Participatory Action Research (PAR) as a Professional Learning Community (PLC) strategy for Secondary School Teacher Professional Development (PD)

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GAUTAM AHLAWAT

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Abstract

Participatory action research (PAR) was used to investigate the effect of a purposeful and sustained professional learning community (PLC) on teacher professional development (PD) in a secondary school context. A self-contained focus group of teachers organised in a learning community generated iterative data. The focus group meetings served as professional development sessions and data was collected through audio recordings. Inductive and comparative data analysis made meaning of the participants perceptions and compared their individual positioning.

The findings indicate that teachers need favourable conditions for shared knowledge generation and focus group dynamics play a pivotal role in professional learning communities.

It is recommended that purposeful and sustained professional learning communities be formed within and across New Zealand secondary schools and PAR as pedagogy is used as a PLC strategy for positive teacher PD outcomes.

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Chapter 1: Introduction

The current education scenario

The current education scenario is undergoing rapid change globally. Gerver (2010) and Robinson (2010) explicate the changing nature of school education triggered by technological innovations in the education arena. Further, the already complex teaching lifeworld of a teacher is further compounded by: increased cultural diversity through globalisation, constant technological improvement with easy access to knowledge via the internet, changing family structures and public expectations to deliver a meaningful education. Thirdly, "changing social conditions and research developments on children's processes of cognitive understanding" (Bascia & Hargreaves, 2000, p. 7) add to the list of change parameters. Lastly, schools and educational institutions experiment with new learning theories in order to align education delivery with government directives "as governments… emphasise the importance of education and human capital to economic competitiveness and social cohesion" (Levin, 2008, p. 6).

These changing expectations require teachers to adapt and modify their practices and pedagogy in order to deliver authentic education to their students. There is an implicit requirement for teachers to exhibit versatility and innovation in the classroom to meet the changing social scenario. This unspoken and subtle expectation from society becomes more pronounced when political and policy pundits dole out performativity parameters (Ministry of Education, 2015) via teacher appraisals. Teachers are expected to upskill and incorporate change in pedagogy, generally without adequate support, and be agents of change. However, the time and effort required to complete appraisal forms in order to comply with performativity standards leaves little time for self-improvement and innovation in the classroom. Therefore, an apparent gap exists in this seemingly 'no-mans-land'; teachers are expected to become agentic but with minimal school support. This unintentional creeping chasm between teachers acquiring varied pedagogical tools as compared to the exponential growth in demand for delivering meaningful education needs to be addressed in some form.

Background and role of the researcher

I was a teacher for almost two decades in a co-educational public school in India which was founded by the British before India gained independence. The school resonated with colonial British culture where hierarchical management structure was evident in every department of the school; teaching, administration, student body and the School Board. As such the holistic pedagogy practised, endorsed and patronised by the stakeholders of the school was teacher centred, traditional and regimental. Power differentials within the school, inherited from colonisation, were firmly entrenched and apparently accepted by one and all.

I migrated to New Zealand and started teaching in the secondary school system, equipped with a traditional pedagogic philosophy. The New Zealand educational scenario was in the process of formalising the new curriculum document and implementing the National Certificate of Educational Achievement (NCEA) model in 2002-2003. I was part of this transitional process as Head of Department for the next five years. As the NCEA model was being implemented and the content aligned to the new curriculum it slowly dawned on me that a pedagogical shift was required to teach effectively within the new framework. It was obvious that I had to learn new skills and teaching tools. Most importantly there needed to be a mind shift from the traditional pedagogical stance which was firmly embedded in my classroom practice.

Over the next five years I was part of many professional development sessions, conducted internally by the school management, as well as outside providers. I also had the opportunity to attend Best Practise Workshops conducted by New Zealand Qualifications Authority (NZQA). Of the many professional development sessions that I attended, the most beneficial were the ones where there was an opportunity to interact with colleagues on a specific topic. Sharing ideas and strategies with teachers from other schools within my subject area always gave me confidence in myself and my classroom practice. In many instances it helped to improve my pedagogy. Secondly, professional development that was specific to my need at that time, enabled me to acquire specific toolsets that helped me

to deliver the curriculum content effectively. Thirdly, the opportunity of interacting with innovative teachers helped me to fast track my learning through the generation of shared knowledge. On the flip side of the professional development coin was the frustration of attending full staff one-off sessions which were totally out of context for me. I found these sessions to be unproductive with respect to time as well as contextual content. Many times professional development was offered with the assumption of universal applicability of a given successful innovative educational tool. This more often than not resulted in a disempowering experience and a feeling of inadequacy in one's capabilities.

