in the research they are undertaking. Individuals should be treated fairly, sensitively, with dignity, and within an ethic of respect and freedom from prejudice regardless of age, gender, sexuality, race, ethnicity, class, nationality, cultural identity, partnership status, faith, disability, political belief or any other significant difference. This ethic of respect should apply to both the researchers themselves and any individuals participating in the research either directly or indirectly (Gardner, 2011, p. 5).

I understand that engaging in action research as a method of inquiry raises a number of ethical issues that go beyond the usual consent, confidentiality and respect for participant’s interests. I was involved more in the daily life of the school, including preparing students for school functions and this resulted in my developing close relationships with the researcher and the research participants. The trust placed in me as researcher carried with it an obligation to respect the people and the professional community into which I had been invited. At times, I noticed that they expected me to become a mediator between them and the management, explaining to me all the difficulties they encountered in their work. That being so, I had to often remind them that “I am here only as a researcher”.

I ensured that both schools’ leadership and management teams were fully informed of what the research might involve from the outset and it was more convincing to the principals as they were also participants of the research and they could therefore easily communicate to the managing body. A copy of my letter of request outlining the nature of my research to the chair of the board is included in Appendix (A). I was also aware that, given this research
relied on principals’ initiatives participation could have been perceived to be more mandatory than voluntary. Therefore, I made it clear to them that anyone who did not wish to engage in any of the data gathering exercises had the right to decline and to do so in privacy with no repercussions. I attach a teacher’s consent form in Appendix (C). I had provided my mobile number and email address so that any individual teacher, if needed, could have private access to me to indicate a wish to disengage from participating at any stage. I was aware that action research of this nature, especially given that it was focusing on deprivatising teachers’ practice, may have resulted in concerns about privacy. I consciously tried to avoid any instances where people would feel pressurised to participate. Confidentiality was always an issue in building trust. I made it clear to the participants the nature of the process in which they were to engage, including why their participation was necessary, how the results would be used and to whom they would be reported. I also made it clear that while the group discussions were video recorded that would not be shown to anyone else in the school or to those in leadership positions. It was also made clear to them that they also have the freedom to request me not to record, if they considered saying something off record while the discussion was in progress.

Consent was also gained from management. Prior to beginning my observation of the PLC groups and focus group interviews two consent forms were issued. The first consent form concerned each participant’s consent to participate in the PLC and focus group interview. The second was to allow me to video and/or audio record during the PLC meetings and focus group interviews. The consent forms are attached in Appendix (D).
5.27 Conclusion

This chapter presented a detailed description of different approaches to research. I intended the reader to get an overview of different types of research, together with grasping the aim of this research study and the reason why I chose a mixed method approach. This chapter also introduced different research instruments used in the study and discussed their validity and reliability. I also gave a description of the site and sample. I turn next to exploring my findings.
Chapter 6

Findings: The PLCs in Operation in the Two Schools

6.1 Introduction

The purpose of this study was to examine the effects of operating PLCs in schools in north India. More specifically, this study examined the effects of a PLC on principals’ leadership styles and on teachers’ levels of self-efficacy in two north Indian schools. I conducted a quantitative analysis of the results. For both PLCA-R and TSES surveys I preformed descriptive analyses including calculating the mean and standard deviation for each set of results. Data analysis focused on three key considerations. First, I sought to establish basic descriptive data on the characteristics of PLCs. This I attempted through examination of the aspect of the PLCA-R which focuses on the perceptions of staff relating to specific practices observed at their schools regarding shared and supportive leadership, shared values and vision, collective learning and application, shared personal practice, and supportive conditions, including both relationships and structures. I now summarise these results below.

6.2 Demographic Information

The staff of St. David’s comprised 70 teachers; the staff of St. Joseph’s comprised 42 teachers. Before implementation of the PLC all the teachers in these two schools were invited to fill in the LPI and TSES surveys. The teachers were requested to bring their responses back on the third day. Table 3 gives the details of the data gathered.
Table 3: Survey Response Rates in Phase 1

<table>
<thead>
<tr>
<th>School</th>
<th>Survey</th>
<th>Number of Survey distributed</th>
<th>Survey returned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>St David’s</td>
<td>LPI</td>
<td>70</td>
<td>58</td>
<td>82.86%</td>
</tr>
<tr>
<td>St. Joseph’s</td>
<td>LPI</td>
<td>42</td>
<td>32</td>
<td>76.20%</td>
</tr>
<tr>
<td>St David’s</td>
<td>TSES</td>
<td>70</td>
<td>58</td>
<td>82.86%</td>
</tr>
<tr>
<td>St. Joseph’s</td>
<td>TSES</td>
<td>42</td>
<td>33</td>
<td>78.58%</td>
</tr>
</tbody>
</table>

After a one-day seminar on PLCs, teachers of both the schools were given a letter explaining in brief what a PLC is and how one works. There was a form attached to this letter and teachers were asked to express their willingness to participate in the PLCs. Of the 70 teachers, 56 (80%) in St. David’s expressed a willingness to participate in the PLC. In St. Joseph’s, of 42 teachers 34 (80.96%) expressed willingness to participate in the PLC.

![Figure 8. Willingness to participate in the PLCs](image)

After the survey responses were retuned, I requested that the principals form five PLCs in their schools. I restricted the number to five because if there had been more than 10 groups it would not be manageable for qualitative data management. In this chapter, the descriptive statistics and results are presented based on the collected data both from quantitative and qualitative. I used the Statistical Package for the Social Sciences [SPSS] Version 24 for portions of statistical analyses and ATLAS.ti (software to organise and
analyse research data) for qualitative data analysis.

6.3 Research Questions

As stated above, the purpose of this study was to examine the effects of operating PLCs in schools in some selected northern-Indian schools. More specifically, this study examined the effects of a PLC on principals’ leadership styles and on teachers’ levels of self-efficacy in the two schools studied. Below are the specific research questions through which I tried to answer.

1. How do PLCs operate in north Indian Schools?
   a) What are the factors that help or hinder the creation and development of effective PLCs?
   b) What are the challenges experienced in implementing PLCs in north Indian Schools?

2. Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?
   a) What are the teachers’ perceptions?
   b) What are the principals’ perceptions?

3. Is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy?
   a) What are the collective perceptions of this on the part of members of a PLC?
   b) What are each individual teacher’s perceptions?
6.4 Research Question Findings

These questions can perhaps be understood in more detail, as follows.

6.4.1 Research Question One

How do PLCs operate in north Indian Schools?

- What are the factors that help or hinder the creation and development of effective PLCs?

- What are the challenges experienced in implementing PLCs in north Indian Schools?

Eaker and DuFour (2015) acknowledge there is no step-by-step plan when it comes to establishing a PLC. Each school has its own context and we need to make our plan fit our school. In this question, I was trying to consider and report how these schools re-cultured themselves and cite ways in which they implemented PLCs. In addressing the first research question, I used qualitative research methods based on traditions of phenomenology. The data were gathered from different sources, including observations of the PLC meetings, one-to-one interview with principals and various focus group interviews. I asked for documents related to PLC planning (e.g. agendas and minutes of PLC meetings from teachers). I took notice of (1) frequency and length of meetings, (2) attendance, (3) input from principal, (4) content of meetings, (5) evidence of there being acceptance of the PLC ideal and collaboration amongst teachers.
6.4.1.1 How do PLCs operate in north Indian Schools?

The following accounts reveal the stories of each school as it developed its PLC. Next, knowing that implementing a PLC culture is difficult and those who undertake to do so must face various challenges, I consider the challenges they faced and the kinds of support needed to overcome these obstacles.

6.4.1.1.A St. David’s school

St. David’s school was situated in a border district of Himachal Pradesh Una, on the border with Punjab. Even though Himachal Pradesh is generally a hilly area the terrain in which it sat was flat, with low hills. By 2015/2016 this area was also a main industrial hub and had become a transit town for travelers going to the famous city of Dharmsala (where the Dalai Lama, the spiritual leader of Tibet resides) and tourist destinations such as Kullu-Manali, Jwalamukhi, and Chintpurni. The people mainly earned their livelihoods through agriculture and small-scale industry. According to the 2011 census, it had a population of 521,173 people (263,692 male and 257,481 female). Average literacy was 86.53% male and female literacy was 91.89% and 81.11%, respectively (Census, 2011b). St. David’s school was a K-12 school and had a student population of 2800 and 70 teachers.

Initiation

The one-day workshop on PLCs could be considered as the initiation or starting point of the PLC in St. David’s (SD). As I have noted above, the workshop began with teachers participating in playing musical chairs. The first game of musical chairs was played in the usual way, but in the second game the same team played the game but differently. The rule was that every time the music stopped a chair was to be removed but no player would be removed. Everyone was expected to give space for others to sit. At the end only one chair
would remain, and all needed to sit. While the game was going on I took photographs of the participants. After the game I projected those on the screen and noted the difference. In the first pictures every player looked serious; they did not look at each other. Everyone concentrated on chairs. It was a competition. But in the second set there was joy on everyone’s face. There was great fun. No player felt insecure. And with this I introduced the concept of PLCs to the school saying that PLCs are platforms for cooperation not for competition and they may bring joy and more effectiveness into the profession. Thereafter, the principal and staff agreed to adopt this innovation by making the decision to proceed with the implementation of the PLC.

Implementation

The principal and staff begin to put the PLC into practice. The data and literature suggest that there are various considerations that influence the implementation of a PLC in a school.

Leadership

The implementation and development of PLC in a school is directly related to the breadth and depth of the initiative of the principal. In SD this was at once evident. The principal was very enthusiastic about PLCs. From the outset, it was evident that the principal demonstrated strong instructional leadership and visionary stewardship. This information was gathered primarily from my on-site visits, which I conducted three times in the span of two years. During these I had face-to-face interviews with the principal and also gathered data from the teachers’ PLC meetings. The principal himself noted:

_The workshop you conducted provided step-by-step directions for introducing PLCs. And the book you gave named ‘Professional Learning Community Leader’ was very useful. I almost followed the book._  
(Principal of SD, personal interview, October 17, 2016).
The first thing I did was to create a foundation for the mission, vision and values for our school. I initiated it during a special staff meeting convened with the same purpose in mind. I divided the staff into different small groups and send them to first discuss the question. After the discussion, each group came out with a mission and vision statement. We compared all the results and had a discussion in common and formulated a vision and mission statement for our school. It was very beneficial. Since everyone was involved in making the vision and mission statement all were aware of it and became more focused (Principal of SD, written report, paragraph 3).

In my field visits I quickly noticed that this exercise had really influenced the school’s culture. One teacher during the focus group interview said ‘… therefore we were clear about our mission and vision and that became our goal and this goal and vision became the everyday priority and we were ready to invest our time and energy for it.’ (SD 6, focus group 1, October 10, 2016). In chapter two we saw that shared values and visions are characteristics of successful PLCs. Hord and Hirsh (2009) discussed the principal’s role in the sharing of vision and mission. Here we observe something new, that was an example of a PLC and a school leader (ie principal) sharing responsibility for forming a vision and mission. Shared leadership was also evident in the principal. A teacher testified:

He made a core group of five to discuss how to form a PLC and how it should go about. He provided us some literature over the topic and we studied and discussed. Under his guidance, we decided that for the smooth beginning we should give some sort of guidelines for the PLCs. Therefore, we formulated a few questions like (1) share some evidence of students learning (2) discuss about teaching practice (3) discuss about the difficulties that you encounter in the classroom (4) Plan how you can observe the class of the other teacher teaching. (SD 22, focus group 3, October 12, 2016).

**Planning**

Effective planning is key to success in operating a PLC. I frequently noted that one of the critical factors in SD was its effective and meticulous planning. The passages quoted above reveal this truth. The school set aside 90 minutes for planning in two weeks and the principal had a clear plan regarding how the teachers should use this time: ‘it is important to give them a clear plan how to go about at least for one or two meetings. Then they get
the pulse of it and they will take off’ (Principal of SD, personal interview, October 17, 2016).

**Improvement in Instructional Leadership Style**

‘One of the benefits I received from the PLC, I think, is that I have made some progress in the instructional leadership. I got more involved into monitoring lesson plans or visiting classroom. I could see that there is a clarity in my vision about goal’ (Principal of SD, personal interview, October 17, 2016). Teachers also testified that after the implementation of the PLC their principal was more likely to make classroom visits and was more engaged with teachers/students.

**Leadership Support**

The principal assisted the development of the PLC by providing PD opportunities with comments/resources. During the focus group discussion two teachers expressed the view that they were encouraged and felt more enthusiastic when, after each PLC, meeting their principal asked for their thoughts and if they have any suggestions/requests to make.

As language teachers, most of us were not very good at the new smart-board and projector installed in the classrooms. During our PLC meeting this issue came up and after the meeting we suggested to our principal that our PLC group need some special training for handing smart-board in the class. For the very next meeting he arranged a person who came and gave some training. He also informed other teachers that our PLC is conducting a ‘learning session on smart-board management’. Our group was so happy, and we were really proud. That gave us more enthusiasm to work in the PLC. (SD 29, focus group 4, October 13, 2016).

According to Leithwood et al. (2006), one of the core practices of successful leaders is developing people. Leadership support also was evidently a successful function of the PLCs. The principal reminded the teachers of the nature of the PLC from time to time so that they remained focused and did not deviate from the objective in PLC meetings.
There were always tendencies to limit the PLC meetings discussing what is happening in the school. I regularly reminded them that in the PLC meetings you must spend more time on discussing and learning new ideas, sharing what you have learned in the classroom and discuss successful strategies that you have implemented in the classroom or learned from literature. (Principal of SD, personal interview, October 17, 2016)

Many of the teachers during the focus group interviews reported that most progress in/after the PLCs occurred because of the support they received from the principal. One example of such supports as express by a teacher was that they were provided with tea/coffee and biscuits when they were conducting PLC meetings: ‘A cup of tea made a lot of difference’ she said (SD 7, focus group 1, October 10, 2016).

**Time Management**

Time for collaboration and teamwork is essential in establishing and sustaining PLCs. In SD, I often observed that the principal made considerable effort to provide time for PLC meetings. In this school, each PLC had scheduled times for its meeting and the principal arranged substitute cover for those teachers participating in the PLC meetings. He also made parallel scheduling at the request of the teachers so that two classes have same subject at the same time.

*I put this idea in our PLC meeting and all of us thought that it may be beneficial. We requested our principal to arrange our timetable in such a way that we have chemistry in both divisions of tenth class. So that we can bring the class together. We found it was very beneficial. First of all, two teachers could be working in the class at the same time. It also helped us to increase our commitment to each other as we supported each other in the class as well as critically evaluated our performance in the PLC meetings. We have developed more trusting relationships with one another.* (SD 22, focus group 3, October 12, 2016).

Hord and Hirsh (2009) and other authors suggest that lack of time is a major impediment to the development of PLCs. The urgency associated with the time management or other structural impediment (see Hord & Sommers, 2009) is clearly shown in the example given above.
**Feedback**

Teachers reported that receiving feedback was an important factor in developing PLCs, this included both formal and informal feedback. As one teacher explained, ‘the feedback we received gave us a lot of encouragement. It gave us a kind of proof that we are taken seriously’ (SD 26, focus group 3, October 12, 2016). Teachers also indicated in the focus groups that they felt comfortable and confident asking for feedback from the principal and their colleagues.

**Teachers’ Levels of Cooperation**

Teachers’ willingness to cooperate was the most important factor that influenced the implementation and operating of PLCs in SD. As I have already mentioned, 80% of the teachers expressed willingness to participate in the PLCs.

... I called a special meeting of all teachers who said that they are ready to participate in the PLC. I asked them if they thought this would help them or will really be effective. I found that they were full of enthusiasm. Two of them (teachers) had already read a good bit about PLC. And they were explaining about the benefit of the PLC. So, when others had heard them speaking the level of enthusiasm increased. So, I was pretty confident that they will cooperate very well. And indeed, they did cooperate. (Principal of SD, written report, Paragraph no.5).

I also could see that levels of cooperation were very high in SD. One teacher said during a focus group interview that when she was invited to observe her colleague’s class she used an online search engine to search for answers to the question ‘What are the observation skills and how to improve it’. This seems to suggest how seriously she was taking the whole exercise.
**Peer Observation and Peer Support**

Positive experience of working with peers was a very important aspect in the success of PLCs. Even though there were some concerns regarding peer observation almost everyone was fully supportive of it and all experienced a great deal of encouragement from undertaking it. Two major themes emerged when teachers were asked about peer observation. These were (1) trust and (2) support. This concurs with the research findings discussed in the literature review: PLCs can foster an environment of trust. For example, Graham (2007) has stated that his study showed that, as the members of a PLC learned from each other, they also grew to trust each other. Most of the teachers agreed that ‘we are able to trust each other more’. Many of them, especially new teachers, stated that operating a PLC was a great source of support for them. It is worth mentioning here the story of a teacher who taught the Hindi language and was very good at reciting poems. In a PLC meeting it was observed that this teacher recited poems in a very melodious way. All the group members wanted to hear this. Later she was requested to go to other classes so that students could listen to her melodious recitation of the poems. Thus, in this particular instance the PLC had had two effects. It gave a degree of encouragement to the Hindi language teacher and it had a positive influence on students’ learning; it also encouraged distributed learning. The English PLC teachers’ group decided that when a Shakespeare play was to be taught they would bring the classes together and the teachers themselves would enact different roles. And they observed that this was an effective way of teaching. They also brought some videos to show the students so that they better understand the play. ‘When we were acting as Shylock or Portia or Bassanio [characters in *The Merchant of Venice*], it was great fun for us as well us for the students. In this way, we could develop more interest in Shakespeare play in students’ (SD 8, focus group 1, October 10, 2016)
Reflective Practice

PLCs in SD exhibited signs of encouraging reflective practice. Teachers testified that peer observation and PLC meetings often became opportunities for intensive reflection on instructional practices.

*I am a teacher for more than 15 years. But this is the first time I seriously examined my teaching practice. That too when one of my colleagues commented: ‘I think your class was almost completely teacher centered. You gave little opportunity for the students to interact’. It was not a very pleasant thing to hear but as I reflected and became conscious of my practice later I understood what she observed was correct and I improved a lot after that* (SD 26, focus group 3, October 12, 2016).

During the focus group interviews, there were other teachers who claimed PLCs helped them to improve both personally and professionally. The main reason they gave for this was that the PLC prompted them to evaluate/reflect on their particular teaching practices.

A participant shared:

*In the beginning, I did not like the idea of being observed or take the burden of going and sitting in someone’s class. But as everyone was telling that they are willing to participate I thought I also must. But when we started doing it I could soon realise that it is beneficial. Now I can honestly say... the skill you develop in one observation followed by a PLC meeting and evaluation is equal to [a] one-week professional development workshop. Because it gives us opportunity to reflect on our own way of teaching.* (SD 13, focus group 2, October 11, 2016)

Recording the Classes

As some of the teachers found it very difficult to make time to observe, they decided to video record the class and at PLC group meetings they watched the resulting videos and discussed the teaching and about the topic taught. One of the PLC members invited her group to her house on a Sunday, so they could watch these videos and discuss them in a more informal way. ‘We were more comfortable and found very confident in making positive criticisms. Our trust level has really increased. We can really make any
observation without being hurt’ (SD 26, focus group 3, October 12, 2016). The practice of observing the recorded video seemed more acceptable to the teachers as more people could observe them as they were shown during the PLC meeting and the teachers felt more at ease in teaching in the presence of the camera than in the presence of colleagues in the class.

**Sharing**

There was a considerable emphasis on sharing. Teachers and principal agreed that they now identified PLCs with sharing: ‘we share our time, we share our skills, we share our story, we share observation and feedback and above all we share knowledge’ (SD 15, focus group 2, October 11, 2016). The principal believed he was able to ‘share both the authority and the burden’ (Principal of SD, personal interview, October 17, 2016).

*The best thing that I like in PLC is that there is no ‘business secret’ for any one of us now. All are ready to share if they have any success story or what has revolutionised their classroom. We share everything for the common good* (SD 8, focus group 1, October 10, 2016).

These findings concur with Hord (2009) who stated that one of the features of PLC practice is that peers start sharing their practice to gain feedback, and thus individual and organisational improvements are achieved.
6.4.1.1.A.1 Factors that Help or Hinder the Creation and Development of Effective PLCs

To answer this sub-question I used an *a priori* coding method, based on the theoretical construct (Stuckey, 2015). Thus, I tried to find out if the presence or absence of five learning and applications of learning, supportive conditions, and shared personal practice) interacted with/affected five core issues that affect school reform (organisational structure, focus of improvement work, personal and social dynamics, contextual influences, and leadership [Morrissey, 2000]). The figure above shows how these two frameworks relate.

Figure 9. Organisational principals of PLCs and core issues that affect school reform
**Organisational Structures**

For the effective implementation of PLCs, like any other reform initiative, conducive organisational structures are necessary. In SD we can see many of the necessary organisational supports obviously present. Clear directions and processes for the initiation and implementation of PLCs were evident. For example, I was able to introduce the PLC ideal and the principal gave briefings about their *modus operandi* during school staff meetings. Times and venues were allocated for the PLC meetings. There was proper and productive communication between the principal and PLC members. Hord (1998) emphasised the importance of supportive conditions in developing the staff as a learning community. We thus see that supportive conditions for developing a PLC were present in SD.