The varied professional development experiences prompted me to undertake research in this area. I wanted to find out the feelings of my colleagues' vis-à-vis the manner and types of professional development teachers were being offered. Various factors prompted me to undertake research in a secondary school. I felt that being a part of the system would enable me to get an inside view of the situation. Secondly I felt that pre-existing professional and collegial relations would help with ready acceptability of my role as a researcher among my colleagues. Lastly I had the advantage of easy access to the school and its facilities as I could arrange the focus group meetings for the research.

The discordancy

I have been a classroom teacher for more than a decade in a New Zealand Secondary School. Over that decade, I was continuously frustrated by attending compulsory professional development sessions which were one-off, random and therefore ineffective for me. My feelings and views resonated with the results of research conducted by the Post Primary Teachers Association (PPTA) national executive in 2014 on Professional Learning and Development (PLD). Although the PPTA is an organisation representing the teaching body, their research did shed light on the felt inadequacy of PLD offered to teachers. The research analysis was presented to the Ministry of Education which highlighted "that both teachers and school leaders agree that current PLD provision is inadequate, piecemeal and incoherent" (PPTA, 2013a, p. 4). Teachers

and leaders felt that professional development should be ongoing. The report proposed forming professional learning communities where time to reflect on one's practises was catered for in a normal school day (PPTA, 2013b). The research further states that the "least effective PLD is a whole staff transmission model delivered in-house" (PPTA, 2013a, p. 5). A mandatory and ad hoc approach to PLD adopted by the school authorities, which was attuned with governmental expectations, prompted teachers like me, to "see teaching as a *technical* activity where the justification of doing *this* rather than *that* stemmed from regulations rather than a pupil's needs" (Galton, 2000, p. 201, author emphasis). However, teaching is a much more complex activity "requiring sophisticated professional judgement that draws on deep intellectual resources of knowledge, expertise, reflection, research and continuous learning" (Bascia & Hargreaves, 2000, p. 7). Everyday decisions made by a teacher on the spur of the moment which cater to the immediate needs of the student, in and outside the classroom, are as a result of years of experience, "judgement, insight, inspiration and the capacity for improvisation" (A. Hargreaves & Fullan, 2012, p. 5). The capacity to take intuitive spontaneous decisions for the benefit of the students, individually and collectively, is a skillset developed by teachers over time. A. Hargreaves and Fullan (2012) classify this capability as *decisional capital* and feel that it is a very important component of professional capital.

The proposal

I was keen to look at teacher professional development from a different angle. The current PLD opportunities being offered in my school were not meeting my needs as a teacher. Given the busy life of a secondary school teacher I was looking for opportunities for professional development within the structure of a normal school day and I felt that it was important for these to be purposeful (to the teacher context) and sustained (over several cycles) to be effective.

Further, I am of the view that teachers as professionals have the necessary expertise and experience to support each other to grow through collaboration and sharing of knowledge. This prompted me to look at

convening a professional learning community (PLC) of teachers. The idea was to organise a focus group of teachers into a PLC that would learn a certain competency or skillset to improve student outcomes. To this effect the PPTA research project recommends to the Ministry of Education to take "more responsibility in developing and supporting professional learning communities (PLCs) across schools so that teachers can learn from their colleagues who have different students and different approaches to them" (PPTA, 2013a, p. 9).

The structure of the thesis

The purpose of this qualitative study was to look at the perceptions of teachers on professional development. The research explores alternative professional development opportunities for teachers. Chapter One sets the scene by painting a picture of the current educational scenario prevalent in the world and New Zealand in particular.

Chapter Two reviews literature on professional development. Journal articles on teaching as a professional activity and elements supporting effective teacher professional development are analysed. The role of a Professional Learning Community (PLC) as vehicles for professional development is explored. Lastly, PAR as pedagogy for a PLC is evaluated.

Chapter Three explains the research methodology, design and process. It justifies the paradigm and validates the methodology used for the study. It explains that the research design underpins the context of the study and that qualitative research is emergent. The research process is outlined. The steps for data collection and analysis explained keeping in view its validity and reliability. Appropriate ethical measures of the research are stated. Finally the challenges and difficulties faced during the research are listed.

Chapter Four outlines the findings of the research through the voice of the participant teachers. It gives their current perceptions of professional development and what it encompasses for them as professionals. It captures their anecdotal experiences of professional development and organises the data into appropriate themes.

Chapter Five is an amalgamation of the research literature and the findings of the study. It discusses the themes which emerged in the findings and relates them to the research literature. An attempt is made to answer the research question.

Finally, Chapter Six draws conclusions and recommends further action on the basis of the analysis.

Conclusion

This study will add to the existing knowledge base of professional development. The research focused on the effectiveness of professional development and looked at alternatives through the eyes of secondary school teachers.

Chapter Two is a review of the seminal and current literature on teaching, professional development, professional learning communities and participatory action research as pedagogy.

Chapter 2: Literature Review

Introduction

The objective of this literature review is to demonstrate that the researcher is well informed on the topic of study prior to seeking new knowledge. This chapter attempts to understand the role of professional learning communities as a means of teacher professional development with respect to teaching effectively in a contemporary school. The literature review is presented in four main themes; *what is teaching*, *professional development*, *professional learning communities* and *participatory action research as pedagogy*. First an attempt is made to analyse the role of a teacher and the changing expectations for effective teaching in today's context. It looks at the challenges and expectations that teachers face as teacher proficiency is redefined in the 21st Century. Next, it looks at the need for teacher professional development and outlines the scope of the study. Then it explores how teachers develop and what is involved in effective professional development. An analysis and evaluation of professional learning communities as a means of professional development is done. Lastly, participatory action research and its effectiveness as pedagogy within a professional learning community is also explored. While each theme may be distinctive on its own, collectively they help to contextualise the study. Each subsequent theme sequentially builds on the previous one and thereby firmly entrenches and entwines the topic of study within its various strands. For every theme, relevant literature was sourced, evaluated and then contextualised to the topic of study.

Knowledge was acquired through reading, analysing and synthesising contemporary and seminal literature in and around the topic of study. This review was prepared by searching for national literature on the various themes so as to contextualise the study. However, where quality national literature was not easily available, international articles were used to analyse the theme. To ensure that relevant literature was sourced the following keywords and phrases were used: *teaching, teaching as moral activity, teaching in 21st Century, research on teaching, pedagogy, teacher*

education, professional development, professional learning community, learning network, action research and participatory action research. Using these keywords electronic searches were conducted using educational databases like *Proquest, Jstor, Springer, Taylor and Francis, EBSCO, ERIC, and* through *Google Scholar* to locate published journal articles. Relevant theses were accessed from The University of Waikato *Research Commons* database and professional books used from the library. Educational websites and teacher blogs were also accessed with the aim of including teacher voice and current teaching experiences and practice.

What is teaching?

In the literature review, teaching is looked at as a holistic activity – an activity which transcends the boundary of the classroom and the academic curriculum and thereby influences student outcomes.

Teaching skills – Conventionally held views

Historically, teachers are seen as moral flag bearers of the society and teaching as a moral practice is one of the world's most enduring understandings. Dwelling on this commonly held notion Hansen (2001) feels that "teachers are moral agents, people who can and often do have positive effects on students" (p. 830). He further suggests that it is a practice saturated with moral significance and in fact, any action or behaviour a teacher exhibits, inside or out of the classroom, is capable of expressing a moral meaning for the students. Huebner (1996) views teaching from a holistic lens where teaching as a caring act addresses the student as a whole, not just their intellectual aspect. "Teaching is an act of caring – caring for the world and another human being" (Huebner, 1996, p. 269). He emphasises that a teacher is expected to model to a young person, who is naïve to the ways of the world, desirable qualities of human behaviour; being patient and respectable, open-minded and supportive, attentive and understanding, responsive to their needs and so on. A. Hargreaves (1994) feels that the modern perspective of good teaching is not limited to the mastering of skills and knowledge of teaching; it involves distinguishing and making choices between better and worse decisions rather than right or wrong ones. He highlights that "teachers may or may

not have conscious moral intent in their work, but almost all of the work has consequences that are moral. There is no escaping this" (A. Hargreaves, 1994, p. 12). Day (1999) reinforces that the act of teaching with moral intent involves emotional work. He feels that it is an act which "is infused with pleasure, passion, creativity, challenge and joy" (p. 6).