**Focus of Improvement Work**

Maintaining an undeviating focus on students’ learning is a central aspect of PLCs. This can be achieved by three dimensions of a PLC: *Supportive and Shared Leadership, Shared Values and Vision*, and *Collective Learning and Application of Learning*. In SD the values and vision of the PLC were clearly established when staff had a specific workshop to formulate the vision and mission statement of the school. This activity gave clarity and helped the staff to focus on their values and vision. Supportive leadership on the part of the principal was very evident. As we have already seen, the principal gave every support and encouragement. I often observed that working collectively, and in a collaborative way, the principal influenced teachers’ commitment to implementing PLCs in the school. This observation reaffirms the findings of Bolam et al. (2005) that supportive leadership is an important aspect of the successful implementation of PLCs. The PLC members at SD put
considerable emphasis on collective understanding of actual practice through observation and constructive reflections. As one teacher there put it:

*I found the peer observation very helpful. It was in fact a moment for mutual learning. Every one of us in the PLC learned something or other from the observation and the discussion we held after the observation. Some exchanged the feedback in writing. That was very helpful.* (SD 29, focus group 4, October 13, 2016).

Another said: ‘We knew we should improve ourselves as teachers. But we never thought it in a collective way. That was something new we learned from you’ (SD 8, focus group 1, October 10, 2016).

**Personal and Social Dynamic**

A culture of trust and mutual respect with regard to relationships, and collective engagement of staff and administrators are the fruits of an effective PLC. Every PLC members in SD agreed that there was substantial improvement in levels of trust. Many of them reported that they were free to enter professional dialogue with the colleagues. It was claimed that positive attitudes and relationships were more valued and nurtured among staff.

*[B]efore we were not free to ask a colleague if we had a doubt. As she said [another teacher had earlier expressed the same view] we would consider what they will think or will they tell it to someone that I do not know this? So better keep quiet. Now we don’t have that inhibition. We trust each other. We know that we are all learning* (SD 3, focus group 1, October 10, 2016).

**Contextual Influences**

A significant social dynamic could also be seen in the developmental stage. I have already noted above the story of a teacher inviting the PLC group to her house to watch the video recorded classes and to have a discussion. This is a clear indication that there was a noticeable improvement in social relations, but existing school culture is an important
aspect in the implementation of a PLC or any other new reform initiation. School culture creates a psychosocial environment that profoundly affects teachers, administrators, and students. Inevitably, school culture is closely linked to socio-political culture. This is a very complex matter and merits some careful consideration: ‘… this was a big issue in the beginning. PLC had to struggle through the traditionalist teachers who keep on saying we never did this way’ (Principal of SD, written report, paragraph 7). The socio-political and cultural context of India is such that both society and family are very hierarchical in nature. This was reflected in the school’s culture as well. Teachers were at ease with accepting orders from the principal and obeying them. ‘I am happy to just do what is told. There we don’t take up the responsibility’ (SD 27, focus group 4, October 13, 2016).

Maybe because of our culture we are used to ‘order and obey’ culture. Shared leadership was not very much in our mind. So honestly speaking I had to read something about shared leadership and purposefully make some changes in my behaviour. Surprisingly teachers were more comfortable in receiving orders (Principal of SD, written report, paragraph 7).

In operating a PLC shared vision, values and supportive conditions are vital if it is to exert a positive influence. This study seemed to suggest SD had experienced change.

Earlier if we get a little free time we used to engage ourselves into gossips. But now our culture has changed. Even when we meet at corridors even between the periods we started discussing about teaching or asking doubts. We now say to our principal that don’t worry even if we are talking beside the corridors, be sure, we are discussing about class (SD 22, focus group 3, October 12, 2016).

**Leadership**

The most critical of the themes emerging at every juncture was the leadership capacity of the principals, which had a very significant impact and influence on the other four issues. As noted above, the culture of the school was modelled after the hierarchical structure of Indian society in general. Hitherto, the absence of collective decision-making structures prevented teachers being involved in long-range planning and sharing leadership and responsibilities. I frequently observed that the teachers were more than satisfied with the
small extent of the involvement they experienced in decision-making. No complaint or dissatisfaction ever came up in the discussions about the lack of shared leadership, though they had only a bare minimum of this.

But, at the same time, the school was successful in identifying a shared vision and mission. Both the mission and vision statements were formed with the full and active involvement of the staff. Thus, they could easily identify their shared goals. This fact helped considerably in the implementation of PLCs. Even though the staff seemed to be satisfied with existing levels, supportive and shared leadership as identified/described in PLC literature looks much different to what I saw in SD. At the same time, I noticed that new decision-making structures were being developed and put in place by the SD principal to facilitate the involvement of teachers in decisions. For example, he gave autonomy to the teachers to decide the time of meeting and he then arranged their timetables accordingly.

Traditionally the school report on annual day celebration is prepared and presented by the principal. This year, I entrusted this task with a group of teachers. They came to me time to time for clarification. I was a bit anxious how it will go. But finally, they came out with a beautiful presentation of the report with multimedia presentation. It was much better that what I usually did. I was so happy that I entrusted it with them. I could see how proud the team was. (Principal of SD, personal interview, October 17, 2016)

Teachers also reported that implementing PLCs had helped them grow individually in leadership practice. One teacher noted:

I was so nervous to speak in front of others. I failed in the interviews in some other schools because I could not demonstrate my teaching skill properly because of my nervousness. In the PLC, I chose to be quiet in the beginning. But slowly I realised that I too am getting involved in the discussion. Now I am confident that I can take a bit of leadership in the group meetings. I can express my opinions without inhibition. (SD11, focus group 2, October 11, 2016)

Overall, both SD’s teachers and principal claimed the shift to PLCs had enabled them to think differently about leadership. Accordingly, teachers commented that having
opportunities to conduct their own professional development opportunities enabled to operate as leaders in the school. These brief comments conclude my preliminary observations on St David’s, I turn next to consideration of those concerning St Joseph’s before closing the chapter with more general comments about PLCs.

6.4.1.1.B St. Joseph’s School

St. Joseph’s school (SJ) was located in a village in Hoshiarpur district, itself located in the north-east part of Punjab state, India. This district was also part of Indus Valley Civilisation (a Bronze Age culture extant between 3300 and 1300 B.C.). It is situated 22 kilometers distant from district headquarters, Hoshiarpur. Its main income was from agriculture. In 2006 the Ministry of Panchayati Raj named Hoshiarpur one of the country’s 250 most backward districts (from a total of 640). According to the Press Information Bureau of the Government of India, Ministry of Panchayati Raj (2011) Hoshiarpur was the only district in Punjab currently receiving funds from the Backward Regions Grant Fund Program [BRGF]. The village in which SJ was situated was economically backward even by the standards of Hoshiarpur district. Punjabi is the main local language. According to Census 2011, the total geographical area of the village was 304 hectares with a total population of 2,122 people but the students of SJ came not only from the village but also from surrounding villages (Census, 2011a). During the interview the principal stated that students came from as far as 18 kilometers away. Even though the village was not economically prosperous it had a higher literacy rate compared to Punjab overall. According to Census 2011, the literacy rate was 91.63%, compared to 75.84% for Punjab. The male rate stood at 93.66% while the female literacy rate 89.65%. SJ is a K-10 school and had a student population of 1800 and 42 teachers when I undertook my research.
**Initiation**

Both SD and SJ followed almost the same pattern at the outset. Moreover, SJ’s principal testified that there was communication between both schools’ principals regarding the functioning of a PLC. Therefore, it was natural that there were many similarities. A one-day workshop was the starting point. The principal and staff elected to adopt this innovation by making the decision to proceed with the implementation of the PLC.

**Implementation**

The first step successfully implementing anything involves the willingness. I have already stated that 80.96% of the teachers expressed their agreement to participating in PLCs. As a starting point SJ’s principal selected five and asked them to collect the opinions of others on the matter of the way[s] in which the school needed to improve. ‘This I did because I wanted them to enter into discussion before we implement PLC’ (Principal of SJ, personal interview, October 14, 2016). This allowed the staff to think more about the need for change. Here I highlight different themes that came up as a result of emergent coding of qualitative data gathered from on-site visit, face-to-face interview with the principal, my observations of the PLC meetings and focus group interviews.

**Planning**

In SJ I easily observed some very effective planning under the leadership of the principal. From the beginning, she was creative. The extract given below from her written report shows this quite clearly.

*In a staff meeting I explained their own observation regarding the need for change and I appreciated them that they have observed that there exists some need (for change). And I said to them that PLC could be a very good method through which we can implement the change in our school. Teachers showed that they are very much interested in it. It was very important to understand what PLC is before we*
begin. So, I asked people who are willing to read some literature around this topic and explain to the staff what are the ways that we can begin with. Out of those who showed willingness I chose five people. I gave them two week to come back with the result. Meanwhile, I went through the book you gave [The Principal as Professional Learning Community Leader]. After two weeks, I met the five teachers. We together prepared a guideline and formed five PLC groups as you have requested (Principal of SJ, written report, paragraph 4).

One of the teachers on the committee said:

[T]o sell any new product in the market what you need to tell the people is its advantage and how easy it is to use. That is what we tried to do. When our principal entrusted the teachers, I mean five of us, with the duty of looking into this new concept called PLC the advantage was that we could really and honestly consider if this will help our school. And when we told it is good and beneficial our colleagues will easily accept it (SJ 20, focus group 3, October 20, 2016).

These words indicate how successful the principal was in promoting shared leadership.

This finding reminded me of Leithwood and Riehl (2003). Their research suggested that bringing a shared leadership model into decision making process could greatly increase coordinated administrative and learning strategies in an educational institution. Throughout the interviews teachers often acknowledged the importance of planning together. I noticed that because of shared planning the SJ teachers took ownership, as the expression has it. It was suggested in the literature review that when developing a PLC, teachers are expected to work together. Here the very planning process itself promoted teamwork.
6.4.1.1.B.1 Factors that Help or Hinder the Creation and Development of Effective PLCs

**Leadership**

The effects of an existing culture of leadership in SJ were at once obvious when it came to implementing PLCs. The principal was very successful in setting a goal by creating a need. A teacher noted:

> when the principal send the teachers with the question to discuss about the area of improvement it was a surprise for us. Usually it is the principal in the staff meeting who comes up with the great speech that we need to improve in these areas. Now, may be for the first time we were given time and space that we could make a self-criticism. And that too in the absence of any member from the management. We were honest to the core. We already started asking to one another, ‘What shall we do?’ (SJ 27, focus group 4, October 22, 2016)

Most of the literature reviewed in chapter three suggest that creating the conditions under which PLCs can bring about continuous school improvement greatly depends on having effective leadership (Melanie et al. 2004; Neumerski 2013). In my experience it was obvious that SJ’s principal was successful in leading a goal-oriented team in a way very favourable to the successful implementation of PLCs. Her leadership placed a considerable emphasis on collaboration and she could easily gain constant and committed cooperation from the staff. She described this as follows.

> Implementation of PLCs were successful here because of the wholehearted cooperation of teachers. What I notice is that the teachers who are in PLCs are showing more care and concern for the students. It was really an encouraging factor for me. Therefore, I decided to bring all the staff under PLCs (Principal of SJ, written report, Paragraph 7).

Even though I had requested only five PLC groups, in SJ the entire teaching staff participated. However, for this study I observed only the initial five groups. If the fundamental challenge for PLC is achieving teachers’ cooperation, then in SJ the principal’s leadership had prompted the teachers to feel the need of it.
The first thing I asked them was to share their own experience with their teachers in their school time. That what do they remember most about their teachers. The discussion was very lively. They shared the story of teachers who influenced them, discouraged them, who created interest in the subject they taught. One teacher shared the story of how she lost interest in one of the subjects because of the teacher who taught that subject. As a conclusion of the discussion I said to them that we can learn one thing from here that the ability of the students to learn is changeable. It sometime depends on the teacher who teaches them. Secondly there are teachers who are highly effective and there are teachers who are less skilled. And that is the story among us too. Let us make use of PLC to mutually help. So that we all improve in our teaching skills. Teachers seemed very happy with this idea (Principal of SJ, personal interview, October 14, 2016).

Laying the Foundation of Mission, Vision, Values and Goals

As at SD, in SJ the principal called a special meeting of the staff; that day lunch was provided to the teachers by the school. They spent half a day discussing and formulating mission statement and vision statements. This proved to be an important step on the part of the principal as it was an opportunity to make the mission, vision, values and goals of the institution abundantly clear to every teaching staff member. Since all of them participated in the discussion they knew very well what it was.

Being a Role Model

One of the best qualities of an effective leader is being a role model. During the face-to-face interview with the principal of SJ she gave a good example of this.

It is surprising to see that even though you know how much peer observation enhance the teacher’s own learning and teaching, when it comes to the real situation of observation there was a great hesitation. I understood that it was a great hurdle for almost every teacher to overcome. So, I decided to encourage them by making myself available for being observed. During a staff-meeting I explained to them what observation is and its benefits. How to prepare oneself for observation and what are the things that we should keep in mind when we commit to peer observation. Then I took a chapter from history book and taught in front of them. Asked them to make their own observation and critical comment. In the beginning, they were very reluctant to give any comment but once they saw that I am taking the comments graciously they were more open and there was a great deal of discussion. I could see that it was a great opening for them. I concluded
the session telling that how much I benefited from their comments and told them that if you want an opinion on your own teaching then invite your PLC member/s into your class (Principal of SJ, written report, paragraph 8).

It can be seen here that the principal not only speaks about the need to continue learning or shared practice, she also became a model of inspiration for teachers. Leadership literature often emphasises the principal remaining the central source of leadership influence (Fletcher & Kaufer, 2003).

**Setting Directions**

The SJ principal had maintained a document called ‘My PLC Diary’. She allowed me to go through that diary and I could see how well she was able to communicate to the staff the goal and benefits of PLC. In the diary, I noticed that she had given some guidelines regarding peer observation. I reproduce some points from her diary below.

*When you observe the class*

- Ask the colleague if he/she wishes you to focus on some particular issues.
- Be present in the class well before the time and be as unobtrusive as possible during the observation.
- Should not go to the class with your own bias about what should happen in the class. In fact, you will have something to learn from the class.
- After post-observation discussion, it is good to give your suggestions and comments in writing.
- Never forget that the goal of peer observation is for mutual upliftment [sic].

**Developing People**

Sparks (1984) suggested that personal improvement is an inevitable aspect of thinking about/attempting school improvement. From the interview data we can find some evidence of development in the teachers happening through PLCs.
For example, when the principal noticed there were some issues in the PLC groups she helped the groups to overcome these.

*I understand change occurs in conversation and dialogue. But it is not easy to keep this healthy dialogue and conversation going. I found there are some issues in the group. Some people take feedback as personal attack. That affected the group dynamism. Therefore, I approached the manager, who always encouraged me, to get a resource person to give a seminar. And we conducted a one-day-seminar titled ‘Believe in your team’. I found it was very helpful* (Principal of SJ, personal interview, October 14, 2016).

Teachers in this school had very limited personal access to the Internet. The principal thus provided a computer in the staffroom with internet access so teachers who were interested in learning more about PLCs could make use of the computer in their own time.

*One Day Teaching Practice*

This I consider having been an innovative development on the part of the principal. A day before the new school year began SJ’s teachers were given a full day for teaching practice. Since the whole school was divided into different PLCs, each of the PLCs gathered in different classrooms. They took turns, and each taught a self-selected lesson. The rest of the group observed the teaching. Since it was a whole day programme everyone got enough time for demonstration and the group was very much involved in feedback, the principal reported. This day had a great impact on the teachers. In the focus group interview it was referred to very often. A teacher commented about the day:

*We often hold seminars and workshops. But very little of the seminars and workshops that I attended got transferred into classrooms. But this day was very fruitful. For the first time, we have come together to discuss about our own professional development and practice. We try to apply the best practice together. And therefore, I can say most of the things we discussed on that day got transferred into classrooms* (SJ 29, focus group 5, October 22, 2016).
Helping to Develop Group identity

In SJ I found that each PLC group (of the initial five groups) was provided with a communal display board. Each group was able and free to exhibit its work or any new knowledge related to its subject on the board. ‘This was to keep the group active and there was a health competitive spirit. This helped the whole school community to benefit from their knowledge’ (Principal of SJ, personal interview, October 14, 2016).

Time Management

In previous research, time management had often emerged as an important concern. In this case we see an effective approach to problems of time management. The principal reported that she gave the teachers the autonomy to choose their PLC meeting time and day. Once they fixed the time, she arranged the overall timetable, often arranging substitute teachers for their class. Although teachers recognised the value of having regular PLC meetings and saw the benefit, both principal and teachers noted the difficulty of finding time to meet. One teacher commented: ‘Principal tries her level best to give us time but often it is not possible. Consequently, we have to meet before or after school. That is really a challenge for many especially for those who come from far’ (SJ 6, focus group 1, October 18, 2016). Several teachers were engaged in extracurricular activities, including dance classes and sports activities, which made meeting times difficult to coordinate. A teacher noted: ‘in our school we don’t have a dance teacher. We ourselves give them practice often after the school time’ (SJ 16, focus group 2, October 19, 2016).
Feedback

‘We never had the possibility of getting an honest, candid feedback. No student will dare to give that. PLC gave a wonderful opportunity for it. Sometimes it can be humbling. But it was always eye-opening’ (SJ 29, focus group 5, October 22, 2016). This is what one teacher said about the feedback. Another said: ‘in the beginning, we used to give only positive feedback. We did not know how the other one will take it. But after two or three PLC meeting we developed more trust. So, we were more open and honest’ (SJ 8, focus group 2, October 19, 2016). Most of the teachers claimed that they were happy to receive honest feedback as it helped their professional development.

Collaborative Teamwork

Collaborative teamwork is essential to building and supporting a PLC. In fact, the success of PLCs hinges on collaboration. The study showed signs of an emerging collaborative structure among some SJ PLCs. The English group in SJ decided to encourage/request other subject teachers to participate in teaching new vocabulary to the students. To this end, they distributed the list of vocabulary to all the subject teachers and requested that they use these words/terms in their teaching in the hope that the children would learn the vocabulary easily by hearing it used frequently. Another form of collaboration was found when the Math group decided to come together and compare the result of students’ first and second semester examinations. The goal was to find out which were the mathematical concepts the students did not understand very well. For this the teachers sought out the question which the majority of the students solved wrongly or did not solve. An explicit focus on student learning through collaborative teamwork was exhibited here. Teachers found opportunities to work collaboratively so that the students benefit maximally. One
teacher from SJ said: ‘now if the students are not doing well we immediately ask the question, what do I need to improve? Because now we are not saying that we completed our syllabus. We are concerned if the children learned or not’ (SJ 14, focus group 5, October 22, 2016).

_Giving substitution was the most difficult thing to do on everyday basis. Because, one or other teacher will be absent every day and no one was happy to get an extra period as a substitute teacher. But the magic of PLC, I must say, that now if a teacher is absent they will try their level best to arrange it with the PLC group member so that the same subject will be taught in the class. It is easier now because the co-teacher is aware of what the other one is teaching. It is very much beneficial for the students as well. Because, if they are not teaching in a particular class as a substitute teacher one will only keep the discipline of the class. Now they do teach_ (Principal of SJ, personal interview, October 14, 2016).

**Peer Observation and Peer Support**

As we have already seen, SJ’s principal gave a very good training and support with regard to the business of observation and when she herself came forward to be observed this provided a great deal of encouragement for the teachers. As a result, it was easy for them to build up trust. Many expressed the view that they were happy to invite a colleague or even a group of colleagues into their classes.

_During the observation, my colleague told me that what I am writing on the blackboard is not visible to the students who are sitting in one particular place. It was because of the reflection. I told the students to pull down the curtain so that the blackboard is visible to them. I noticed, many of the things the students will not tell us. We need a colleague to give us a proper feedback_ (SJ 7, focus group 1, October 18, 2016).

Another teacher said: ‘I was so happy to see the way she was teaching. I really wanted to teach like her’ (SJ 31, focus group 4, October 22, 2016). Another teacher believed ‘after becoming part of PLC we have no ego. We are concerned about everyone performing at their best. We are happy to share our skills’ (SJ 17, focus group 2, October 19, 2016).
Creating an Atmosphere of Trust

All the above-mentioned efforts resulted in an atmosphere of trust. It is trust that opens the closed door of a classroom to a colleague. ‘We soon realised that we are not here to compete but to collaborate. That increased our trust level’ said one of the teachers from SJ (SJ 11, focus group 2, October 19, 2016). During the focus group there was unanimous agreement that having a PLC had definitely increased levels of mutual trust among the teachers and between school management and staff. ‘Before PLC we never had the freedom to go and ask a doubt or request a help from another colleague’, one teacher confessed, before adding: ‘Now, we are always going to each other for advice because we trust each other very much’ (SJ 29, focus group 5, October 22, 2016).

6.4.1.2 Challenges and Barriers

As to challenges and barriers, both SD and SJ reported almost identical issues. I outline these in some detail below.

6.4.1.2.1 Lack of Time

This was a major issue in both the schools. Even though the principals tried their level best to arrange and accommodate the PLC meetings, most of the time teachers had to arrange them to take place after school. In SJ teachers mentioned that some of the staff had their homes in faraway villages. Therefore, it was difficult for them to linger after normal school hours. ‘I had to spend a lot of extra time’ said the principal of SJ, ‘to arrange classes when PLC teachers are holding their meetings, to give some guidelines and make some kind of assessment of their PLC meetings, etc. Often it was very difficult to find substitute teachers because, no one was free’ (Principal of SJ, personal interview, October 14, 2016).
teacher from SD said, ‘time emerged as a barrier because we don’t have a common planning or perhaps it is not possible in such a big school to arrange timetable in such a way that we can meet without having so much of hassle’ (SD 22, focus group 3, October 12, 2016). During the focus groups teachers from SD mentioned time on 82 occasions and those from SJ referred to it in 113 remarks/comments.

### 6.4.1.2.2 Lack of Understanding of PLCs

This was a challenge, particularly in SJ. Initially the emphasis was only on forming five groups and when the principal decided to extend this to the whole staff many of them did not have a proper understanding of a PLC. ‘It is very important that the participants should have a clear idea about what PLC is and they should be given clear direction to follow through’, said the SJ principal (Principal of SJ, personal interview, October 14, 2016).

### 6.4.1.2.3 Challenges to Implementing a Collaborative Culture

The principal of SD outlined the difficulties he faced in facilitating a collaborative culture. He told the story of a teacher who was not convinced of the benefit of observation. He was of the opinion that it would be belittling for the teacher in the class if someone else arrived to do some “policing”. Consequently, he neither went to anyone else’s class nor allowed anyone else to observe his teaching. Finally, the principal had to change this staff member’s role and responsibility. Infrastructure also emerged as an impediment to collaboration in SD. Because the school buildings were scattered, the teachers found it difficult to communicate with each other or to undertake observations. Another challenge was lack of classrooms suitable to combine two classes. Both SD and SJ had only two rooms each that
could take the children of two classes together. Therefore, little space was available for shared teaching.

### 6.4.1.2.4 Autonomy

‘Some teachers who consider themselves as best teachers showed great resistance [to PLCs]’, said SJ’s principal (personal interview, October 14, 2016). ‘They believe, we have our own style and it is deeply imbedded in the personality of a person. And you learn it from your own experience not by imitating someone else’. Autonomy must, of course, be central to professionalism but it can be a barrier to successful and potentially productive cooperation at times.

Finally, for the purpose of triangulation and to check the effectiveness of PLCs in both SD and SJ I used the PLCA-R (Oliver, Hipp, & Huffman, 2010). This instrument contains 52 statements concerning the five dimensions of PLCs as described by Hord (1997). The five dimensions are: Shared and Supportive Leadership, Shared Values and Vision, Collective Learning and Application, Shared Personal Practice, and Supportive Conditions. The dimension of Supportive Conditions was broken into Supportive Conditions – Relationships, and Supportive Conditions – Structures during the creation of the PLCA-R instrument. The following table lists the dimensions and the corresponding numbers of questions.
Table 4: Categories/Statements

*Based on Hord’s Five Dimensions and Number of Statements in Each Category*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared and Supportive Leadership</td>
<td>11</td>
</tr>
<tr>
<td>Shared Values and Vision</td>
<td>9</td>
</tr>
<tr>
<td>Collective Learning and Application</td>
<td>10</td>
</tr>
<tr>
<td>Shared Personal Practice</td>
<td>7</td>
</tr>
<tr>
<td>Supportive Conditions-Relationships</td>
<td>5</td>
</tr>
<tr>
<td>Supportive Conditions-Structures</td>
<td>10</td>
</tr>
</tbody>
</table>

Considering the first research question (namely, how do PLCs operate in north Indian schools?) it was important to test and verify whether the characteristics of professional learning community existed in these schools. My quantitative analysis using the PLCA-R concerned how the teachers perceived the presence/absence of the five dimensions of PLCs present in their schools.

Teachers responded to the 52-item survey that was structured by dimension. In each case the findings were ranked from highest to lowest by mean values across all dimensions. The following tables reflect teacher perceptions based on survey results in percentages of strongly disagree, disagree, agree, and strongly agree.
Table 5: Shared and Supportive Leadership

<table>
<thead>
<tr>
<th>Shared and Supportive Leadership</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The principal shares responsibility and rewards for innovative actions.</td>
<td>0%</td>
<td>0%</td>
<td>52.1%</td>
<td>47.9%</td>
<td>3.48</td>
<td>.501</td>
</tr>
<tr>
<td>The principal participates democratically with staff sharing power and authority.</td>
<td>0%</td>
<td>6.9%</td>
<td>49.0%</td>
<td>44.0%</td>
<td>3.37</td>
<td>.661</td>
</tr>
<tr>
<td>The principal is proactive and addresses areas where support is needed.</td>
<td>0%</td>
<td>0%</td>
<td>68.0%</td>
<td>32.0%</td>
<td>3.32</td>
<td>.468</td>
</tr>
<tr>
<td>Opportunities are provided for staff members to initiate change.</td>
<td>4.6%</td>
<td>0%</td>
<td>69.5%</td>
<td>25.9%</td>
<td>3.17</td>
<td>.647</td>
</tr>
<tr>
<td>Staff members have accessibility to key information.</td>
<td>0%</td>
<td>9.3%</td>
<td>72.6%</td>
<td>18.1%</td>
<td>3.09</td>
<td>.517</td>
</tr>
<tr>
<td>Leadership is promoted and nurtured among staff members.</td>
<td>9.3%</td>
<td>6.2%</td>
<td>57.5%</td>
<td>27.0%</td>
<td>3.02</td>
<td>.840</td>
</tr>
<tr>
<td>Staff members are consistently involved in discussing and making decisions about most school issues.</td>
<td>2.3%</td>
<td>7.7%</td>
<td>77.6%</td>
<td>12.4%</td>
<td>3.00</td>
<td>.543</td>
</tr>
<tr>
<td>Decision-making takes place through committees and communication across grade and subject areas.</td>
<td>0%</td>
<td>12.7%</td>
<td>76.4%</td>
<td>10.8%</td>
<td>2.98</td>
<td>.486</td>
</tr>
<tr>
<td>Staff members use multiple sources of data to make decisions about teaching and learning.</td>
<td>4.6%</td>
<td>8.5%</td>
<td>73.7%</td>
<td>13.1%</td>
<td>2.95</td>
<td>.633</td>
</tr>
<tr>
<td>Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.</td>
<td>2.3%</td>
<td>16.2%</td>
<td>69.1%</td>
<td>12.4%</td>
<td>2.92</td>
<td>.610</td>
</tr>
<tr>
<td>The principal incorporates advice from staff members to make decisions.</td>
<td>0%</td>
<td>36.3%</td>
<td>40.5%</td>
<td>23.2%</td>
<td>2.87</td>
<td>.761</td>
</tr>
</tbody>
</table>
The lowest ranking statement in this category was, ‘the principal incorporates advice from staff members to make decisions’. This statement received a mean score of 2.87; some 40.5% agreed and 23.2% strongly agreed, making a combined total of 63.7% of participants who found themselves in agreement with this statement, but 36.3% disagreed. Top rankings were for these two statements: ‘The principal is proactive and addresses areas where support is needed’ and ‘The principal shares responsibility and rewards for innovative actions’. These two statements scored a 100% agreement. These findings go hand in hand with the earlier qualitative data. I have used selected quotations and examples from teachers and principals to show that the principals were active, supportive and willing to share responsibilities.

Table 6: Shared Values and Vision

<table>
<thead>
<tr>
<th>Shared Values and Vision</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decisions are made in alignment with the school’s values and vision.</td>
<td>0%</td>
<td>2.3%</td>
<td>55.6%</td>
<td>42.1%</td>
<td>3.40</td>
<td>.536</td>
</tr>
<tr>
<td>Policies and programs are aligned to the school’s vision.</td>
<td>0%</td>
<td>2.3%</td>
<td>57.1%</td>
<td>40.5%</td>
<td>3.38</td>
<td>.533</td>
</tr>
<tr>
<td>Staff members share visions for school improvement that have undeviating focus on student learning.</td>
<td>0%</td>
<td>4.6%</td>
<td>68.7%</td>
<td>26.6%</td>
<td>3.22</td>
<td>.515</td>
</tr>
<tr>
<td>Shared values support norms of behaviour that guide decisions about teaching and learning.</td>
<td>0%</td>
<td>6.9%</td>
<td>68.3%</td>
<td>24.7%</td>
<td>3.18</td>
<td>.535</td>
</tr>
<tr>
<td>A collaborative process exists for developing a shared vision among staff.</td>
<td>0%</td>
<td>15.4%</td>
<td>51.0%</td>
<td>33.6%</td>
<td>3.18</td>
<td>.678</td>
</tr>
</tbody>
</table>
Data are used to prioritize actions to reach a shared vision.  

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>4.6%</th>
<th>78.0%</th>
<th>17.4%</th>
<th>3.13</th>
<th>0.452</th>
</tr>
</thead>
</table>

Stakeholders are actively involved in creating high expectations that serve to increase student achievement.  

<table>
<thead>
<tr>
<th></th>
<th>2.3%</th>
<th>13.1%</th>
<th>57.1%</th>
<th>27.4%</th>
<th>3.10</th>
<th>0.700</th>
</tr>
</thead>
</table>

School goals focus on student learning beyond test scores and grades.  

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>29.3%</th>
<th>36.7%</th>
<th>34.0%</th>
<th>3.05</th>
<th>0.796</th>
</tr>
</thead>
</table>

A collaborative process exists for developing a shared sense of values among staff.  

<table>
<thead>
<tr>
<th></th>
<th>2.3%</th>
<th>0%</th>
<th>89.2%</th>
<th>8.5%</th>
<th>3.04</th>
<th>0.420</th>
</tr>
</thead>
</table>

The lowest ranking statement in this category was: ‘Stakeholders are actively involved in creating high expectations that serve to increase student achievement’. This statement received a mean score of 3.10. Some 57.1% agreed and 27.4% strongly agreed, making a combined figure of 84.5% of participants who found themselves in agreement with this statement. Only 15.5% disagreed. Highest rankings were for these two statements: ‘A collaborative process exists for developing a shared sense of values among staff’ and ‘Decisions are made in alignment with the school’s values and vision’. These two propositions enjoyed 97.7% positive agreement with their mean values being 3.04 and 3.40 respectively.

This result confirms the qualitative data I have analysed above. From the very fact the principals spent a day with the teachers discussing and developing mission and vision statements respondents claimed that they got a better and clearer idea about the value and vision of the school.
<table>
<thead>
<tr>
<th>Collective Learning and Application</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.</td>
<td>0%</td>
<td>7.7%</td>
<td>48.3%</td>
<td>44.0%</td>
<td>3.36</td>
<td>0.622</td>
</tr>
<tr>
<td>Professional development focuses on teaching and learning.</td>
<td>0%</td>
<td>4.6%</td>
<td>64.9%</td>
<td>30.5%</td>
<td>3.26</td>
<td>0.534</td>
</tr>
<tr>
<td>School staff members are committed to programs that enhance learning.</td>
<td>0%</td>
<td>2.3%</td>
<td>75.3%</td>
<td>22.4%</td>
<td>3.20</td>
<td>0.456</td>
</tr>
<tr>
<td>Collegial relationships exist among staff members that reflect commitment to school improvement efforts.</td>
<td>0%</td>
<td>3.1%</td>
<td>77.6%</td>
<td>19.3%</td>
<td>3.16</td>
<td>0.445</td>
</tr>
<tr>
<td>Staff members collaboratively analyse multiple sources of data to assess the effectiveness of instructional practices.</td>
<td>0%</td>
<td>8.5%</td>
<td>68.3%</td>
<td>23.2%</td>
<td>3.15</td>
<td>0.544</td>
</tr>
<tr>
<td>Staff members plan and work together to search for solutions to address diverse student needs.</td>
<td>0%</td>
<td>17.8%</td>
<td>51.0%</td>
<td>31.3%</td>
<td>3.14</td>
<td>0.688</td>
</tr>
<tr>
<td>Staff members collaboratively analyse student work to improve teaching and learning.</td>
<td>0%</td>
<td>6.9%</td>
<td>73.7%</td>
<td>19.3%</td>
<td>3.12</td>
<td>0.498</td>
</tr>
<tr>
<td>Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.</td>
<td>0%</td>
<td>18.5%</td>
<td>64.9%</td>
<td>16.6%</td>
<td>2.98</td>
<td>0.594</td>
</tr>
<tr>
<td>School staff members and stakeholders learn together and apply new knowledge to solve problems.</td>
<td>4.6%</td>
<td>20.8%</td>
<td>51.4%</td>
<td>23.2%</td>
<td>2.93</td>
<td>0.789</td>
</tr>
<tr>
<td>A variety of opportunities and structures exist for collective learning through open dialogue.</td>
<td>6.2%</td>
<td>18.5%</td>
<td>68.3%</td>
<td>6.9%</td>
<td>2.76</td>
<td>0.668</td>
</tr>
</tbody>
</table>
The lowest ranking statement in this category was: ‘School staff members and stakeholders learn together and apply new knowledge to solve problems’. This statement received a mean score of 2.93 with 51.4% agreeing and 23.2% strongly agreeing, making a combined total of 74.60% of participants who found themselves endorsing this statement, but 25.4% disagreed. Top ranking was for ‘School staff members are committed to programs that enhance learning’. This statement received 97.70% agreement with a mean value of 3.20.

The qualitative data analysed seem to support claims that the implementation of a PLC gave the teachers and principal an opportunity to work collaboratively to solve problems and improve learning opportunities. The principals also reported that through PLCs some kind of collective learning was happening.

Table 8: Shared Personal Practice

<table>
<thead>
<tr>
<th>Shared Personal Practice</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff members collaboratively review student work to share and improve instructional practices.</td>
<td>0%</td>
<td>4.6%</td>
<td>62.2%</td>
<td>33.2%</td>
<td>3.29</td>
<td>.546</td>
</tr>
<tr>
<td>Staff members informally share ideas and suggestions for improving student learning.</td>
<td>0%</td>
<td>3.9%</td>
<td>64.9%</td>
<td>31.3%</td>
<td>3.27</td>
<td>.527</td>
</tr>
<tr>
<td>Individuals and teams have the opportunity to apply learning and share the results of their practices.</td>
<td>0%</td>
<td>0%</td>
<td>73.4%</td>
<td>26.6%</td>
<td>3.27</td>
<td>.443</td>
</tr>
<tr>
<td>Staff members regularly share student work to guide overall school improvement.</td>
<td>0%</td>
<td>4.6%</td>
<td>70.3%</td>
<td>25.1%</td>
<td>3.20</td>
<td>.506</td>
</tr>
<tr>
<td>Opportunities exist for staff members to observe peers and offer encouragement.</td>
<td>0%</td>
<td>2.3%</td>
<td>75.7%</td>
<td>22.0%</td>
<td>3.20</td>
<td>.453</td>
</tr>
<tr>
<td>Staff members provide feedback to peers related to instructional practices.</td>
<td>0%</td>
<td>2.3%</td>
<td>84.9%</td>
<td>12.7%</td>
<td>3.10</td>
<td>.375</td>
</tr>
<tr>
<td>Opportunities exist for coaching and mentoring.</td>
<td>3.5%</td>
<td>22.8%</td>
<td>73.7%</td>
<td>0%</td>
<td>2.70</td>
<td>.529</td>
</tr>
</tbody>
</table>
As shown in table above (Table 8) respondents typically thought that staff members should informally share ideas and suggestions for improving students’ learning. The results reported a higher rate of agreement when compared to other dimensions. The highest level of agreement, with a mean value of 3.27, was for the claim: ‘Individuals and teams have the opportunity to apply learning and share the results of their practices’ with 73.4% agreeing and 26.6% who strongly agreed. This statement achieved 100% agreement. On the other hand, only 73% of respondents agreed and nobody (0%) strongly agreed with the statement, ‘opportunities exist for coaching and mentoring’, with a mean value of 2.70. This result may suggest a need for more opportunities for coaching and mentoring in these schools.

Previous studies have noted that review of a teacher’s behaviour by colleagues is a norm in the PLC (see, for example: Luis et al., 1995). Consistent with previous studies my research also seemed to show that this form of review was not evaluative but involved a process of “peers helping peers”. The table above indicates that such reviews, if conducted regularly by teachers in a PLC, might lead to an improved a sense of collective learning.
Table 9: Supportive Conditions - Relationships

<table>
<thead>
<tr>
<th>Supportive Conditions - Relationships</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships among staff members support honest and respectful examination of data to enhance teaching and learning.</td>
<td>0%</td>
<td>3.1%</td>
<td>52.5%</td>
<td>44.4%</td>
<td>3.41</td>
<td>.553</td>
</tr>
<tr>
<td>Caring relationships exist among staff and students that are built on trust and respect.</td>
<td>0%</td>
<td>2.3%</td>
<td>68.7%</td>
<td>29.0%</td>
<td>3.27</td>
<td>.493</td>
</tr>
<tr>
<td>School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school.</td>
<td>0%</td>
<td>9.3%</td>
<td>71.0%</td>
<td>19.7%</td>
<td>3.10</td>
<td>.529</td>
</tr>
<tr>
<td>A culture of trust and respect exists for taking risks.</td>
<td>0%</td>
<td>11.6%</td>
<td>83.8%</td>
<td>4.6%</td>
<td>2.93</td>
<td>.397</td>
</tr>
<tr>
<td>Outstanding achievement is recognized and celebrated regularly in our school.</td>
<td>27.0%</td>
<td>44.0%</td>
<td>29.0%</td>
<td>0%</td>
<td>2.02</td>
<td>.749</td>
</tr>
</tbody>
</table>

Table 9 illustrates five statements pertaining to Supportive Conditions - Relationships. Of these statements ‘Caring relationships exist among staff and students that are built on trust and respect’ scored the highest level of agreement with a mean value of 3.27 and 97.70% positively agreeing to the statement. Four of the five statements concerning this dimension recorded results above the survey instrument’s overall mean (M=2.93) ‘Outstanding achievement is recognized and celebrated regularly in our school’ was ranked with a mean value of 2.02. Only 29% of the respondents positively agreed to this statement and 71% disagreed. Apparently, teachers thought that outstanding achievement was neither recognised nor celebrated regularly in these schools. It is clear from various previous studies that PLCs require two conditions to be met if they are to be supported. These relate to structures and collegial relationships. My findings reinforce the claims of participants in the interview that a PLC helped develop collegial relationships among the staff as they interacted productively towards a common goal, namely: improving students’ learning.
Table 10: Supportive Conditions - Structure

<table>
<thead>
<tr>
<th>Supportive Conditions - Structures</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The school facility is clean, attractive and inviting.</td>
<td>0%</td>
<td>0%</td>
<td>52.1%</td>
<td>47.9%</td>
<td>3.48</td>
<td>.501</td>
</tr>
<tr>
<td>Resource people provide expertise and support for continuous learning.</td>
<td>0%</td>
<td>6.2%</td>
<td>62.9%</td>
<td>30.9%</td>
<td>3.25</td>
<td>.557</td>
</tr>
<tr>
<td>Communication systems promote a flow of information among staff members.</td>
<td>0%</td>
<td>0%</td>
<td>79.9%</td>
<td>20.1%</td>
<td>3.20</td>
<td>.401</td>
</tr>
<tr>
<td>Data are organized and made available to provide easy access to staff members.</td>
<td>0%</td>
<td>0%</td>
<td>81.5%</td>
<td>18.5%</td>
<td>3.19</td>
<td>.389</td>
</tr>
<tr>
<td>Appropriate technology and instructional materials are available to staff.</td>
<td>0%</td>
<td>8.5%</td>
<td>67.6%</td>
<td>23.9%</td>
<td>3.15</td>
<td>.549</td>
</tr>
<tr>
<td>The proximity of grade level and department personnel allows for ease in collaborating with colleagues.</td>
<td>0%</td>
<td>0%</td>
<td>91.5%</td>
<td>8.5%</td>
<td>3.08</td>
<td>.279</td>
</tr>
<tr>
<td>Fiscal resources are available for professional development.</td>
<td>0%</td>
<td>18.5%</td>
<td>78.4%</td>
<td>3.1%</td>
<td>2.85</td>
<td>.439</td>
</tr>
<tr>
<td>Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members.</td>
<td>8.5%</td>
<td>40.2%</td>
<td>42.5%</td>
<td>8.9%</td>
<td>2.52</td>
<td>.774</td>
</tr>
<tr>
<td>Time is provided to facilitate collaborative work.</td>
<td>19.7%</td>
<td>64.1%</td>
<td>16.2%</td>
<td>0%</td>
<td>1.97</td>
<td>.599</td>
</tr>
</tbody>
</table>

As shown in Table 10, the respondents of SD and SJ unanimously agreed or strongly agreed that their school were ‘clean, attractive and inviting’; ‘The proximity of grade level and department personnel allows for ease in collaborating with colleagues’ and ‘Communication systems promote a flow of information among staff members’. They also unanimously agreed that ‘data are organized and made available to provide easy access to staff members’. However, it is very important to note that these teachers were not satisfied with the time provided to facilitate collaboration: 83.8% strongly disagreed or disagreed with the statement: ‘Time is provided to facilitate collaborative work’ (M= 1.97). Only 37.90% agreed with the statement: ‘the school schedule promotes collective learning and shared practice’ (M = 2.32). Another statement below the overall average mean (M=2.9)
was ‘Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members’ (M = 2.52). Looking at the table we can see that these reactions have smaller standard deviations. That means the respondents were more consistent in their opinions. This analysis has, therefore, produced some reasonably strong evidence that in some areas of the dimension of Supportive Conditions- Structures (namely time provided to facilitate collaborative work, school schedule to promote collective learning and shared practice, and communication systems to promote a flow of information across the entire school community including: central office personnel, parents, and community members) conditions were not favourable to the success of an effective PLC. The collected data would suggest that time, and scheduling are the most important impediments that need to be taken into consideration.