Teaching is an art

Teaching is an art as it showcases a finesse with which a teacher can "move from the incidents themselves to what impinges on them to what surrounds" (Greene, 2001, p. 83). Teaching is an attempt to interpret the student's lifeworld from the abut domains of strangeness and familiarity, where a teacher tries to decode the meaning of what stands out from the ordinary. It is an art because the teacher contrives to instil critical and creative consciousness among the students whereby they can develop the capacity to reflect on their surroundings and appreciate multiple perspectives, in the process cultivating a richness of thought (Greene, 2001). It portrays the teachers' innate ability to hear and appreciate their students' songs and then subtly help them to harmonize their chords with the rest of the world. Therefore teachers can and do make lasting impressions on their students. It appears that Lupton (2013) agrees with Greene because he typifies teaching to be associated with uniqueness, originality and innovation. Lupton is of the view that when teaching is practised as an art, the teacher-student interactions are interspersed with anecdotes and incidents that are unplanned, that have the ability to reach out to unfamiliar hearts. Freedom and expression are an integral functional component of this art which bring an element of risk and uncertainty and "allows for action unfolding, for spontaneity, for responding to student's needs" (Lupton, 2013, p. 160).

Lupton further looks at factors which limit the activity of teaching through standardization and non-customisable learning management systems. These structures control and bind the teacher resulting in a loss of freedom and an inability to cater to the needs of their students.

Teaching skills – Contemporary expectations

More than four decades ago Heidegger (1968) proclaimed that "teaching is more difficult than learning because what teaching calls for is this: to let learn" (p. 15). He explains that the teacher needs to understand that it is not the content expertise or the larger store of knowledge that makes teaching more difficult but rather the ability to engage the students within their lifeworld in order to get them *thinking.* Heidegger (1968) goes on to state that "if the relation between the teacher and the taught is genuine….there is never a place in it for the authority of the know-it-all" (p. 15). Looking at teaching from another angle, Paulo Freire (1993) appears to agree with Heidegger when he questions and challenges the traditional style of teaching. He criticises it as a "banking" model where students are "receptacles" to be "filled" in with teacher narration (Freire, 1993, pp. 52–53) as opposed to engaged in parallel learning.

Although Heidegger never propagated a pedagogical theory of teaching, Riley (2011) attempts to organise Heidegger teaching philosophy in sequential order;

> First, some matter of concern; second, a shared undertaking (thinking along a way in relation to the concern); third, an encounter with phenomenon (things and persons within a meaningful context) opened up to uncommon understanding; and finally appropriate responding from the persons involved. (p. 800)

Riley (2011) is of the view that Heidegger's pedagogy "grounds... engagement of thought" (p. 800) and "dismisses a certain conventional authority of the teacher with the power as originator and compelling force in learning" (p. 811). He says that 'learning to let them learn' is when the taught are "opened and unable not to be involved, engaged by their reawakened capacities to learn" (Riley, 2011, p. 813). It is "the teacher and the learner working in relation to a world of concern and on its behalf, rather than working directly one upon the other" (Riley, 2011, p. 809). He concludes that this ultimately is the crux of the matter: "*the teacher has to learn to let them learn*" (Riley, 2011, p. 811).

Greene (2001) picks up the same concept and applies it to teaching in the modern context when she says "a teacher has to learn what it is to learn to let others learn" (p. 83). She feels that teachers need to create situations and circumstances within the classroom environment where the students are provoked to explore and learn on their own. Interactive instances within a classroom which support meaningful communication in meaningful circumstances develop "open capacities" in students where they learn to "teach themselves, understand something they have not been taught to understand, becoming unpredictably different and going beyond" (Greene, 2001, p. 85). Dweck (2010) believes that intelligence, knowledge and skills can be developed over time and suggests cultivating growth mindsets among learners as an underpinning learning strategy where learners are allowed and encouraged to learn in a non-threatening environment. Deeper learning occurs when a desire to seek answers to questions leads to a deliberate inquiry into the problem (Callison, 2002; Timperley, Kaser, & Halbert, 2014). Providing opportunities for students to share and articulate their lived experiences of exceptional moments and felt failures helps them to discover how to resolve and respond to them (Greene, 2001).

In the last 20 years, a required skillset for teachers of the modern classroom is to develop the capacity to learn to let learn.

Teaching in the contemporary classroom is a complicated mix of challenges and opportunities. Traditional teachers in modern classrooms has resulted in a dichotomy of sorts where effective teaching through traditional teaching strategies needs to happen in a constantly changing and challenging educational landscape. Teacher expectations to deliver a meaningful education in a modern classroom and their feeling of preparedness in doing so was highlighted in a report released by the United States Department of Education in 1999. It stated that only 20% of all teachers working in US public schools feel well prepared to work and integrate educational technology in a modern classroom (Barlow, 1999). Although this was an affective measurement of US teachers, it appears to be a fairly accurate global indicator of the chasm that has developed

between the expectations and the feeling of preparedness among teachers.