Table 11 contains the overall mean and standard deviation from the 91 participants who responded to the survey; this overall view may provide a better understanding of the level of effectiveness of PLC characteristics in these two schools.
Table 11: Professional Learning Communities Assessment – Revised Subscale Mean and Standard Deviation Scores (N=91)

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared and Supportive Leadership</td>
<td>3.21</td>
<td>.601</td>
</tr>
<tr>
<td>Shared Values and Vision</td>
<td>3.18</td>
<td>.597</td>
</tr>
<tr>
<td>Collective Learning and Application</td>
<td>3.13</td>
<td>.625</td>
</tr>
<tr>
<td>Shared Personal Practice</td>
<td>3.16</td>
<td>.552</td>
</tr>
<tr>
<td>Supportive Conditions-Relationships</td>
<td>2.96</td>
<td>.744</td>
</tr>
<tr>
<td>Supportive Conditions-Structures</td>
<td>2.90</td>
<td>.736</td>
</tr>
</tbody>
</table>

Table 11 apparently suggests that the teachers in SD and SJ felt that the characteristics of a successful Professional Learning Community existed in their schools. Analysis of the PLCA-R, as can be seen from these results, indicates that professional learning communities were implemented faithfully in these schools. Hipp and Huffman (2010) state that developing, nurturing, and sustaining a community of learners is no small endeavour and requires intentional actions on the part of the formal leaders (ie principals). My research seems to confirm this and suggests that leadership plays a vital role in the implementation of a PLC, together with the whole-hearted support and interest of the teachers.
6.4.2 Research Question Two

Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style? What are the teachers’ perceptions? And what are the principals’ perceptions? I sought to understand if there was any improvement in the leadership style of the principal as part of him/her being part of the PLC and working with teachers in an effort to improve instructional practice school-wide. At the very outset of the research, and implementation of PLCs in SD and SJ, I met both the principals and gave them some information regarding what PLC are and, as principals, what they were expected to do. I handed them some literature for reference. At the end of the data gathering (after two school years) I requested that both the principals give me comments in writing with regard to their experiences of operating PLCs on their leadership styles. I requested they write these rather than speak in a face-to-face interview because, I thought, they would then have more time and freedom to articulate their experiences. I promised them that their writings would not be published as they were. Therefore, only relevant quotations or summaries/paraphrases are included hereafter. The findings reported below thus come primarily from these written documents from the principals and data gathered from the focus group interviews and, finally, from the quantitative data analysis.

A Principals’ Views

6.4.2.1 New Vision about Leadership

This was a recurring theme in the semi-structured interviews with both the principals. Both principals were of the opinion that taking the initiative to implement PLCs in their respective schools gave them opportunities to have new visions of their leadership roles. The principal of SD said: ‘I was somehow falling into a passive role, just managing the day-to-day things. But engaging into the implementation of PLC gave me opportunity to
think about the leadership responsibility in me’. Both principals claimed that because of their involvement in PLCs they read more about leadership and, because of that, ‘I could see a shift of mind-set happening in me’ as SD’s principal said. The principal of SJ referred to a passionate discussion of leadership as a result of the PLC exercise. ‘I realised the need for truly visionary leadership from me as a principal. I was trying my best to first of all to understand the vision of the institution that I am leading and then trying to inculcate in the teachers an effective vision of teaching and learning’ (personal interview, October 14, 2016). And SD’s principal claimed that:

‘[m]aking sense of what we are doing’ is a new vision about leadership that I found in my journey through PLC. If I need to be effective I need to make it clear to the people what I really mean. That is what I found when we discussed our mission and vision. When I explained some of the core assumption that was in our mission statement and reformulated it in a way more contextualised, I think it made sense and teachers were able to establish some connection with it. It helped them to find sense in what they are doing (personal interview, October 17, 2016).

However, SJ’s principal had a different experience in this regard, saying this:

[i]t is very important to value the professional experience of the teachers. This is a new vison I got as I was participating in PLC. PLC gave me more opportunity to know the teachers well. Especially their strength. That helped me to guide them in a better way. I must say that I learned from them as well (personal interview, October 14, 2016).

A very interesting note from the principal of SD reported: ‘I used to consider my job as managing the school. Now I know I am a leader, not a manager’ (personal interview, October 17, 2016). Both the principals expressed the belief that their new visions of leadership and their own ways of leading made them more effective. Almost all the literature that I came across during this study supported the view that leadership is important, even invaluable, in establishing PLCs. This study adds to that view as to the significance of leadership. The testimonies from the principals reflect the effort they made in implementing the PLCs.
6.4.2.2 Establishing Goals and Expectations

Establishing goals and expectations is often said to be an essential dimension of leadership. Both the principals involved in this study agreed with this point and were of the view that allowing PLCs in their schools helped them in establishing and setting goals and expectations: ‘the most important thing that happened in the school because of the establishment of PLC is that now we have a common goal and it is clear to each and every one of us’ said SJ’s principal. She further claimed:

I read somewhere, ‘accept no excuses. If you expect it, you will achieve it’. I constantly reminded teachers that I have high expectations about the result of PLC and the change that is going to bring to our school. I said to the teachers to collect in writing what are the expectations of their students about their teachers. Some of them were very silly but there were a quiet few which I thought was very important and eye opener. For example, one student wrote, ‘I would like to see the teachers teach me the subject in relation to day today life’. I thought it was a real need. Because any good teacher should be able to establish a connection between the life and the subject so that it become relevant for the student (Principal of SJ, written report, paragraph 9).

According to SD’s principal, ‘[the] PLC... [gave an] ... opportunity, not only to establish goals and set expectations but also, they gave opportunity to get the staff involved in it and then evaluate time to time if we have achieved the set goal or are we making any improvement. It gives more clarity to the set goal. Thus, insuring success for all became our slogan’ [original emphasis].

6.4.2.3 Creating New Structures

If India’s education system is to set high goals and expectations, then it becomes the responsibility of the educational leaders to strive to create structures and conditions that will help such goals to be realised. ‘I had to spend my time in inventing or creating structures and processes that will fit PLC characteristics in our school’ said SD’s principal.
Finding a successful organisational structure that will accommodate PLC was an important area of consideration in the beginning. But I think it was also an opportunity for me to show my leadership capacity. I created five PLC group in the beginning. Later created a learning support group. We came to an agreement that there will be at least one PLC meeting in two weeks. Each group was given the freedom to choose the day and time in consultation with principal. Additionally, once in two months I met every PLCs. All these not only helped the teachers’ professional development but it helped me too (Principal of SJ, written report, paragraph 7).

In a previous study, considering structures as supportive conditions for the implementation of PLCs, Hipp and Huffman (2010) noted that, in practice, matters such as time and proximity are often provided by administrators and allow staff members to come together to work and learn. Many researchers have emphasised that time for teachers to work together is essential for school reform initiatives (DuFour et al., 2009; Hipp & Huffman, 2010).

6.4.2.4 Collaborative Skill

PLCs proved an effective vehicle for developing collaborative skills in the principals’ leadership styles. Both principals admitted that they themselves had to develop more trust in their staff so they could allow their staff the opportunities and facilities needed for collaboration.

*It was not easy for me in the beginning. Honestly speaking we are more used to ‘order and obey’ pattern. I used to tell the teachers this ‘this is what I want you to do’ and they seldom came back with any suggestions. But now I started asking them ‘this is my idea…. What is your opinion about it’. I found that it is easy to collaborate when there is discussion. The effect is very visible. They take the ownership and thus they are more responsible and productive* (Principal of SD, personal interview, October 17, 2016).

SJ’s principal admitted that it was very difficult for her to step into the culture of collaboration as she was too accustomed to being at the top and obeyed. She confessed the difficulty of this and the ‘temptation to go back to the old style’, due to the negative reactions of teachers. ‘Sometimes I thought it is better not to enter into conversation. Once
you look for collaboration especially in decision making some people are very negative about everything’ (Principal of SJ, personal interview, October 14, 2016). Since one of the fundamental purposes of PLCs is collaboration it was evident that many efforts had to be made to create a culture of collaboration. One teacher noted that ‘principal has given us capacity to do plans, to give suggestions in the plan otherwise she herself made, and to take decisions and responsibilities. Our communication with management... increased a lot’ (SJ 19, focus group 3, October 20, 2016). Another teacher from SJ said: ‘now we have an atmosphere where everything is school created and school driven. Everything is done in full collaboration not any individual show. I am happy to work here’ (SJ 5, focus group 5, October 22, 2016).

The principal of SJ said she recognised a personal ‘Leadership void’ (lack of collaborative skill) because of her involvement in PLCs and the associated reading she undertook. Consequently, she reported that she was making a conscious effort ever since to operate a collaborative leadership style in future. The principal of SD believes the PLC made him less rigid and brought more flexibility to his relations with staff. ‘Now I don’t give a task list to the staff. I am inviting them to take responsibility and play an active role and I think that motivates them’ (Principal of SD, personal interview, October 17, 2016).

* I am a student of political science. Leadership is an interesting subject for me. The PLC has created an enormous paradigm shift in what type of leadership we are familiar with. By emphasising an interactive and contextually embedded process of leadership this theory provides a challenge to the individualistic, hierarchical, non-directional and de-contextualised notion of leadership that we are familiar with. This has brought a lot of room for collaboration and mutual respect (SJ 12, focus group 2, October 19, 2016).
6.4.2.5 Empowering the Staff, Promoting and Participating in Teacher Learning

Under this heading I consider planning, coordinating, and evaluating teaching and the curriculum. Both the principals agreed the PLCs gave opportunities for direct oversight of curriculum through school-wide coordination across classes and subject.

I realised that my direct involvement in the support and evaluation of the teaching was minimum. I had the idea that I must just leave the classroom to the teachers. They know the subject. But I, like majority of the principals, pretended that all teachers are same. PLC gave that atmosphere of freedom that accessibility to classroom without making people nervous became very easy. This involvement does not happen without PLC. How can I go and visit very classroom so often in such a big school where almost 3000 students are studying? Now I can say it is a mutual empowering system that is at work through PLC. (Principal of SD, written report, paragraph 8).

The experiences of the principals suggested that because they had more opportunity to interact with the teachers they got to know more about their needs. Once they knew what those teachers needed, they can gently push their boundaries. The principal of SJ described one such incident.

It was not that easy to break the leader-follower mind-set. I loved to see and took satisfaction when people keep coming back to me for permission. Now I understand that empowerment is the sign of a good transformational leader. Now I try to build confidence in my staff so that they grow as empowered and self-guided people. For that I always try to give encouraging feedback. I give them opportunities to demonstrate and achieve their full potentials. For example, there was a teacher who was very timid. She was never able to speak a word when the group discussion comes. But I noticed whenever she was asked to speak about her school days she was very happy to speak. So, I asked her to talk about her expectation of a good teacher based on her own experience as a student. She came out amazingly. She gave good examples of good teachers and how they influenced her. It was a very good session and everybody appreciated her. I could see the change that was happening in her thereafter. She became very confident and can successfully guide a group discussion now (Principal of SJ, personal interview, October 14, 2016).
‘To [a] certain extent’, said a teacher from SD, ‘PLC could serve as a paradigm for improving every aspect of school functioning from school administration to classroom instruction. Our principal started showing more interest in the classroom. We have noticed that his visit became more frequent and we are no more nervous about it. He also gives positive suggestions after visiting the class’ (SD 1, focus group 1, October 10, 2016). Another teacher from the same school said, ‘It seems that now [after the implementation of the PLC experiment in that school] our principal is taking more interest in developing our teaching skill. He gave us a good guideline on the need of well-formulated instructional objectives. That was a great help for us to prepare our lectures and design in-class activities’ (SD 19, focus group 3, October 12, 2016). My data suggest that PLC meetings went deeper into issues and the leadership role of the principal was obvious there. ‘Looking at the minutes of the PLC meetings one common problem I traced was that teachers believe “students are not able to stay focused even half an hour in the class”. I suggested that teachers should use active learning strategy in the class. Students attention can be maintained throughout a class session by periodically giving them something to do’ (Principal of SD, personal interview, October 17, 2016).

6.4.2.6 Visionary, Motivator, and Communicator

Visionary leadership was another matter principals believed that they could develop as a result of participating in PLCs. Both the principals expressed the belief that the collaborative processes involved in PLCs were instrumental in developing visionary leadership quality in themselves.

PLC gave me great opportunity to develop myself. It is said that one moment a leader must be a visionary, the next moment a motivator to peruse that vision and another moment a communicator. My desire to implement an effective PLC demanded from me to improve my leadership role especially as a visionary and
motivator. I believe I really motivated them when I was personally involved. For example, when I noticed that there was a great reluctance or nervousness regarding peer observation of the classroom I volunteered to teach a topic in front of the staff during a staff meeting. And I invited observations and feedback. In the beginning, they were a bit reluctant but gradually they became confident and I could see how the trust level increase in them. And I believe I could motivate them to a great extent. Again, there was increased need and opportunity of communication in the process of PLC implementation. I believe it helped me a lot to increase my communication skill (Principal of SJ, personal interview, October 14, 2016).

The principal of SD also said that the visionary and motivator roles were among some of the skills that he had added to his leadership toolkit. This was confirmed by a teacher when she said, ‘our principal is a great motivator. He gets people to go that extra mile because we see he walks with us’ (SD 15, focus group 2, October 11, 2016).

Both principals’ responses strongly suggested that their roles in the implementation of PLCs in their respective schools were very significant. At the same time, this benefitted them in their leadership roles. The principals themselves evidently felt that their roles as instructional leaders had expanded in this period. Reading the testimony of the principals I had a sense that they had found a new understanding of leadership: that leadership resides with the whole school community rather than solely in them. Looking at the teachers’ views about their principals’ leadership style may provide an enhanced understanding in this matter.
B. Teachers’ View

To get a clear picture of the teachers’ views on the question ‘Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?’ I used the LPI. I conducted a paired samples t-test was to establish if teachers found any significant difference in the leadership style of their principals before and after implementing the PLCs. The following tables show the results.

St. David’s School

Table 12: LPI Category 1: Model the way: (N= 58)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets a personal example of what he/she expects of others</td>
<td>5.84</td>
<td>2.10</td>
<td>-5.72</td>
<td>57</td>
<td>.000</td>
</tr>
<tr>
<td>Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on</td>
<td>5.76</td>
<td>1.81</td>
<td>-6.41</td>
<td>57</td>
<td>.000</td>
</tr>
<tr>
<td>Follows through on promises and commitments he/she makes</td>
<td>6.07</td>
<td>1.67</td>
<td>-6.39</td>
<td>57</td>
<td>.000</td>
</tr>
<tr>
<td>Asks for feedback on how his/her actions affect other people's performance</td>
<td>5.66</td>
<td>2.10</td>
<td>-4.34</td>
<td>57</td>
<td>.000</td>
</tr>
<tr>
<td>Builds consensus around a common set of values for running our organization</td>
<td>5.93</td>
<td>1.56</td>
<td>-8.73</td>
<td>57</td>
<td>.000</td>
</tr>
<tr>
<td>Is clear about his/her philosophy of leadership</td>
<td>5.07</td>
<td>1.52</td>
<td>-12.88</td>
<td>57</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 13: LPI Category 2: Inspire a Shared Vision: (N= 58)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
</tr>
<tr>
<td>Appreciate and acknowledge the contributions of the predecessor.</td>
<td>5.64</td>
<td>8.09</td>
</tr>
<tr>
<td>Describes a compelling image of what our future could be like</td>
<td>5.69</td>
<td>6.66</td>
</tr>
<tr>
<td>Is exceptionally good at imagining a future that does not yet exist and enlist the staff in that vision.</td>
<td>5.98</td>
<td>8.28</td>
</tr>
<tr>
<td>Shows others how their long-term interests can be realized by enlisting in a common vision</td>
<td>6.00</td>
<td>8.14</td>
</tr>
<tr>
<td>Vision and approach to life inspires me.</td>
<td>6.24</td>
<td>8.53</td>
</tr>
<tr>
<td>Speaks with genuine conviction about the higher meaning and purpose of our work</td>
<td>6.00</td>
<td>8.76</td>
</tr>
</tbody>
</table>
Table 14: LPI Category 3: Challenge the Process: (N= 58)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
<td>pre</td>
<td>post</td>
<td></td>
</tr>
<tr>
<td>Seeks out challenging opportunities that tests his/her own skills and abilities.</td>
<td>5.74</td>
<td>8.47</td>
<td>1.78</td>
<td>1.53</td>
<td>-8.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Challenges people to try out new and innovative ways to do their work.</td>
<td>6.74</td>
<td>9.05</td>
<td>1.42</td>
<td>1.45</td>
<td>-8.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.</td>
<td>6.45</td>
<td>8.69</td>
<td>1.67</td>
<td>1.71</td>
<td>-7.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Asks “What can we learn?” when things don’t go as expected.</td>
<td>6.24</td>
<td>8.09</td>
<td>1.80</td>
<td>1.96</td>
<td>-5.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.</td>
<td>6.17</td>
<td>9.00</td>
<td>1.63</td>
<td>1.62</td>
<td>-8.58</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Experiments and take risks, even when there is a chance of failure.</td>
<td>5.79</td>
<td>8.62</td>
<td>1.84</td>
<td>1.99</td>
<td>-9.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
</tbody>
</table>
Table 15: LPI Category 4: Enable Others to Act: (N= 58)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
<td>pre</td>
<td>post</td>
<td></td>
</tr>
<tr>
<td>Develops cooperative relationships among the people he/she works with</td>
<td>6.19</td>
<td>9.10</td>
<td>1.70</td>
<td>1.53</td>
<td>-10.98</td>
</tr>
<tr>
<td>Actively listens to diverse points of view</td>
<td>6.33</td>
<td>8.83</td>
<td>1.70</td>
<td>1.73</td>
<td>-7.38</td>
</tr>
<tr>
<td>Treats others with dignity and respect.</td>
<td>6.14</td>
<td>8.74</td>
<td>1.49</td>
<td>1.79</td>
<td>-8.31</td>
</tr>
<tr>
<td>Supports the decisions that people make on their own</td>
<td>5.36</td>
<td>7.09</td>
<td>2.37</td>
<td>2.55</td>
<td>-4.37</td>
</tr>
<tr>
<td>Gives people a great deal of freedom and choice in deciding how to do their work.</td>
<td>4.53</td>
<td>7.79</td>
<td>1.94</td>
<td>1.91</td>
<td>-9.21</td>
</tr>
<tr>
<td>Ensures that people grow in their jobs by learning new skills and developing themselves.</td>
<td>6.66</td>
<td>9.26</td>
<td>1.38</td>
<td>1.13</td>
<td>-11.35</td>
</tr>
</tbody>
</table>

Table 16: LPI Category 5: Encourage the Heart: (N= 58)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
<td>pre</td>
<td>post</td>
<td></td>
</tr>
<tr>
<td>Praises people for a job well done</td>
<td>5.74</td>
<td>8.29</td>
<td>2.07</td>
<td>1.96</td>
<td>-6.35</td>
</tr>
<tr>
<td>Makes it a point to let people know about his/her confidence in their abilities</td>
<td>5.83</td>
<td>8.41</td>
<td>2.04</td>
<td>1.89</td>
<td>-7.17</td>
</tr>
<tr>
<td>Makes sure that people are creatively rewarded for their contributions to the success of our projects</td>
<td>5.83</td>
<td>8.47</td>
<td>1.91</td>
<td>1.97</td>
<td>-6.49</td>
</tr>
<tr>
<td>Publicly recognizes people who exemplify commitment to shared values</td>
<td>5.64</td>
<td>7.90</td>
<td>1.48</td>
<td>1.92</td>
<td>-6.46</td>
</tr>
<tr>
<td>Finds ways to celebrate accomplishments</td>
<td>5.47</td>
<td>8.60</td>
<td>1.98</td>
<td>1.62</td>
<td>-12.03</td>
</tr>
<tr>
<td>Gives the members of the team lots of appreciation and support for their contributions</td>
<td>6.34</td>
<td>8.97</td>
<td>1.56</td>
<td>1.54</td>
<td>-9.31</td>
</tr>
</tbody>
</table>
### St. Joseph’s School

Table 17: LPI Category 1: Model the way: (N= 32)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Pre</th>
<th>post</th>
<th>pre</th>
<th>post</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets a personal example of what he/ she expects of others</td>
<td>5.41</td>
<td>8.50</td>
<td>1.99</td>
<td>1.73</td>
<td>-7.41</td>
<td>31</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on</td>
<td>5.34</td>
<td>9.53</td>
<td>2.14</td>
<td>2.25</td>
<td>-7.73</td>
<td>31</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follows through on promises and commitments he/she makes</td>
<td>6.69</td>
<td>8.56</td>
<td>2.34</td>
<td>1.25</td>
<td>-3.96</td>
<td>31</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asks for feedback on how his/her actions affect other people’s performance</td>
<td>4.22</td>
<td>6.97</td>
<td>2.46</td>
<td>2.85</td>
<td>-4.05</td>
<td>31</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Builds consensus around a common set of values for running our organization</td>
<td>5.44</td>
<td>9.03</td>
<td>2.32</td>
<td>1.29</td>
<td>-7.05</td>
<td>31</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is clear about his/her philosophy of leadership</td>
<td>5.16</td>
<td>8.72</td>
<td>2.46</td>
<td>1.55</td>
<td>-7.53</td>
<td>31</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 18: LPI Category 2: Inspire a Shared Vision: (N= 32)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appreciate and acknowledge the contributions of the predecessor.</td>
<td>4.31</td>
<td>7.84</td>
<td>2.00</td>
<td>2.55</td>
<td>-5.38</td>
</tr>
<tr>
<td>Describes a compelling image of what our future could be like</td>
<td>4.28</td>
<td>7.78</td>
<td>2.38</td>
<td>2.05</td>
<td>-5.74</td>
</tr>
<tr>
<td>Is exceptionally good at imagining a future that does not yet exist and</td>
<td>3.91</td>
<td>8.34</td>
<td>1.87</td>
<td>1.31</td>
<td>-11.05</td>
</tr>
<tr>
<td>enlist the staff in that vision.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shows others how their long-term interests can be realized by enlisting a</td>
<td>4.59</td>
<td>7.81</td>
<td>2.73</td>
<td>1.49</td>
<td>-5.72</td>
</tr>
<tr>
<td>common vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vision and approach to life inspires me.</td>
<td>5.16</td>
<td>8.28</td>
<td>1.66</td>
<td>2.32</td>
<td>-5.34</td>
</tr>
<tr>
<td>Speaks with genuine conviction about the higher meaning and purpose of</td>
<td>5.34</td>
<td>8.28</td>
<td>1.65</td>
<td>1.74</td>
<td>-6.26</td>
</tr>
<tr>
<td>our work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 19: LPI Category 3: Challenge the Process: (N= 32)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean pre</th>
<th>Mean post</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeks out challenging opportunities that tests his/her own skills and abilities.</td>
<td>5.13</td>
<td>7.84</td>
<td>1.82</td>
<td>1.52</td>
<td>-6.76</td>
<td>31</td>
</tr>
<tr>
<td>Challenges people to try out new and innovative ways to do their work.</td>
<td>5.72</td>
<td>9.53</td>
<td>2.24</td>
<td>0.91</td>
<td>-8.73</td>
<td>31</td>
</tr>
<tr>
<td>Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.</td>
<td>5.94</td>
<td>9.06</td>
<td>1.45</td>
<td>1.21</td>
<td>-9.49</td>
<td>31</td>
</tr>
<tr>
<td>Asks “What can we learn?” when things don’t go as expected.</td>
<td>5.22</td>
<td>7.88</td>
<td>2.77</td>
<td>1.71</td>
<td>-4.77</td>
<td>31</td>
</tr>
<tr>
<td>Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.</td>
<td>5.50</td>
<td>9.03</td>
<td>1.74</td>
<td>1.55</td>
<td>-8.84</td>
<td>31</td>
</tr>
<tr>
<td>Experiments and take risks, even when there is a chance of failure.</td>
<td>5.69</td>
<td>8.91</td>
<td>3.64</td>
<td>1.53</td>
<td>-4.99</td>
<td>31</td>
</tr>
</tbody>
</table>
Table 20: LPI Category 4: Enable Others to Act: (N= 32)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t value</th>
<th>d f</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
<td>pre</td>
<td>post</td>
<td>t</td>
</tr>
<tr>
<td>Develops cooperative relationships among the people he/she works with</td>
<td>5.25</td>
<td>8.97</td>
<td>2.18</td>
<td>1.33</td>
<td>-8.07</td>
</tr>
<tr>
<td>Actively listens to diverse points of view</td>
<td>5.66</td>
<td>8.81</td>
<td>2.43</td>
<td>1.14</td>
<td>-7.06</td>
</tr>
<tr>
<td>Treats others with dignity and respect.</td>
<td>5.47</td>
<td>8.91</td>
<td>2.09</td>
<td>1.57</td>
<td>-7.69</td>
</tr>
<tr>
<td>Supports the decisions that people make on their own</td>
<td>5.00</td>
<td>7.16</td>
<td>1.86</td>
<td>1.79</td>
<td>-4.72</td>
</tr>
<tr>
<td>Gives people a great deal of freedom and choice in deciding how to do their work.</td>
<td>4.41</td>
<td>7.66</td>
<td>1.99</td>
<td>1.67</td>
<td>-6.09</td>
</tr>
<tr>
<td>Ensures that people grow in their jobs by learning new skills and developing themselves.</td>
<td>7.22</td>
<td>9.09</td>
<td>2.02</td>
<td>1.76</td>
<td>-3.88</td>
</tr>
</tbody>
</table>
Table 21: LPI Category 5: Encourage the Heart: (N= 32)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean pre</th>
<th>Mean post</th>
<th>Std. Deviation pre</th>
<th>Std. Deviation post</th>
<th>t value</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Praises people for a job well done</td>
<td>6.00</td>
<td>8.91</td>
<td>2.66</td>
<td>2.48</td>
<td>-3.90</td>
<td>31</td>
<td>.000</td>
</tr>
<tr>
<td>Makes it a point to let people know about his/her</td>
<td>5.25</td>
<td>8.22</td>
<td>2.09</td>
<td>1.66</td>
<td>-6.73</td>
<td>31</td>
<td>.000</td>
</tr>
<tr>
<td>confidence in their abilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makes sure that people are creatively rewarded</td>
<td>5.53</td>
<td>8.97</td>
<td>2.19</td>
<td>1.30</td>
<td>-7.08</td>
<td>31</td>
<td>.000</td>
</tr>
<tr>
<td>for their contributions to the success of our</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publicly recognizes people who exemplify</td>
<td>4.78</td>
<td>7.56</td>
<td>2.44</td>
<td>1.54</td>
<td>-6.29</td>
<td>31</td>
<td>.000</td>
</tr>
<tr>
<td>commitment to shared values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finds ways to celebrate accomplishments</td>
<td>3.41</td>
<td>7.94</td>
<td>2.16</td>
<td>1.68</td>
<td>-9.49</td>
<td>31</td>
<td>.000</td>
</tr>
<tr>
<td>Gives the members of the team lots of appreciation</td>
<td>6.75</td>
<td>8.81</td>
<td>2.00</td>
<td>1.55</td>
<td>-4.21</td>
<td>31</td>
<td>.000</td>
</tr>
<tr>
<td>and support for their contributions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As the tables on the preceding pages show, a paired-samples t-test was conducted to compare the teachers’ perception of the leadership style of their principals before and after the implementation of PLC. Responses from both schools were analysed separately and grouped under the five categories, namely: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act and Encourage the Heart. If individual statements and the responses are analysed, we can see that there were significant improvements in the mean. In the paired-samples t-test the Sig. (2-Tailed) value in all cases was less than .001 (p ≤ .001). From all of this we can conclude that there was a statistically significant difference between the mean score of the LPI survey collected before the
implementation of the PLCs and the LPI survey collected after the implementation of the PLCs.

These results show that the teachers rated their principals higher on each of the five practices in the survey conducted after the PLCs’ implementation than in the survey conducted just before their implementation. This result gives some support to statements made by the principals regarding their belief that PLC helped them to improve their leadership styles or leadership practices. This change may have come about because, as we can see from the qualitative data, implementation of the PLCs gave a lot of opportunity for the principals to interact with teachers. Both principals demonstrated strong tendencies towards instructional leadership and visionary stewardship. Each played a critical role in developing and communicating a shared vision, shaping a culture of trust, supporting and monitoring collegial learning. We can also see that strong emotional bonds and shared responsibilities were developing, both between colleagues and between principals and teachers. In conclusion, we can reasonably say that implementing and developing the PLCs within these schools seemed to provide a useful infrastructure for the development of the leadership styles of both the principals.

6.4.3 Research Question Three

The third research question asked: ‘Is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy? What are the collective perceptions of this on the part of members of a PLC? And what are the principals’ perceptions?’.

To answer this question, I relied mostly on the focus group interview result. Focus group data were video recorded and as a safety measure, voice recordings also were done separately. The video data were transcribed and then imported to ATLAS ti. software for
coding and analysis. The details of how the coding and analysis were done are elaborated in the methodology chapter, above (see 5. 25). Using Bandura’s (1997) four sources from which we draw efficacy as a theoretical framework, namely: mastery experiences, vicarious experience or social modelling, verbal/social persuasion, and psychological response, I then attempted to see if all these or any of these sources exist in a PLC culture and how are these sources of efficacy fostered through PLC experiences.

Focus groups participants were asked first to talk about their initial experiences of being in the teaching profession. This question aimed to make them comfortable at the interview’s beginning. Nearly all the participants said that they had had very good experience to begin with. But a good few reported that they were nervous and thought they were failures in their first few weeks. One teacher reported that he felt that he was not making any impact on the students and thus left the job after struggling for three years. I noticed that he did not add those three years to his recorded experience. Some of them recorded that they found it difficult to move between the theory which they learned in college/university and day-to-day practice. One put it thus:

.... I was very fresh after B[achelor of] Ed[ucation] full of enthusiasm that all what I learn from B. Ed. should be used in the class. All the theory should be practiced, and that was my idea. But soon I realised that many of those are not practical. I found there is a big gap between theory and practice. I think I utterly failed to bridge this both. And I lost the first year completely. I don’t think I made any impact those initial years on students. So, I left the teaching career after three years .... But after a few years due to the circumstances I came back again to teaching (SD 17).

Many of them reported openly that teaching was not their dream job. They wanted to become something different but circumstance, including finance and family responsibilities forced them to take teaching as their profession. In some cases, even though they found that the teaching was “not their cup of tea” they had to continue. One teacher
noted: ‘I thought teaching is very difficult. It was disheartening. Sometimes I thought of leaving the job but there was no option’ (SJ 19). Once they were comfortable in the group I asked them to share their experiences of the PLCs.

6.4.3.1 Teachers’ Opinions on PLCs

In general, teachers were very happy about the PLCs and happy to be part of one. They expressed different reason for being satisfied. Some of the most consistently reasons were as follows.

- Our mutual trust levels increased.
- We were getting positive feedback.
- We learned to appreciate each other.
- The PLC gave opportunities to learn.
- It was an opportunity for us to come together.
- PLCs gave us a platform to discuss the common challenges, both from the students as well as from our colleagues.
- It created a zeal for learning.
- We got a platform to share our views.
- There was more unity among us.
- Group discussion was more beneficial for us than working alone.
- We were afforded an opportunity for self-evaluation.
- The PLC was a great problem solving opportunity.

However, there were also some who were not very happy about PLCs or the ways in which they functioned. Common objections and criticisms were as follows.

- It is an extra burden.
- Planning is lacking.
- We need to have specific time available for the meetings.
• It is time consuming.

• We are not able to have a group for our own subject. Therefore, it is not of any use to us. (In these cases, different subject teachers were formed into single a PLC).

As stated above, I was specifically looking for the four sources of efficacy. Overall, focus group discussions indicated the presence of one or more sources of efficacy present in the operation of PLCs, especially in PLC meetings and mutual observation of classroom performance. I examine below each source of efficacy separately.

6.4.3.2 Mastery Experience

Bandura (1997) stated that mastery experiences are the most influential sources of teacher efficacy. In other words, it is performance accomplishments that matter most. Successful experiences lead to greater feelings of self-efficacy. I attempted to establish if the PLC interventions had helped by providing an environment for mastery experience for the teachers. Data from focus group interview suggested that mutual observation of classroom performance was a great source of mastery experience. Most of the participants reported that when they knew that someone was coming to observe a class they put more effort into preparing that class. ‘Since only after strict preparation I used to enter the class, I was confident’ (SD 13). Getting the approval of a colleague after an observation was also often a source of mastery experience. ‘I am teaching Mathematics. But I don’t claim that I am a master of Mathematics. But when [name of the co-teacher] observes my teaching and give her feedback I become more confident and I have a feeling that yes, I too am teaching well’ (SD 10). It is obvious that the fundamental source of mastery experience is knowledge of the subject. I observed many of the PLC meetings and noted how they often helped the participants to acquire more knowledge in their own subject areas. ‘We used to bring new articles from Google Scholar [a free online source for the location of academic articles].’
publications] and discuss it in our meetings. That was the best part, I think. Regarding Mathematics, we got a lot of new knowledge in that discussions. Now whenever we get time we bring one article and discuss’ (SD 24). Some of the participants said that during the PLC meetings they were able to discuss concepts about which they were not very clear or which they thought they were not able to communicate well to those they taught (SD 2; SD 8; SD 23; SJ 9; SJ 17). As a result, they testified, they felt more confident when they teach in the class. ‘… with discussion, I am able to understand it better and then I can explain to the students in a much better way’ (SD 2).

Definitely it is helping us. It diminishes our worry a lot. We used to worry ….. now new chapter we must begin, the concepts are not clear… these were worrying us sometime. Now prior to beginning the new chapter we sit together and discuss. That gives us confidence. It helps us to understand the things in a much better way (SD 3).

One great help I got from PLC was that we started suggesting good books. When someone is reading a good book, that book was introduced in the PLC meeting and then we got some idea about it and if we are interested we can go for it. I found it very helpful. This happened only due to PLC meetings. Otherwise I even did not know that such types of books exist. It helped me to grow professionally (SD 31).

In the beginning of the school year, our principal gave one full day for every PLCs to come to school and have a demo class. So, when one teacher was giving the demo, we understood that each of us, even though the topic is same, are teaching in different manner. For example, I am teaching algebra with some methods and (name of the teacher) is teaching it with some other methods, and (name of the teacher) is teaching with some other methods. Same question can be learnt to solve in different ways. It is helping us a lot. Having seen all these different method, we are able to choose the best one and the easiest one for the students. I think PLC is the most purposeful method for professional development and we gain mastery over the subject though all these exercises (SJ 7).

Mutual observation was very useful. When we are teaching in front of any expert it is much different. We become very alert. Obviously, it builds up our confidence also. And we try to put our best effort on that theme. So generally, there is improvement. Then there is a desire to improve more and more….. confidence is built, that is the main thing, I think (SJ 19).
These are some of the quotations selected from 41 passages which, directly or indirectly, touched on mastery experience. In general, feedback from one considered to be an expert who observed teaching during the professional learning interventions was very much stressed as enhancing mastery experience. Reports also suggested that mastery experiences for a few participants were based on the self-evaluation prompted by observing others.

*It is a platform in which we are able to look into the area where we are lacking... When we observe, other teachers teaching we get lot of new ideas and we become aware of our week points. So, personally speaking I have implemented all those things in my classroom which I thought beneficial for the students and that gives me a feeling that I too am improving* (SJ 27).

According to Bandura (1997) mastery experience is one of the four significant influences on the shaping of individual’s sense of self-efficacy. This finding is thus very significant: implementing and operating PLCs positively influenced the teachers’ mastery experiences, either because they prepared better when they knew that someone was coming to observe a class or because they obtained colleagues approval. Being involved the PLCs also prompted, in some cases, self-evaluation, which, in turn, triggered a further sense of mastery experience. Mastery experiences are recognised as a crucial influential factor in the promotion of increased self-efficacy.

### 6.4.3.3 Vicarious Experience

According to Bandura (1997) the second source of self-efficacy comes from our observation of people around us. Seeing people like ourselves succeed by their sustained effort promotes the belief that we, too, possess the capabilities to master the activities needed for success in that respect. In many comments made in the focus groups teachers reported clearly and consistently that observing someone else perform well in the class or handle a situation motivated them (SD 12; SD 26; SD 21; SD 1; SJ 2; SJ 12) to perform
well or encouraged a feeling that “we too can do the same”. Similarly, they also said they were curious to know how other teachers were preparing a topic (SD 22; SJ 27), felt encouraged (SD 20) or inspired (SD 8; SD 3; SJ 21, SD 28),

*It helps a lot. Suppose if I think that I am not good at this particular topic, I can go to other class and see the way the other teacher teaches. So, this gives me an opportunity to sit in the class and gain knowledge about that particular to it and how to teach it. It is good it has an impact on my confidence and on my professional development, I believe* (SD 26).

*I always feel motivated when I visit [teacher’s name] class. His way of teaching is very nice. He does not just teach the chapters, he discusses also some general issues which are current affairs and is connected to the topic taught. I am really motivated by his way of teaching* (SD 1).

*Sometimes, when I bring a problem in the [PLC] group there may be someone who already had gone through the same struggle and has already implemented a solution effectively. So that is a tested and proved solution readily available for me. I really feel more confident in implementing those in my own practice* (SJ 27).

Bandura (1997) found that the effect on observers was strongly related to the degree to which the observer identified with the model. When the observer identified closely with the model, the effect on his/her self-efficacy was stronger. If the model was viewed by the observer as possessing similar skill levels to the observer, the model’s success or failure would influence the efficacy beliefs of the observer. In other words, if a teacher observes that his/her colleague succeeds, he/she will believe himself or herself to be more capable of success. Confirmation of this emerged very clearly from the data. Vicarious experiences had a strongly positive influence in the PLCs’ participants.

### 6.4.3.4 Verbal Persuasion

In Bandura’s (1997) social cognitive theory verbal persuasion may influence a teacher’s efficacy and I found evidence of this being so. One teacher said, ‘There are times when we really get disillusioned, that was my experience. Some time we may think that I am the
best teacher in this subject. But when we get the feedback from our colleague we come to know where we really stand’ (SD 24). Another teacher stated, ‘as I was thinking I was perfect and when I saw that how others are teaching I got a little bit disillusioned’ ((SD 31). Someone else said ‘I got new ideas. I became aware of my writing problem and I was able to overcome it. It was brought to my attention by my colleague when he came to my class for observation’ (SJ 15).

*I used to write down on the board each and everything. It became a habit that I was never aware that I write and rub it off as soon as I write; again, I write something else and rub it off immediately. As a result, students were not benefiting from it, as I do not give them time to read it or copy it. When the teacher came into my class to observe, she brought it to my notice and then I became aware of it. I do not do the same now (SJ 10).

Verbal persuasion also happened in the PLCs in the form of encouragement. Almost every participant in the focus groups stated that they experienced all the more encouraged when they received positive feedback from other teachers. When they were asked how they felt when they were given positive feedback from the teachers who observed their classroom performance one teacher said, ‘I cannot really explain how much it increased my confidence level or contentment we can say. I feel that I have reached some other world’ (SD 3).

*The positive energy we receive from getting appreciation is not something we can take for granted. There is nothing more precious than the feeling that we truly matter. Feeling genuinely appreciated is very much energizing. I think it is a basic human need. Sometimes a little bit of appreciation boost us a lot. PLC gives us a platform to notice what others are doing right and then appreciate it (SJ 14).

SJ 14 continued by saying that he could tell three good qualities that he observed in each of his PLC members and he named each one and the three qualities he found in each of them. I noticed how this simple act was appreciated by everyone. Another participant said, ‘It boosts up our morale. I am appreciated for this I can do better, that becomes our attitude. I long for more appreciation and thus I do better and better so that others may appreciate

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me. It helps that way’ (SD 8). And another teacher gave an example that seemed especially apt.

*I will give you an example, one day [name of the teacher] came and said to me ‘I have to give some notes to the students. Can you have a look at it and correct if there is any mistake. Because I have observed that your grammar is very good’. She is the senior most teacher in our school and is generally appreciated as a teacher who has a very good English. So, the very fact she asked me to correct was enough for me. I went back and revised my grammar again thinking that I should not make any mistake now (SD 7).

According to Bandura (1997) verbal persuasion is not as influential as mastery experiences and vicarious experiences. In this study verbal persuasion come mainly from descriptive feedback on a teacher’s performance from his/her colleagues during the observed classes and in PLC meetings. Though getting appreciation was valued very highly, critical evaluation also became a source of encouragement to improve. This, in turn, might bring mastery experience.

6.4.4 TSES Survey Result

To further understand this issue, I used the TSES survey, which categorises efficacy into three subscales: efficacy in student engagement, efficacy in instructional strategies, and efficacy in classroom management. The mean and standard deviation for each of the subscales from the TSES were calculated. Table 22 reports the results of the analysis.
Table 22: Teachers’ Sense of Efficacy Scale Mean and Standard Deviation Subscale Score
(N= 58)

**St. David’s School**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre- research</th>
<th>Post-Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. deviation</td>
</tr>
<tr>
<td>Efficacy in Student Engagement</td>
<td>6.40</td>
<td>.64751</td>
</tr>
<tr>
<td>Efficacy in Instructional Strategies</td>
<td>6.18</td>
<td>.63834</td>
</tr>
<tr>
<td>Efficacy in Classroom Management</td>
<td>6.21</td>
<td>.55022</td>
</tr>
</tbody>
</table>

Table 23: Teachers’ Sense of Efficacy Scale Mean and Standard Deviation Subscale Score
(N= 33)

**St. Joseph’s School**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre- research</th>
<th>Post-Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Efficacy in Student Engagement</td>
<td>5.87</td>
<td>.70813</td>
</tr>
<tr>
<td>Efficacy in Instructional Strategies</td>
<td>5.99</td>
<td>.91081</td>
</tr>
<tr>
<td>Efficacy in Classroom Management</td>
<td>5.89</td>
<td>.76599</td>
</tr>
</tbody>
</table>
The results, as shown in the tables above, suggest that in both St. David’s and St. Joseph’s schools there were improvements in the mean score when pre-research and post-research data were compared. Of the two schools St. Joseph’s showed greater improvement.

6.4.5 Correlational Findings of PLCA-R and TSES

To determine the relationship of this finding to the fact of there being in operation PLCs, a Pearson’s correlation of the sub-scale scores of the PLCA-R and TSES was used. When determining a correlation, a positive value for the correlation implies a positive association between the two variables. Conversely, a negative value for the correlation suggests an inverse association between the two variables. A perfect correlation would result in r=1. The Pearson’s correlation determined the linear relationship among the following sub-scales of the PLCs: shared and supportive leadership [SSL]; shared values and vision [SVV]; collective learning and application [CLA]; shared personal practice [SPP]; supportive conditions-relationships [SCR] and supportive conditions-structures [SCS] to the sub-scales of the TSES survey: efficacy in student engagement [ESE; efficacy in instructional strategies [EIS] and efficacy in classroom management [ECM]. Table 24 Contains the result of the analysis at p<.50.
Table 24: Pearson Correlation of PLCA-R and TSES Subscale Scores

St. David’s School

<table>
<thead>
<tr>
<th>Shared and Supportive Leadership</th>
<th>Efficacy in student engagement</th>
<th>Efficacy in Instructional Strategies</th>
<th>Efficacy in Classroom Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson correlation</td>
<td>.289*</td>
<td>.072</td>
<td>.259*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.014</td>
<td>.590</td>
<td>.030</td>
</tr>
<tr>
<td>N</td>
<td>58</td>
<td>58</td>
<td>58</td>
</tr>
</tbody>
</table>

| Shared Vision and Values        |                               |                                    |                               |
| Pearson correlation             | -.042                         | .008                               | .162                          |
| Sig. (2-tailed)                 | .755                          | .953                               | .224                          |
| N                               | 58                            | 58                                 | 58                            |

| Collective Learning and Application of Learning |                               |                                    |                               |
| Pearson correlation             | -.004                         | -.041                              | .128                          |
| Sig. (2-tailed)                 | .734                          | .760                               | .339                          |
| N                               | 58                            | 58                                 | 58                            |

| Shared Personal Practice        |                               |                                    |                               |
| Pearson correlation             | -.211                         | -.076                              | .164                          |
| Sig. (2-tailed)                 | .112                          | .572                               | .219                          |
| N                               | 58                            | 58                                 | 58                            |

| Supportive Conditions-Relationships |                               |                                    |                               |
| Pearson correlation             | .388*                         | .275*                              | .332*                         |
| Sig. (2-tailed)                 | .001                          | .010                               | .011                          |
| N                               | 58                            | 58                                 | 58                            |

| Supportive Conditions-Structures |                               |                                    |                               |
| Pearson correlation             | -.149                         | -.008                              | .176                          |
| Sig. (2-tailed)                 | .265                          | .952                               | .186                          |
| N                               | 58                            | 58                                 | 58                            |

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

Thirteen of the 18 factors failed to show a significant relationship between PLCR and TSES. A significant correlation could be found only between SSL and ESE, SSL and ECM, SCR and ESE, SCR and EIS, and ECM and CR. We can also observe five statistically significant relationships. That is: shared and supportive leadership correlating with
efficacy in student engagement and efficacy in classroom management as well as supportive conditions – relationships with efficacy in student engagement, efficacy in instructional strategies and efficacy in classroom management. Hoy (2000) theorised that leadership practice helps teachers believe that they can and will make a difference through their instructional practices. In 2001 Tschannen-Moran et al. declared that over the past two decades and for longer before that empirical data had accrued regarding the positive relationship teacher efficacy has on student motivation, engagement, and achievement (2001). My research seems to support these earlier findings.

But it is important to note that 13 of the 18 factors failed to show any significant relationships. This finding was not expected as the rest of the data, especially from the qualitative research, gave some indications that there would have been more correlations. One of the reasons for this somewhat anomalous fact could be that the PLCA-R is based on organisational construct and the TSES is based on individual construct. I strongly suspect that using a collective teacher efficacy scale may have shown a clearer, more consistent result. Does what worked at the individual level carry over to the collective level? This could be a point of interest for a further study. Another reason for this unexpected result could be that the teachers’ efficacy level was already high, even before the PLCs came into operation. Finally, the anomaly could also be attributed to casual filling of the research questionnaire as the qualitative data. A combination of things may be issue.
Table 25: Pearson Correlation of PLCA-R and TSES Subscale Scores

St. Joseph’s School

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pearson correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
<th>Efficacy in student engagement</th>
<th>Efficacy in Instructional Strategies</th>
<th>Efficacy in Classroom Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared and Supportive Leadership</td>
<td>-.042</td>
<td>.814</td>
<td>33</td>
<td>-.073</td>
<td>.686</td>
<td>.170</td>
</tr>
<tr>
<td>Shared Vision and Values</td>
<td>-.013</td>
<td>.943</td>
<td>33</td>
<td>.000</td>
<td>.998</td>
<td>.186</td>
</tr>
<tr>
<td>Collective Learning and Application of Learning</td>
<td>-.214</td>
<td>.233</td>
<td>33</td>
<td>-.056</td>
<td>.757</td>
<td>-.107</td>
</tr>
<tr>
<td>Shared Personal Practice</td>
<td>-.101</td>
<td>.957</td>
<td>33</td>
<td>.023</td>
<td>.900</td>
<td>.150</td>
</tr>
<tr>
<td>Supportive Conditions-Relationships</td>
<td>.062</td>
<td>.731</td>
<td>33</td>
<td>.058</td>
<td>.747</td>
<td>-.040</td>
</tr>
<tr>
<td>Supportive Conditions-Structures</td>
<td>-.216</td>
<td>.228</td>
<td>33</td>
<td>.026</td>
<td>.886</td>
<td>-.088</td>
</tr>
</tbody>
</table>

As shown in the tables above, despite the intuitive plausibility of there being a correlation, the quantitative data analysis shows no evidence of significant correlations between PLCA-R and TSES. A result is considered significant if the probability is unlikely to have occurred by chance. The table shows that there are even negative correlations though not significant. This result was unexpected as the qualitative data exhibited possibilities of significant correlation. What can be inferred from this result is that though according to each individual teachers’ perception they have benefitted from participating in PLC to improve their self-efficacy in teaching collective perception could not significantly correlate with PLC and teachers’ self-efficacy. However, it could be that more extensive
research involving more participants in more schools and conducted over a longer period would lead to a different outcome (added to the points noted above, I consider that the reason for this result could be (a) that participants completed the survey without giving due seriousness to it, (b) that the number of participants were less than would be usual for a quantitative study, and (c) the time available was very limited and may have been insufficient for finding a significant result).

6.5  Summary

In this chapter, quantitative and qualitative data were analysed and presented in an effort to answer the research questions.

1. How do PLCs operate in north Indian Schools?
   a) What are the factors that help or hinder the creation and development of effective PLCs?
   b) What are the challenges experienced in implementing PLCs in north Indian Schools?

2. Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?
   a) What are the teachers’ perceptions?
   b) What are the principals’ perceptions?

3. Is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy?
   a) What are the collective perceptions of this on the part of members of a PLC?
   b) What are each individual teacher’s perceptions?

Qualitative data were gathered through focus group interviews, interviews with principals, reports produced by the principals and my own observation during the field visits. Finally,
quantitative measures, including the PLCA-R, used to look at how teachers perceived the presence or absence of the five dimensions of PLCs present in their school, the LPI, used to evaluate the effect of PLC on principal’s leadership style, and the TSES, used to measure levels of teacher efficacy, were all employed. The next chapter presents a summary, conclusions, and implications of the findings. In addition, some tentative recommendations for future research are offered.
Chapter 7

Summary, Recommendations and Conclusions

7.1 Preface

This chapter provides a summary of the study, an overview of the procedures and the research questions, followed by discussion of the findings. Conclusions and implications of the study, as well as recommendations for further study, are presented with concluding thoughts. The purpose of this study was to examine the effects of operating PLCs in schools in north India. More specifically, this study examined the effects of a PLC on principals’ leadership styles and on teachers’ levels of self-efficacy in two north Indian schools.

7.2 Introduction

PLC had become a “buzz” term in educational contexts by 2018 and it had become central to many efforts at bringing about improved professional development around the globe, especially in the United States where there was a growing interest in developing PLCs in schools in the early twenty-first century in an attempt to improve teachers’ levels of effectiveness (e.g. Mintzes, Marcum, Messerschmidt-Yates, & Mark, 2013) and students’ learning (e.g. Dogan, Pringle, & Mesa, 2016). The literature review gives ample empirical evidence of the impact of PLCs on teachers’ practices and students’ learning. Specific literature deals with the impact of PLCs on scientific, technological, engineering and mathematical teaching and learning (e.g Fulton & Britton, 2011). The overall or most commonly expressed view on PLCs can be summarised in words taken from a study conducted in England (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005); this concluded that ‘the idea of a PLC is one well worth pursuing as a means of promoting
school and system-wide capacity building for sustainable improvement and pupil learning’ (p. 145). The principal reasons I had for being interested in PLCs were as follows. (1) PLCs are generally thought to be effective when operated by those educational leaders who already know that top down reform initiatives are often short-lived and (2) PLCs are different to initiatives that are confined to delivering administrators’ ideas to teachers, this more common model may have the effect of creating tension rather than empowerment, whereas PLCs give teachers opportunities to be heard and empower them to be leaders in the right sense.

Overall, it emerges from previous research into aspects of PLCs that a reform that is teacher-initiated and grounded in daily classroom practice may be more likely to be effective and achieve the ultimate end of educating students. This would seem to be so because this process (developing and operating a PLC) calls on teachers to work together in collaborative teams to implement them and gather evidence of whether and how students are learning through formative assessments in their classrooms. I could see the PLC discussions gradually progress from more routine matters (eg lack of time and high numbers of students in the classes) to the evaluation of students’ comprehension, academic progress during teachers’ lessons, different learning needs etc. The teachers were gathering detailed information from each other that could be used to improve instruction and students’ learning. For example, during a PLC meeting (in which I was present as an observer) a teacher raised the key question: “How do you know that they have learned what you taught?” She said, she would ask the students to raise their hands if they felt that they had understood. I could see from the body language and gestures of the participants in the PLC that they approved and appreciated this point. Therefore, I can say that I did see in
both the observed schools that there was some shift towards a more collective approach to professional learning.

7.3 Overview of the Study

The first part of this research study focused on the implementation of PLCs in two schools in north India. To prepare for that work I used the literature review to consider the concept of school culture, because culture is a powerful force. Schools need both clear structures and strong cultures if they are to succeed. School culture influences how people think, feel and act (Deal & Peterson, 2009). Looking at the characteristics of a PLC one can easily see that the invitation to implement a PLC is tantamount to an invitation to change a school’s culture. According to Deal and Pearson (2009) the key ways culture is manifested include relationships among staff, how newcomers are treated, relationships between staff and administration, how students who are struggling are treated, how staff collaborate to improve the school, and how success and accomplishments are celebrated.

In the literature review I also took time to consider leadership as it is another important theme in the literature that the leadership quality of the principal has great bearing on the success/failure of a PLC. Carpenter (2015), in his study on school culture and leadership of professional learning communities, concluded that leaders must provide supportive and shared leadership structures in order to ensure a positive school culture and effective professional learning. As mentioned in the literature review (chapter 2) a growing body of evidence suggests that when schools and groups of schools with the necessary capacity set about organising themselves as PLCs, and are compared with counterparts that do not, PLCs have a consistently positive impact on students’ achievements. The role that the
principal and other leaders can play in the creation and development of such community endeavours could well seem quite obvious. It is abundantly clear that collegial activities focused on staff learning cannot easily happen across the entire school staff without the principal’s support and guidance (Hord & Sommers, 2008; Wells & Feun, 2007). Thus, the literature review tried to deal at length with different theories and aspects of leadership, and particularly of educational leadership. Emphasis was especially placed on the role of the principal in PLC leadership.

The literature review explored the theme of teacher-efficacy because this study also sought to establish if there was a correlation between the implementation of professional learning communities and teachers’ perceived self-efficacy. In a study trying to establish the power of collaborative communities to improve teaching and learning Carroll, Fulton, and Doerr (2010) concluded, ‘Overall, the studies show us that when teachers are given the time and tools to collaborate they become life-long learners, their instructional practice improves, and they are ultimately able to increase student achievement far beyond what any of them could accomplish alone’ (Carroll, Fulton, & Doerr, 2010, p. 10). Self-efficacy was a rising star in research on characteristics that make a teacher most effective in the classroom by 2018 (e.g., Poulou, 2017; Zee & Koomen, 2016). Thus far, a growing body of theoretical and empirical work has demonstrated the complex ways in which teacher efficacy may have relationships with students’ achievement and motivation (Zee & Koomen, 2016). Rick DuFour has stated: ‘This sense of efficacy is also critical to schoolwide improvement efforts. If those within the school believe that the causes of student learning lie outside their spheres of influence school improvement efforts will be viewed as futile’ (DuFour & Berkey, 1995, p. 5). While the research is clear in regard to the importance of PLCs in schoolwide improvement and teachers’ efficacy levels, I observed that there was a lack of
research as to whether or not the implementation of a PLC in a school affected the efficacy levels of the participating teachers. Therefore, this study very specifically examined the relationship between the PLC and teacher self-efficacy.

This study was conducted in two schools in northern India with the aim of investigating the impact of establishing and operating a PLC on principals’ leadership style and teachers’ levels of self-efficacy. The research involved a combination of qualitative and quantitative tools, used sequentially but with priority given to the qualitative phase. The research involved the use of semi-structured interviews, focus group interviews, and observation. To gauge the level of teachers’ views as to how well PLCs were implemented the PLCA-R survey instrument was used. There are six components of the PLCA-R: Shared and Supportive Leadership; Shared Values and Vision; Collective Learning and Application of Learning; Shared Personal Practice; Supportive Conditions – Relationships; and Supportive Conditions. These six measures have been shown to be valid indicators of successfully operated PLCs. The Teacher’s Self Efficacy Scale survey was used to gauge what teachers thought about their own levels of efficacy in three component areas: efficacy in student engagement; efficacy in instructional strategies and efficacy in classroom management. The Leadership Practice Inventory survey was used in an attempt to establish if the implementation of a PLC helped a principal to improve his/her leadership style. The LPI contained questions pertaining to the five categories of leadership described as the Five Practices of Exemplary Leaders by Kouzes and Posner (2002a). The five categories are as follows: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart.
I generated qualitative data using an increasingly popular technique in the field of education, namely ethnographic or observational research. I chose this method because there can be gaps between what people say they do and what they actually do. One easiest way to overcome this problem is through observation. Another consideration was that there can be some aspects of a situation about which participants do not even consciously think. A simple conversational interview might never bring key truths to light. And, in fact, the analysis of the data in this research suggested that there were differences in what teachers said they did and what they actually did. For instance, if I were to consider only the quantitative data, I would have come with a categorical conclusion that there is no significant correlation between a PLC and teacher-efficacy. But since the qualitative data gave much evidence that the sources of efficacy, according to Bandura (1997), were present in the PLCs operating in these two schools, we may assume that there is room for further discussion before drawing conclusions.

7.4 Analysis of the Findings

The following section analyzes the study’s findings from Chapter Five. This analysis is centered on the three major research questions from this study.

7.4.1. Research Question One
   How do PLCs operate in north Indian schools?

   a) What are the factors that help or hinder the creation and development of effective PLCs?

   b) What are the challenges experienced in implementing PLCs in north Indian schools?
The first research question was largely concerned with the creation and development of PLCs (the implementation process) and was an attempt to tell the story of PLC development in the Indian context. The figure below gives a basic sense of this.

![Figure 10. Process of the implementation of PLC](image)

The story of the development of PLCs in these two schools seemed to confirm the view of Eaker and DuFour (2015) and some other researchers (as outlined in Chapter 3) that there is no step-by-step plan when it comes to the establishing of a PLC. Each school had its own context and we can see that even though a similar procedure was followed (as the diagram above notes) there were also differences between the two schools regarding the formation and operation of their PLCs. Each school took its own approach to the development and operation of the PLC ideal.
Both principals took a keen interest in acquainting themselves with some basic literature on PLCs and they encouraged the teachers to do the same. This fact was very helpful. It reminded me that Hord (1997) had said that a strong commitment by the school leader is an absolute necessity for developing successful professional learning communities. Leadership support was very much evident especially in the matters of planning and time management in both the schools. As the PLCs evolved the principals felt the need to invest more time and energy in them. I observed that by responding to these demands they were exhibiting new leadership skills especially in the matter of shared leadership, being a role model and setting directions. I also observed some evidence of the dilemma faced by the principals in their changing roles in the PLCs. Roughly speaking, the principals had to deal with allowing themselves to be seen less as solitary authority figures (a stance inherited from the hierarchical culture of Indian society as mentioned in the previous chapter) to being seen as facilitators in the professional learning community.

Undoubtedly, the enthusiasm of the teachers played a very great role in the implementation of the PLCs. Apart from some initial reluctance teachers were very cooperative. The findings in this study support previous studies on PLCs that have suggested they increase collaboration among teachers and reduce the tradition of teachers’ isolation to a certain extent. In analysing the focus group interviews it was very clear that PLCs provided the teachers opportunities to engage in ongoing collegial activities where they talked about teaching, received frequent feedback on teaching and designing classes (at least in some cases), taught each other etc. As DuFour (2004) predicted I could observe that the teachers were working together in teams to analyse and improve their collective learning and classroom practice. Additionally, analysing the PLCA-R results it became apparent that the teachers in SD and SJ felt that the characteristics of a successful PLC, namely Shared
and Supportive Leadership, Shared Values and Vision, Collective Learning and Application, Shared Personal Practice, and Supportive Conditions, existed in their schools.

7.4.1.1 Factors that Help or Hinder the Creation and Development of Effective PLCs

Some of the themes that emerged from my analysis of the data obtained in relation to the factors that help the creation and development of effective PLCs were:

1. conducive organizational structures;

2. supportive leadership;

3. clarity of the vision and mission of the school;

4. effective planning and time management;

5. personal and collective trust (between staff and management) and

6. collaborative team work. (see chapter 6 for details)

The findings of this study can be compared with those of Hipp and Huffman (2010) who suggested that beginning with a clear vision of what we are striving to achieve is very important for successful PLCs. The efforts the principals had made to clarify the vision and mission of each school helped a lot in the successful implementation of the PLCs in both cases, and that could be considered as the first step. Researchers like DuFour and Eaker (1998), Hord (1997), Hipp and Huffman (2010) agreed that supportive conditions are amongst the most important factors if PLCs are to thrive. They are of the opinion that there are two types of conditions necessary to build effective PLCs, namely: structural conditions and relationships. Hipp and Huffman (2010) observed that, in practice, considerations such as time and proximity are often provided by administrators who allow staff members to come together to work and learn. This study reaffirms this finding. My
data suggest that both the principals were keen to provide supportive conditions, as mentioned above, and that was one of the most important helping factors.

Hord and Sommer (2008) explain that supportive and shared leadership are both important factors for the successful implementation of PLCs. Similarly, Fullan (2005) asserts that good leadership plays a vital role in transforming any organisation (in this case a school) in order to get better results. The findings of this study clearly showed the importance of leadership in the successful implementation of PLCs in both schools. I could see the leadership being shared. For example, we have seen that, in both the schools, teachers were given the freedom to arrange their PLC meeting for convenient times and the principals modified the timetables accordingly. Here I could see a cultural shift from teachers being mere ‘implementers, or ‘followers’ to decision makers or leaders. Hord (1997) explains that supportive and shared leadership are evident when school administrators share power, authority, and decision making with teachers. Hord (2004), Hipp and Huffman (2010) and many other authors on PLCs agree that without creating a culture of trust and respect PLCs cannot be sustained/effective. In this study we have noted that PLC practices (namely: PLC meetings and collegial observations) increased trust among teachers and since the PLCs gave more opportunity for principals to interact with teachers in a regular way, they also positively affected the relationships between teachers and principal. Trust, in turn, became a helping factor for the PLCs. The absence of any of the themes mentioned above could hinder the development of an effective PLC.
7.4.1.2 Challenges and Barriers

Lack of time was the most common concern expressed by the staff involved in PLCs in both the schools. During the personal interviews principals also expressed their concerns with regard to effective time management. Teachers will not be able to develop common assessments or evaluations if the structures and time are not provided for them to do so. Although, as we have already seen, both the principals did their best in this respect, lack of time remained a real concern. The consensus from the PLC participants (revealed by the focus group interview) was that the current allocation of time for PLCs to meet was not enough. Lack of understanding was another challenge. It is very important that the participants in one should have a clear idea of what a PLC is. In the attempt to implement PLCs, the most pressing need was to clarify what this intervention looked like in practice. During the personal interviews the principals reported that even though I began with a workshop, introducing PLCs and allaying participants’ doubts, some of them still did not understand exactly what these were and why they mattered. Even principals themselves sometimes felt the need to be clearer while giving instructions or guiding teachers into PLC. One of them said ‘I myself understood that clarity was lacking while defining the expectations for PLCs’ (SD principal, personal interview, October 17, 2016). Another challenge that could be observed in this study was the difficulty involved in developing collaborative cultures. Most specifically, in some cases there was reluctance to observe other teachers teaching or allowing oneself to be observed. This may be due to the teachers’ authoritarian and dogmatic approaches to knowledge transfer. Collaboration is the cog in the engine of team performance and previous chapters have explained how one person’s unwillingness to collaborate affected a PLC. Therefore, we can say that, though there were a great deal of collaboration, the difficulties involved in developing collaborative cultures posed barrier.
7.4.1.3 Conclusion
In conclusion I can say that the PLCs developed/observed in north India operated very similarly to the PLCs described in the literature more generally. They met regularly, shared expertise, worked collaboratively by observing each other’s practices, developed cultures of collaboration and trust in professional development, and provided a safe space for professional dialogue and enquiry.

7.4.2 Research Question Two
Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?

   a) What are the teachers’ perceptions?
   b) What are the principals’ perceptions?

Previous research has suggested that effective leadership is critical for organisational change (Harris, 2004; Hord & Sommers, 2008; Sparks, 2005). It was also very clear from the reviewed literature (e.g., Ontario Principals’ Council, 2009) as well as the findings of this study that the leadership plays a very important role in the implementation/development of PLCs in a school. Some literature notes the different roles principals can play in PLCs including, setting directions (Ontario Principals’ Council, 2009), creating shared belief, values and vision (Hord & Sommers 2008), developing people (Leithwood, Day, Sammons, Harris, & Hopkins 2006) and re-designing the school organisation to have a collaborative culture (Ontario Principals’ Council, 2009; Eaker 2002). As it is obvious from the foregoing that the principal’s leadership plays an invaluable role in creating and nurturing a PLC in a school, it is also conspicuous that there is a gap in the research regarding the benefits that principals receive from implementing and sustaining PLCs in their schools. Therefore, I tried to bridge this gap in my research
by attempting to answer the question: ‘does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?’. I tried to do so from two different angles. One concerned the views of the principals who participated in it and the other concerned the perspectives of the participating teachers.

7.4.2.1 PLCs Influence on Leadership: Principals’ Perceptions

Both the principals agreed that participating in or implementing a PLCs in his/her school was a learning experience for him/her and they, too, gained from it. Both the principals thought that taking the opportunity to implement PLCs in their respective schools gave them opportunities to have new visions of their leadership roles. According to them, they became more aware of the leadership responsibility that lay with them as principals. The interview data made it clear that they each had elaborate discussions with the staff of their respective schools on the missions and visions of those schools. This gave each an opportunity to make sense of his/her leadership role. Both principals also had the opportunity to come to know more about the teachers, which helped them to be more effective in guiding them. Participating in the PLCs allowed them to move from being simply managers to leaders.

According to the principals PLCs gave them opportunities to establish goals and set high expectations. I noticed that they initiated discussion with staff regarding how far they had achieved these goals. Here they were showing their movement towards democratic leadership. I observed that their leadership styles became more and more learning-focused, concerned with learning on the part of both students and teachers. A culture of public practice and reflective practice could be observed to be developing in both schools. There
was evidence that the principals were increasingly focusing on the effective management of resources and of people. Arranging parallel periods so that two classes could be combined together and arranging visiting experts to help teachers in using smart boards are examples of this happening. The principals noted that after the PLCs were implemented they had more opportunities for direct involvement with the support and evaluation of classroom teaching. Thus, we can conclude that the operation of the PLCs had some influence for the better on the subsequent professional conduct and working practices of the principals.

The principals were also of the opinion that PLCs gave them opportunities to develop more trust in their staff which, in turn, helped them to become more collaborative. As I have mentioned in the previous chapter this is noteworthy because in India obedience to authority is the norm. Therefore, this was a great step towards democratic leadership under which staff were empowered to develop plans, to give suggestions, to take decisions and take responsibility etc. It is also worth mentioning here that I observed some teachers expressed the view that the PLCs had created an enormous paradigm shift in what type of leadership they were familiar with. Hirsh and Hord (2008) earlier observed that ‘Sharing the power, authority, and decision making with the staff can be challenging for some principals. But those who have accomplished this transition have found it highly satisfying to have colleagues who share in the responsibility for improving instruction for the students of the school’ (p. 28). The principals in the study (see the previous chapter) also admitted that it was not easy for them in the beginning as they were more used to ordering and simply being obeyed. But the principal of SD claimed that by the end of the PLC experiment a mutual empowering system was at work in the school.
In conclusion I can say that the overall perception of the principals was that their involvement in implementing PLCs and their cooperation in sustaining them made them more visionary, more prone to sharing leadership, being collaborative, motivational and instructional in their leadership and empowering staff by promoting/participating in teachers’ learning.

7.4.2.2 PLCs Influence on Leadership: Teachers’ Perceptions

Leadership in a school is a phenomenon that is both practised and experienced. Therefore, I considered it important to see if teachers perceived any change in the leadership style of their principal. Thus, to get a clear picture of the teachers’ views on the question ‘Does a principal’s initiative to support and sustain a PLC have any effect on his/her leadership style?’ I used the LPI. Using this survey, I compared the teachers’ perception of the leadership style of their principal before and after the implementation of PLC. When a paired t-test (2-tailed) was conducted the value in all cases was less than .001 (p ≤ .001). From this we can conclude that there was a statistically significant difference between the mean score of the LPI survey collected before the implementation of the PLCs and the LPI survey collected after the implementation of the PLCs.

A closer look at responses from the teachers suggest that they perceived improvements in practices such as shared leadership and instructional leadership. They also observed increases in mutual trust between principal and staff. What these results suggest is that the principals’ involvement in implementing and sustaining PLCs had positively affected their leadership practices.
To conclude this discussion, I am able to say that both the teachers and the principals agreed that the implementation of and their participation in the PLCs had positively influenced the principals’ leadership styles. Their commitment to creating the PLCs in their respective schools was visible on the part of the principals. In their sincere efforts to implement PLCs, principals were spontaneously practicing many aspects of good leadership. They gave opportunities to teachers to have input into decision making and knowledge sharing, thus a decentralised and collaborative or participative leadership was emerging. Having PLCs gave clarity of both vision and mission and thus it was easy for the entire school to “play on the same team” and work towards the same goal, namely: improving students’ learning. Leithwood et al. (2007) observed that the relationship fashioned between principals and teachers leads to shared and responsive leadership in the school. My research seems consistent with this result. We could say further that PLC practice served as platform for the principals and teachers to share more leadership roles, providing more opportunities for collaboration, resulting in increased trust and understanding. This, in turn, helped leadership growth in principals. I also observed that there was a general willingness on the part of the principals to include teachers in decision making processes democratically. The PLCs also gave greater opportunity for teachers to communicate, not only with each other but also with principal. This may have helped the principals to recognise the abilities of teachers and take them on board.
7.4.3 Research Question Three

Is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy?

(a) What are the collective perceptions of this on the part of members of a PLC?

(b) And what are the principals’ perceptions?’

As stated in the introductory part of this chapter, reviewed literature showed that multiple studies have provided compelling evidence that teacher efficacy beliefs are strong predictors of subsequent behaviour (Coladarci & Breton, 1997). Teachers’ decisions to stay in the often challenging teaching environment (e.g., Hong, 2012), to be less critical of their students when they make mistakes (Ashton & Webb, 1986), and exhibit more enthusiasm about teaching (Allinder, 1994) may all hinge on self-efficacy. There are also studies that predict correlations between levels of efficacy and willingness to participate in professional learning community (e.g. Graham, 2007; Mintzes, Marcum, Messerschmidt-Yates & Mark, 2013). As the literature clearly exhibits the value of PLCs as well as the benefits of increased teacher efficacy, I thought it important to consider how PLCs influence teacher efficacy. Therefore, I specifically sought to establish if the four sources of efficacy (Bandura, 1997) operated in a PLC culture. I thus approached answering the third research question with this thought in mind: is there any relationship between the implementation of a PLC and teachers’ levels of self-efficacy? Considering the research findings in the previous chapter it seems possible to say the following concerning the various sources of efficacy being present in the operation of PLCs.

Mastery Experience: The findings of this study show that there exists a high level of mastery experience for teachers in the PLC environment. Mutual observation of classroom performance was a great source of mastery experience. According to Bandura (1997), in
mastery experiences individuals build their self-efficacy beliefs by successfully carrying out a challenging task at a high level. After a person has an experience of mastery, when he/she is faced with a similar experience in the future, he/she will be able to draw on the past experience and have a powerful expectation that he/she will be successful. This was what appeared to be happening in the mutual observation of classroom performances. Data indicated that teachers were very cautious and therefore spent extra time in preparation when they knew that they were going to be observed. And as most of the teachers believed that they had successfully carried out this task they became more enthusiastic in the future. It is obvious that the fundamental source of mastery experience is knowledge of the subject; the extra time teachers spent in preparation and their practice of discussing new research articles in the PLC meetings gave them opportunities to increase their knowledge. These results also suggest that through the discussion they carried out during the PLC meetings the teachers also had a new way of acquiring more knowledge of their subject. Thus, this study lends support to the claim of Tschannen-Moran and McMaster (2009) that the format of professional development that yielded the highest sense of teacher self-efficacy was one which included an authentic mastery experience in the teacher’s own classroom.

Vicarious Experience: According to Bandura (1997), people can also build self-efficacy by seeing other people successfully complete a task. Seeing that the task is doable helps them to feel that they can be successful. If the observer is able to identify himself/herself with a model who succeeds in performing the given task, then the efficacy of the observer increases. In the current study PLCs which met on a regular basis were examined. The data suggested that teachers reported clearly and consistently that observing someone else perform well in the class or handle a situation motivated them to perform well or
encouraged a feeling that “we too can do the same”. Data revealed that some participants believed that observation of colleagues’ teaching had a positive impact on their confidence and on their professional development. Restating Bandura’s (1997) belief that one’s self-belief plays an important role in making progress to realising desired outcomes, it seems reasonable to say that the exercise of peer observation of classroom performance takes the observer through a vicarious, self-reflective, and self-regulatory process and hence may lead to greater self-efficacy. Thus, the findings of the present study support Bandura’s (1986, 1997) model of self-efficacy which describes vicarious experience as one of the four sources of efficacy. Furthermore, the findings are in agreement with the opinion of Mintzes, Marcum, Messerschmidt-Yates and Mark, (2013) who claimed that observing another colleague skilfully teaching a lesson could provide a vicarious experience, while actively participating in a community of like-minded professionals and receiving constructive feedback from peers could offer additional emotional support.

**Verbal Persuasion:** Also known as social persuasion, this is often thought to be the third most effective way to develop self-efficacy (Bandura, 1977, 1986, 1997). When a trusted colleague tells a person that he/she can be successful with a challenge, he/she is likely to approach the task with a high expectation of succeeding. Examining the result of this study it is very clear that almost every member in the PLCs experienced encouragement when they received positive feedback from other teachers. These findings go hand in hand with the results of Wise and Trunnell (2001) who suggested that verbal persuasion is most effective when following a performance accomplishment (ie, a mastery experience). However, contrary to Bandura, and other researchers, the results from the present study suggest that verbal persuasion could exist not only in the form of applause but, at least in some cases, it came in the form of an honest remark. An honest remark, even if critical,
can function a verbal persuasion when people receive it as realistic encouragement and thus, in turn, giving honest remarks becomes a way to develop self-efficacy.

In general terms, it seems reasonable to say that one’s self-efficacy beliefs get developed and reinforced through mastery experiences, vicarious experiences and verbal persuasion. But in the specific case, is it possible to know if PLCs in these two north Indian schools provided such a favourable platform for developing and reinforcing self-efficacy and did the teachers there really experience any improvement in their self-efficacy levels? The TSES survey conducted before the implementation of the PLCs and after two years of their experience suggest that in both St. David’s and St. Joseph’s there were improvements in the teachers’ levels of self-efficacy. Of the two schools St. Joseph’s showed greater improvement. This might be because the principal in SJ, as we have already seen, very much took the initiative by offering to teach and allows the teachers to evaluate and share their opinions of her work. This was, as she noted, an attempt to give more confidence to teachers to open up their own classrooms. When teachers and leaders work together towards mutual goals and teachers feel their voices are heard efficacy is raised (Schleicher, 2016). The Principal in SJ, through her many initiatives, created a school setting that encouraged knowledge sharing and mutual trust. This may be a reason for the greater improvement in teachers’ efficacy levels there.

To examine the relationship between teachers’ self-efficacy levels and the dimensions of PLCs Pearson’s correlation of the sub-scale scores of the PLCA-R and TSES was used. Both St. David’s and St. Joseph’s were tested separately. Thirteen of the 18 factors in St. David’s school failed to show a significant relationship between PLCR and TSES. A significant correlation could be found only between SSL and ESE, SSL and ECM, SCR
and ESE, SCR and EIS, and ECM and SCR. And there was no significant relationship between PLCA-R and TSES in St. Joseph’s. This may suggest that there was no correlation between teachers’ self-efficacy beliefs and the implementation of PLCs in both the schools. As certain studies have shown that professional learning communities affect teachers’ self-efficacy (Cowley & Meehan, 2001) the results in this case were unexpected, especially when the qualitative data showed the possibility of a correlation. For an explanation to this finding I looked at the pre-research survey data and noted that the teachers had considerably higher senses of self-efficacy regardless of whether or not they were part of a professional learning community. Professional learning communities presume that there exists no significant professional collaboration already in place amongst the teachers. Another explanation for the results may be that some teachers perceived themselves to be efficacious and that their being so did not depend on their participation in a PLC. Instead, these teachers may have been self-motivated and not even aware of the other teachers around them because of their strong feelings of efficaciousness and competence. It is also possible that teachers did not understand the questionnaire very well, even though it was explained to them, and thus did not complete it properly. Another explanation for this unexpected result could be that teachers filled the form in casually without taking time to read it or did not take it seriously.

As stated in the methodology chapter, this research involved a combination of qualitative and quantitative tools, used sequentially but with priority given to the qualitative phase. Therefore, more weight has been given to the qualitative result, because, more than in a structured survey, qualitative data are acquired through dynamic processes such as interviews, focus groups, observation of the researcher etc. At the same time, quantitative result cannot be ignored. Personally, I would like to hold on to the first possibility (which
has some support in the data). That is: the teachers already had high levels of self-efficacy regardless of whether or not they were part of a professional learning community. Another reason could be that, as stated during the analysis of the findings, the PLCA-R deals with teachers’ perceptions collectively, the TSES construct being aimed at individuals. Therefore, assessing collective perceptions of teachers’ efficacy levels might have produced a different result.

7.5 Limitations

Since I had served as a school principal, I had to be aware throughout the study of any bias I might have against any of the teachers/principals resulting from their personal philosophies of leadership differing to mine. My personal beliefs had to be set aside while engaged in the study in order to remain open to facts.

It would have been more effective if I could have visited the schools more often. Since the distance was a matter of concern field visits were limited. Because of the poor technological infrastructure in India Skype interviews and observations were not very effective and I had to abandon the plan for observing the PLC meetings through Skype. Further, the length of the survey could also have led some teachers to quickly and thoughtlessly answer the questions. This may be why the results were somewhat unexpected.

The study was limited to two schools and two principals, one each from two states in north India. Thus, India being a vast country and very diverse in culture, with a complex system of education as each state is responsible for its own educational policy, any generalisation of the result will be questionable to some extent. Involving more schools would have given
more secure results. Finally, according to Fullan (2000), it takes approximately three years for an elementary school and six years for a high school to achieve successful change. That being so, my conclusions could be considered hasty because the implementation of the PLCs and the data collection took place within the span of two school years.

7.6 Implications for Educational Practice

In India, free and compulsory education became a fundamental right in 2009. From then children from the age of six to 14 could demand, by law, to go to school, it being their right to get a basic level of education. The question however arises, by 2018, what kind of education were children getting when they went to state schools? The twelfth Annual Status of Education Report for India (ASER, 2018), a report prepared by the non-governmental organisation called Pratham group, assessed educational conditions in 24 states and 23,000 homes. It painted a grim picture. It revealed that 25% of rural youths in their teenage years – from 14 to 18 - may not even be able to read Standard 2 texts (texts written in their mother tongue) and do simple division. Previous ASER reports had observed that, despite high enrolment ratios (over 96%), in the last eight years of primary schooling, improvement in reading outcomes and arithmetical ability continued to be low. Moreover, a large proportion of students in both government and private schools continued to be below expected grade level (Ghosh & Bandyopadhyay, 2018). Another startling fact that we find in this report is that approximately 17% of students dropped out because they failed in their studies (ASER, 2018). By 2018 the educational policy of the Indian government did not allow schools to fail students until Grade 8. It would seem that the policy of not failing students had led to an adverse, unexpected consequence where students left behind were not identified until they failed exams after Grade 8 (Ghosh &
Bandyopadhyay, 2018). This report also suggested that, despite the extraordinary improvement in the enrollment rates, India needed to give a serious thought to how children were being taught. By 2018 it was policy that teacher education and professional development programmes were to be revisited and reformed according to need. Clear goals were to be set, for example, to ensure that by 2020, the knowledge and skills of the children in all schools would match their grade levels.

It is my ultimate conclusion that India has recognised the challenges it faces and hope radical reform may follow with regard to education. This study provides strong support for adopting the PLC as a powerful model for overall school development as it provides professional development both for teachers and for principals. As the principals adopted more of a collaborative than a supervisory role, this model may bring about better communication between management and staff and thus increase the mutual trust which is an important requirement for the success of any reform initiative. This becomes more significant in India’s education system as the cultural and educational traditions of India give significant, if not absolute, autonomy to principals. That being so, a reform model (PLC) that encourages shared leadership might bring truly systemic change to Indian education. As PLCs demand whole-staff involvement in a process of intensive reflection on instructional practices and desired student outcomes, they help teachers to continually learn from one another via sharing expectations and plans as well as in-depth critical examination of what does and does not work to enhance students’ achievements. This aspect of the PLC has the potential to address the needs of the Indian education system for more and better CPD.
The PLC model of reform may also address the problem raised by Ghosh and Bandyopadhyay (2018), namely that of the students being left behind remaining unnoticed until they fail in exams after Grade 8 (due to the government policy that did not allow schools to fail students until grade 8). In PLCs, educators demonstrate their commitment to helping all students learn.

They do this by asking constantly the four critical questions and sub-questions.

(1) What do we want students to learn? What should each student know and be able to do as a result of each unit, grade level, and/or course?

(2) How will we know if they have learned? Are we monitoring each student’s learning in a timely way?

(3) What will we do if they do not learn? What systematic process is in place to provide additional time and support for students who are experiencing difficulty?

(4) What will we do if they already know it?

The story of the implementation of PLCs described in this study may also give some insights into how PLCs could be implemented in other schools, especially in India. The PLC literature is dominated by American or western perspectives, Indian educators or policy makers may thus be wary of applying it in Indian. This study can thus be considered a ground-breaking attempt and may encourage many more studies/experiments. It may also help us foresee certain challenges and prepare teachers/principals to overcome or avoid these challenges with the end result that anyone or any school could begin to implement PLCs with relative ease.
7.7 Recommendation for Further Research

This work was more of an exploratory study than a sophisticated and complex account of principals’ leadership and teachers’ efficacy as it takes the reader through the story of the implementation of PLCs in two north Indian schools but could not explore certain issues in the depth desired. As is obvious from the discussion of limitations, in any future study, it would be helpful to involve more schools from different parts of the country so that they would be representative of the entire country. Thus, the findings from this study should be regarded as indicative rather than conclusive.

Some important issues about becoming and developing a school as a PLC were not fully explored in this study. For example, only the leadership of the principal was focused on here. A future study could explore leadership at all levels. Further, as having a PLC is ultimately aimed at improving learning. A future study involving more research on the PLC’s impact on student success would be valuable. In this study the participants themselves came up with the proposal of having a wider concept of PLCs, involving teachers from neighbouring schools. If only one school is considered there will be a limited number of teachers who teach the same subject. Further research could consider what would be required to develop a digital or online PLC in the Indian context so as to involve various schools in a vicinity.

One thing we could not clearly explain in study was why there was no significant correlation between teachers’ sense of self-efficacy and the six dimensions of the PLC. To more perfectly capture the efficacy levels of teachers future researchers may want to undertake a critical examination of the TSES questionnaire. For example, is the questionnaire too open to wide interpretations so that teachers are confused? Do the
questionnaires need to be adapted to the context? As already noted, a further study along the same lines, but using the Collective Teacher Efficacy scale instead, of TSES might help to explore more and bring another dimension to the relationship between PLCs and teacher efficacy.

7.8 Conclusion

Ideally, research would never be inconclusive and would always be definitive, but this is rarely – if ever – so in any real-world context. Life, quite simply, is messy and research (which aims to capture and depict some aspect[s] of life) must, of necessity, be messy as well. This research does not provide absolute assurance that a PLC is a “good thing” and thus does not offer an immediate plan for reform of education in India, or anywhere else in the world for that matter. But it does point in a certain direction. It does hint at or suggest what might be possible and desirable and thus may be deemed worthwhile.

Professional learning communities can be an effective form of professional development for teachers. The principal is the key person in establishing and developing PLCs. If Indian schools, or schools anywhere, are to be transformed into PLCs educators must first establish a clear vision of what a learning community looks like and how people operate in such an organisation (Olivier & Hipp, 2010). The ultimate benefit of professional learning communities is improved instructional practices which lead to improved levels of achievement on the part of students. The relationship between principal’s leadership role and a successful PLC suggests that while successful implementation and effective sustaining of PLCs in a school greatly depends on the leadership of the principal, at the same time principals also benefit as it positively influences leadership quality.
At the outset of this study, the idea of professional learning community was very new in India. Therefore, it was important to tell the story of how a school can develop into a professional learning community. As far as I am aware this was a pioneering study in this particular context. By 2018 it was widely accepted that teachers’ PLCs were crucial for improving the quality of education. The practical implications of a concept that has gained wide currency in America as well as becoming popular in European countries have been investigated for the first time against the backdrop of a new culture using a mixture of quantitative and qualitative methods. I believe that the findings may have significant messages for policy-makers, practitioners and researchers especially given the quality and extent of formal education available is still an issue in India.

This study could be considered as a practical guide to those who wish to transform their schools into professional learning communities, especially in the Indian context. From this study we can conclude that even though there is no step-by-step approach to the implementation of PLCs getting to know what a PLC is could be considered an important starting point. Either the principal or an external facilitator (from some external support agency) should take the responsibility of introducing it to the staff. Serious consideration should be given to the structural adaptations and time required.

Even though this study could not establish a correlation between the PLC and teachers’ sense of efficacy that could be quantitatively measured, qualitative results suggest that those things which contributed to increased levels of self-efficacy were: (1) mastery experiences, (2) vicarious experience, and (3) social persuasion of the kind present in the practical atmosphere of PLCs significant influence on the pedagogical decisions in the classroom. Knowing this much may allow us to appreciate the value of PLCs for schools.
Finally, this research has suggested that PLCs can offer ways to reduce teachers’ isolation and give opportunity for them to connect with one another for collaborative learning. A PLC may help foster a culture of collaboration between teachers and principals resulting in better communication between management and staff.

Assuming you are a teacher, as you come to the end of reading this research you may want to make your school a more collaborative place or transform your school into a professional learning community. You might look more closely into my work to see what has been specifically recommended through its findings so that you can embrace the notion of turning your school into a PLC. I thus summarise below certain key points.

- Giving a clear idea of what a PLC is must be considered as the first step. It would be advisable to get some external help in give initial training on this for the teachers concerned.

- Clarify the mission and vision of your institution and set the PLC’s goals in accordance to this mission and vision.

- Teach and encourage participants to collaborate. Never assume it will come naturally. Help the team to develop the skill of open and judgment-free communication.

- Create an atmosphere of trust. It is up to the school’s leader to establish trust. Inspire by life example. That is the best way to create an atmosphere of trust.
• Provide enough time for the PLC team to meet and work together. Giving guideline for the minimum number of meetings within a particular period might help foster regularity.

Are PLCs beneficial for school principal? My research suggests that the hardwork of a principal in implementing a PLC may help that principal to improve many leadership qualities in him/herself.

Will PLCs help the participants to improve their levels of efficacy? The qualitative data clearly suggest that the four sources of efficacy listed by Bandura (1997) were very much present in the PLCs studied. Therefore, we may say that PLCs will positively affect teachers’ efficacy levels.
Reference List


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APPENDIX A: LETTER REQUESTING APPROVAL FROM THE CHAIRMAN OF THE EDUCATION BOARD
March, 2014

Chairman, Mount Carmel Education Board

As part of my PhD, I am conducting a study that explores the relationship between Principal’s leadership style, teacher efficacy and professional learning communities as reflected by the teachers and principals here at (name of the schools). The purpose of the study is to investigate whether implementing and sustaining professional learning communities has an effect on the leadership quality (style) of a principal and whether participating in professional learning communities can affect teachers’ levels of efficacy.

The study is a mixed methods design using three methods of data collection. First, there will be workshop for the teachers in which I will introduce PLC concept to the teachers. After the workshop, under the guidance of the respective principals five PLC groups will be implemented in each schools. Data collection will involve, interviews of the principals, focus group interview for PLC members and three surveys also will be conducted. Data will be collected within the span of two school years. All participating teachers and principals will remain anonymous. And each teacher and principal’s responses will remain anonymous. Participation is voluntary and they will be allowed to quit at any stages of the study.

Your approval to conduct this study will be greatly appreciated. Tank you in advance for your interest and assistance with this research

Sincerely,

Joseph Vellanaj
Email: vellanaj@tcd.ie
(353) 871-804206 - cell
APPENDIX B: INFORMED CONSENT TO PARTICIPATE IN RESEARCH
INFORMED CONSENT TO PARTICIPATE IN RESEARCH

I, Joseph Vellanal, a graduate student at the Trinity College Dublin, the University of Dublin, Ireland is conducting a research study on the influence of operating a professional learning community on principals’ leadership style and teachers’ level of efficacy in tow north Indian schools.

This study has two main objectives: To examine the factors that help or hinder the implementation and development of professional learning communities in Indian schools and how does Professional learning community influence the principals’ leadership style and teachers’ level of efficacy.

It is a field-based research in which teachers participate in the professional learning community and share their perspectives regarding how professional learning communities work. Interested and willing teachers are voluntarily being asked to participate in the implementation of professional learning community in your school. The volunteering members will participate in focus group interviews and three surveys. No name/school’s name or personal identities will be reviled. Your participation will be greatly beneficial for my research as well as for your professional development. However, you may decide not to consent to participate or not to participate in the survey and/or focus group interview.

You will be introduced to the PLC concept through a workshop where you will have the opportunity to clarify any doubts regarding this study. If you have any further questions about the study, you may contact me at +353 871804206 or vellanaj@tcd.ie.

Thanking you in anticipation for your cooperation and interest and willingness to contribute to my research.
APPENDIX C: PARTICIPANT INTERVIEW CONSENT FORM
PARTICIPANT INTERVIEW CONSENT FORM

Project Title: The Influence of Operating a Professional Learning Community on Principals’ Leadership Styles and Teachers’ Level of Efficacy in Two North Indian Schools: Lessons for Indian Schools Generally?

Purpose: This study seeks to investigate the factors that help or hinder the implementation and development of professional learning communities in Indian schools and to explore the possible if Professional learning community influence the principals’ leadership style and teachers’ level of efficacy.

Procedures: You are being invited to participate in one of the professional learning communities that is implemented in your school. PLC members will be invited to participate in a focus group interview. And Three survey that need to be answered two times each. One, before the implementation of PLC and the other set some time during the second year after implementation of PLC. Focus group interview will be video recorded.

Benefits: PLCs embrace collaboration among teachers to improve student achievement. Participating teachers will have an opportunity to work in collaboration with other teachers and thus can use PLC as a means to improve teaching practice. The information gained from this study will be informative for the lard educational community, contributing to empirical research on PLCs.

Confidentiality: All information collected in this study is confidential. Responses will be anonymous and kept confidential through the use of pseudonyms of participants and anyone mentioned by a participant. All audio and video recordings and transcripts will be entered into a computer file and both hard and digital copies will be stored in a locked safe. This data will be maintained on a single password protected computer.

Withdrawal & Questions: by signing below you indicate that the researcher has explained this research study, answered your questions, and that you voluntarily grant your consent, which can be withdrawn at any time, for participation in this study. If you have any questions about this study I will be happy to answer them now. If you have any questions in the future, please contact me at +353-871804206 or vellanaj@tcd.ie.

_________________________________________  __________
Participant’s Name                  Date

_________________________________________
Participant’s Signature
APPENDIX D: VIDEOTAPE RECORDING CONSENT FORM
VIDEOTAPE RECORDING RELEASE CONSENT FORM

As part of this project, a video recording will be made of you during your participation in this research project (during focus group interview). This is completely voluntary and up to you. In any use of the recorded video, your name will not be identified and your identity will be kept completely anonymous. You may request to stop the taping at any time or to erase any portion of your recorded video. Please indicate below the uses of these video recordings to which you are willing to consent by initialling the statements.

1. The video recordings can be studied by the researcher for use in the Initial research project.

2. The video recordings can be used for conferences or publications. Initial

3. The video recordings can be reviewed at meetings of people interested in the Initial study of education and educational practice.

You have the right to request that the tape be stopped or erased during the recording.

You have read the above description and give your consent for the use of video recordings as indicated above.

__________________________  __________________________
Signature                   Date
APPENDIX E: PERMISSION TO USE PLCA-R SURVEY
July 11, 2017

Joseph Vellanal
Avila Carmelite Center, Bloomfield Avenue
Morehampton Road, Donnybrook
Dublin, Ireland

Dear Mr. Vellanal:

This correspondence is to grant permission for the utilization of the Professional Learning Community Assessment-Revised (PLCA-R) for your doctoral dissertation research at Trinity College Dublin, Ireland. I am pleased you are interested in using the PLCA-R measure to investigate the impact of establishing and operating a professional learning community on principals’ leadership styles and teachers’ level of self-efficacy in K-12 North Indian schools. This study’s findings related to assessment of teachers’ perceptions regarding the presence of key PLC dimensions will contribute to the PLC literature, as well as inform research related to self-efficacy.

This permission letter allows use of the PLCA-R through paper/pencil administration, as well as permission for online administration.

While this letter provides permission to use the measure in your study, authorship of the measure will remain as Olivier, Hipp, and Huffman (exact citation on the following page). This permission does not allow renaming the measure or claiming authorship.

Thank you for your interest in our research and measure for assessing professional learning community attributes within schools. Should you require any additional information, please feel free to contact me.

Sincerely,

Dianne F. Olivier

Dianne F. Olivier, Ph. D.
Professor and Coordinator of the Doctoral Program
Joan D. and Alexander S. Haig/BORSF Professor
Department of Educational Foundations and Leadership
College of Education
University of Louisiana at Lafayette
P.O. Box 43091
Lafayette, LA 70504-3091
(337) 482-6408 (Office)  dolivier@louisiana.edu
APPENDIX F: PROFESSIONAL LEARNING COMMUNITIES ASSESSMENT – REVISED (PLCA-R)
Professional Learning Communities Assessment – Revised

Directions:
This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the dimensions of a professional learning community (PLC) and related attributes. This questionnaire contains a number of statements about practices which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Shade the appropriate oval provided to the right of each statement. Be certain to select only one response for each statement. Comments after each dimension section are optional.

Key Terms:
- Principal = Principal, not Associate or Assistant Principal
- Staff/Staff Members = All adult staff directly associated with curriculum, instruction, and assessment of students
- Stakeholders = Parents and community members

Scale: 1 = Strongly Disagree (SD)
2 = Disagree (D)
3 = Agree (A)
4 = Strongly Agree (SA)

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shared and Supportive Leadership</strong></td>
<td>SD</td>
</tr>
<tr>
<td>1. Staff members are consistently involved in discussing and making decisions about most school issues.</td>
<td>0</td>
</tr>
<tr>
<td>2. The principal incorporates advice from staff members to make decisions.</td>
<td>0</td>
</tr>
<tr>
<td>3. Staff members have accessibility to key information.</td>
<td>0</td>
</tr>
<tr>
<td>4. The principal is proactive and addresses areas where support is needed.</td>
<td>0</td>
</tr>
<tr>
<td>5. Opportunities are provided for staff members to initiate change.</td>
<td>0</td>
</tr>
<tr>
<td>6. The principal shares responsibility and rewards for innovative actions.</td>
<td>0</td>
</tr>
<tr>
<td>7. The principal participates democratically with staff sharing power and authority.</td>
<td>0</td>
</tr>
<tr>
<td>8. Leadership is promoted and nurtured among staff members.</td>
<td>0</td>
</tr>
<tr>
<td>9. Decision-making takes place through committees and communication across grade and subject areas.</td>
<td>0</td>
</tr>
<tr>
<td>10. Stakeholders assume shared responsibility and accountability for student learning without evidence of imposed power and authority.</td>
<td>0</td>
</tr>
<tr>
<td>11. Staff members use multiple sources of data to make decisions about teaching and learning.</td>
<td>0</td>
</tr>
<tr>
<td>STATEMENTS</td>
<td>SCALE</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Shared Values and Vision</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>12. A collaborative process exists for developing a shared sense of values among staff.</td>
<td>0</td>
</tr>
<tr>
<td>13. Shared values support norms of behavior that guide decisions about teaching and learning.</td>
<td>0</td>
</tr>
<tr>
<td>14. Staff members share visions for school improvement that have an undeviating focus on student learning.</td>
<td>0</td>
</tr>
<tr>
<td>15. Decisions are made in alignment with the school’s values and vision.</td>
<td>0</td>
</tr>
<tr>
<td>16. A collaborative process exists for developing a shared vision among staff.</td>
<td>0</td>
</tr>
<tr>
<td>17. School goals focus on student learning beyond test scores and grades.</td>
<td>0</td>
</tr>
<tr>
<td>18. Policies and programs are aligned to the school’s vision.</td>
<td>0</td>
</tr>
<tr>
<td>19. Stakeholders are actively involved in creating high expectations that serve to increase student achievement.</td>
<td>0</td>
</tr>
<tr>
<td>20. Data are used to prioritize actions to reach a shared vision.</td>
<td>0</td>
</tr>
</tbody>
</table>

**COMMENTS:**

<table>
<thead>
<tr>
<th><strong>Collective Learning and Application</strong></th>
<th><strong>SCALE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>21. Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.</td>
<td>0</td>
</tr>
<tr>
<td>22. Collegial relationships exist among staff members that reflect commitment to school improvement efforts.</td>
<td>0</td>
</tr>
<tr>
<td>23. Staff members plan and work together to search for solutions to address diverse student needs.</td>
<td>0</td>
</tr>
<tr>
<td>24. A variety of opportunities and structures exist for collective learning through open dialogue.</td>
<td>0</td>
</tr>
<tr>
<td>25. Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.</td>
<td>0</td>
</tr>
<tr>
<td>26. Professional development focuses on teaching and learning.</td>
<td>0</td>
</tr>
<tr>
<td>27. School staff members and stakeholders learn together and apply new knowledge to solve problems.</td>
<td>0</td>
</tr>
<tr>
<td>28. School staff members are committed to programs that enhance learning.</td>
<td>0</td>
</tr>
<tr>
<td>29. Staff members collaboratively analyze multiple sources of data to assess the effectiveness of instructional practices.</td>
<td>0</td>
</tr>
<tr>
<td>30. Staff members collaboratively analyze student work to improve teaching and learning.</td>
<td>0</td>
</tr>
<tr>
<td>STATEMENTS</td>
<td>SCALE</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Shared Personal Practice</strong></td>
<td>SD</td>
</tr>
<tr>
<td>31. Opportunities exist for staff members to observe peers and offer encouragement.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>32. Staff members provide feedback to peers related to instructional practices.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>33. Staff members informally share ideas and suggestions for improving student learning.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>34. Staff members collaboratively review student work to share and improve instructional practices.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>35. Opportunities exist for coaching and mentoring.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>36. Individuals and teams have the opportunity to apply learning and share the results of their practices.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>37. Staff members regularly share student work to guide overall school improvement.</td>
<td>0 0 0 0</td>
</tr>
</tbody>
</table>

**COMMENTS:**

<table>
<thead>
<tr>
<th>Supportive Conditions - Relationships</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>38. Caring relationships exist among staff and students that are built on trust and respect.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>39. A culture of trust and respect exists for taking risks.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>40. Outstanding achievement is recognized and celebrated regularly in our school.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>41. School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>42. Relationships among staff members support honest and respectful examination of data to enhance teaching and learning.</td>
<td>0 0 0 0</td>
</tr>
</tbody>
</table>

**COMMENTS:**

<table>
<thead>
<tr>
<th>Supportive Conditions - Structures</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>43. Time is provided to facilitate collaborative work.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>44. The school schedule promotes collective learning and shared practice.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>45. Fiscal resources are available for professional development.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>46. Appropriate technology and instructional materials are available to staff.</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>STATEMENTS</td>
<td>SCALE</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>47. Resource people provide expertise and support for continuous learning.</td>
<td>0</td>
</tr>
<tr>
<td>48. The school facility is clean, attractive and inviting.</td>
<td>0</td>
</tr>
<tr>
<td>49. The proximity of grade level and department personnel allows for ease</td>
<td>0</td>
</tr>
<tr>
<td>in collaborating with colleagues.</td>
<td>0</td>
</tr>
<tr>
<td>50. Communication systems promote a flow of information among staff</td>
<td>0</td>
</tr>
<tr>
<td>members.</td>
<td>0</td>
</tr>
<tr>
<td>51. Communication systems promote a flow of information across the entire</td>
<td>0</td>
</tr>
<tr>
<td>school community including: central office personnel, parents, and</td>
<td>0</td>
</tr>
<tr>
<td>community members.</td>
<td>0</td>
</tr>
<tr>
<td>52. Data are organized and made available to provide easy access to staff</td>
<td>0</td>
</tr>
<tr>
<td>members.</td>
<td>0</td>
</tr>
</tbody>
</table>

COMMENTS:

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APPENDIX G: PERMISSION LETTER TO USE LEADERSHIP PRACTICE INVENTORY (LPI)
March 13, 2016

Joseph Vell Alan Augusty
Avila Carmelina Center, Morehampton Road
Dublin 4 Ireland D04 YFF66

Dear Mr. Vell Alan Augusty:

Thank you for your request to use the LPI®: Leadership Practices Inventory® in your research. This letter grants you permission to use either the print or electronic LPI [Self/Observer/Observer and Observer] instrument(s) in your research. You may reproduce the instrument in printed form at no charge beyond the discounted one-time cost of purchasing a single copy; however, you may not distribute any photocopies except for specific research purposes. If you prefer to use the electronic distribution of the LPI you will need to separately contact Joshua Carter (jocarter@wiley.com) directly for further details regarding product access and payment. Please be sure to review the product information resources before reaching out with pricing questions.

Permission to use either the written or electronic versions is contingent upon the following:

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2. Copyright in the LPI, and all derivative works based on the LPI, is retained by James M. Kouzes and Barry Z. Posner. The following copyright statement must be included on all reproduced copies of the instrument(s): "Copyright © 2013 James M. Kouzes and Barry Z. Posner. Published by John Wiley & Sons, Inc. All rights reserved. Used with permission";
3. One (1) electronic copy of your dissertation and one (1) copy of all papers, reports, articles, and the like which make use of the LPI data must be sent promptly to my attention at the address below; and,
4. We have the right to include the results of your research in publication, promotion, distribution and sale of the LPI and all related products.

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Best wishes for every success with your research project.

Cordially,

Ellen Peterson
Permissions Editor
Epetersen4@gmail.com
APPENDIX H: LEADERSHIP PRACTICE INVENTORY (LPI)
LEADERSHIP PRACTICES INVENTORY
James M. Kouzes and Barry Z. Posner

To what extent does your principal typically engage in the following behaviors? Choose the response number that best applies to each statement and circle it under that statement.

1 = Almost Never  6 = Sometimes
2 = Rarely        7 = Fairly Often
3 = Seldom        8 = Usually
4 = Once in a While 9 = Very Frequently
5 = Occasionally  10 = Always

He or She:
1. Sets a personal example of what he/she expects of others.
   1 2 3 4 5 6 7 8 9 10
2. Appreciate and acknowledge the contributions of the predecessor.
   1 2 3 4 5 6 7 8 9 10
3. Seeks out challenging opportunities that tests his/her own skills and abilities.
   1 2 3 4 5 6 7 8 9 10
4. Develops cooperative relationships among the people he/she works with.
   1 2 3 4 5 6 7 8 9 10
5. Praises people for a job well done.
   1 2 3 4 5 6 7 8 9 10
6. Spends time and energy making certain that the people he/she works with adhere to the principles and standards we have agreed on.
   1 2 3 4 5 6 7 8 9 10
7. Describes a compelling image of what our future could be like.
   1 2 3 4 5 6 7 8 9 10
8. Challenges people to try out new and innovative ways to do their work.
   1 2 3 4 5 6 7 8 9 10
9. Actively listens to diverse points of view.
   1 2 3 4 5 6 7 8 9 10
10. Makes it a point to let people know about his/her confidence in their abilities.
    1 2 3 4 5 6 7 8 9 10
11. Follows through on the promises and commitments that he/she makes.
    1 2 3 4 5 6 7 8 9 10
12. Is exceptionally good at imagining a future that does not yet exist and enlist the staff in that vision.
    1 2 3 4 5 6 7 8 9 10
13. Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.
    1 2 3 4 5 6 7 8 9 10
14. Treats others with dignity and respect.
    1 2 3 4 5 6 7 8 9 10
15. Makes sure that people are creatively rewarded for their contributions to the success of our projects
   1 2 3 4 5 6 7 8 9 10
16. Asks for feedback on how his/her actions affect other people’s performance.
   1 2 3 4 5 6 7 8 9 10
17. Shows others how their long-term interests can be realized by enlisting in a common vision.
   1 2 3 4 5 6 7 8 9 10
18. Asks “What can we learn?” when things don’t go as expected.
   1 2 3 4 5 6 7 8 9 10
19. Supports the decisions that people make on their own.
   1 2 3 4 5 6 7 8 9 10
20. Publicly recognizes people who exemplify commitment to shared values.
   1 2 3 4 5 6 7 8 9 10
21. Builds consensus around a common set of values for running our organization.
   1 2 3 4 5 6 7 8 9 10
22. Vision and approach to life inspires me.
   1 2 3 4 5 6 7 8 9 10
23. Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.
   1 2 3 4 5 6 7 8 9 10
24. Gives people a great deal of freedom and choice in deciding how to do their work.
   1 2 3 4 5 6 7 8 9 10
25. Finds ways to celebrate accomplishments.
   1 2 3 4 5 6 7 8 9 10
26. Is clear about his/her philosophy of leadership.
   1 2 3 4 5 6 7 8 9 10
27. Speaks with a genuine conviction about the higher meaning and purpose of our work.
   1 2 3 4 5 6 7 8 9 10
28. Experiments and take risks, even when there is a chance of failure.
   1 2 3 4 5 6 7 8 9 10
29. Ensures that people grow in their jobs by learning new skills and developing themselves.
   1 2 3 4 5 6 7 8 9 10
30. Gives the members of the team lots of appreciation and support for their contributions.
   1 2 3 4 5 6 7 8 9 10
APPENDIX I: PERMISSION LETTER FOR TEACHERS’ SENSE OF EFFICACY SCALE
Dear Joseph Vellanal Augusthy,

You have my permission to use the Teachers' Sense of Efficacy Scale in your research. A copy the scoring instructions can be found at:

http://u.osu.edu/hoy.17/research/instruments/

Best wishes in your work,

Anita Woolfolk Hoy

Anita Woolfolk Hoy, Ph.D.
Professor Emeritus
APPENDIX J: TEACHERS’ SENSE OF EFFICACY SCALE

(Long form)
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Teacher Beliefs - TSES</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>Directions:</strong> Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) &quot;None at all&quot; to (9) &quot;A Great Deal&quot; as each represents a degree on the continuum. Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.</td>
<td></td>
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<tr>
<td>1. How much can you do to get through to the most difficult students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>2. How much can you do to help your students think critically?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
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<tr>
<td>3. How much can you do to control disruptive behavior in the classroom?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
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<tr>
<td>4. How much can you do to motivate students who show low interest in school work?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>5. To what extent can you make your expectations clear about student behavior?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>6. How much can you do to get students to believe they can do well in school work?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>7. How well can you respond to difficult questions from your students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
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<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>8. How well can you establish routines to keep activities running smoothly?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
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<tr>
<td>9. How much can you do to help your students value learning?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>10. How much can you gauge student comprehension of what you have taught?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>11. To what extent can you craft good questions for your students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>12. How much can you do to foster student creativity?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>13. How much can you do to get children to follow classroom rules?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>14. How much can you do to improve the understanding of a student who is failing?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>15. How much can you do to calm a student who is disruptive or noisy?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>16. How well can you establish a classroom management system with each group of students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>17. How much can you do to adjust your lessons to the proper level for individual students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>18. How much can you use a variety of assessment strategies?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>19. How well can you keep a few problem students from ruining an entire lesson?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>20. To what extent can you provide an alternative explanation or example when students are confused?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>21. How well can you respond to defiant students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>22. How much can you assist families in helping their children do well in school?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>23. How well can you implement alternative strategies in your classroom?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>24. How well can you provide appropriate challenges for very capable students?</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
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