To be effective in the modern classroom teachers need to acquire new skillsets and toolsets. Recent research on cognition and learning theories open new possibilities for teachers to explore, adapt and apply these in their context. Metacognitive strategies for learning (Azevedo & Aleven, 2013; Volet, 1991) have been developed based on neuroscience discoveries on human cognition and how the brain works (Bright Enlightenment, 2012; Schwartz, 2015). Jukes (2011) in his thought provoking presentation states that the children today are not what they used to be, on a cognitive level, due to the digital bombardment which happens primarily outside of school hours. He explains that this change is happening due to the wiring and re-wiring of their brains which are exposed to a continuous flow of digital data. The students today are processing information in fundamentally different ways than we (teachers and adults) do as they are "always multiprocessing – they do several things simultaneously – listen to music, talk on the cell phone, and use the computer, all at the same time" (Brown, 2000, p. 13). Prensky (2001) further highlights the characteristics of digital natives; "used to receiving information really fast, like to parallel process and multi-task, prefer their graphics before their text, function best when networked and thrive on instant gratification and frequent rewards" (Prensky, 2001, pp. 3–4). Along the same lines, Frand (2000) mentions "zero tolerance for delays" (p. 22) in these information-age students. Jukes (2011) highlights the attributes and learning styles of digital learners and compares them to the traditional teachers' teaching styles and preferences. He is of the view that there is an urgent need for teachers to unlearn their traditional teaching strategies and relearn strategies which will engage the contemporary student.

According to Wagner (2014) contemporary (21st Century) survival skills include competencies like critical thinking and problem solving, collaboration across networks and leading by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analysing information, curiosity and

imagination. DuFour (2014) feels that 21st Century students should be able to develop and communicate ideas to others effectively, use communication to persuade, set and meet goals. Therefore in order to produce globally connected citizens with these higher-order thinking skills "we need educators who possess higher-order teaching skills and deep content knowledge" (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009, p. 2). To establish a connect between the students out of school world and academic world, the contemporary teacher has to provide an effective digital environment to engage the tech savvy, multi-media, multi-tasking digital natives. Teachers with 'we've always done it this way' attitude will struggle to keep up with the contemporary demands and expectations of the teaching profession. If teachers see themselves as learners and acknowledge the fact that they are engaged in parallel learning with their students then they will willingly endeavour to develop the competencies required for implementing effective pedagogy in a modern classroom (Heggart, 2015).

Professional Development (PD)

There is a genuine need for teachers to develop a growth mindset (Heggart, 2015) which enables them to develop professionally through inquiry into their practices (Timperley et al., 2014). "Real educational change is borne of teacher change" (Higgins, Parsons, & Bonne, 2011, p. xii).

Day (1999) is of the view that teaching is a moral enterprise and teachers have always worked within the domains of answerability, responsibility and accountability. Eraut (1995, as cited in Day, 1999) too argues convincingly that a teacher has a moral commitment to serve the interests of the students, a professional obligation to review practice and a professional obligation to continuously develop ones practical knowledge.

The scope of teacher professionalism has appeared as an issue within academic and research discourses with regularity. Advocates of new professionalism, (Day, 1999; Evans, 2011; D. H. Hargreaves, 1994; Nixon, Martin, McKeown, & Ranson, 1997) and activist professionalism (Sachs,

2000) discuss the scope and extent (political and managerial) of professional attributes (implicit and explicit) that are required of a professional educator and explore appropriate policies that support professional development to acquire such competencies. However, this study does not delve into the subtlety of defining and discussing professionalism but concentrates on exploring effective teacher professional development through teacher collaboration, to enhance student outcomes. Although professionalism is not the scope of this study it is acknowledged that the traditional notion of teacher professionalism has cracked under the pressure of social and technological change and therefore demands new education management processes. Nixon et al. (1997) argue that in this new management of education, the professional codes and practices point to a changing power relation between teachers, students and parents where traditionally teachers have been seen as experts of specialist knowledge. They are of the view that this empowerment of parents and students will result in altered relations which will "depend upon new shared understandings and new sets of agreements….outlining a new version of teacher professionality" (Nixon et al., 1997, p. 5).

Professional development may be defined as "development in one's profession, e.g. through seminars, courses, etc." (Professional Development, 2010). D. Hargreaves (1994) argues that professional development through seminars and courses caters only to the functional aspects of teaching techniques and limits developing skills and knowledge of teaching in teachers. Professional development needs to cater to the development of modern day teachers as practitioners of good teaching which embodies the contemporary teaching competencies. A comprehensive definition of professional development has been encapsulated by Day (1999)

> Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of

education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives. (p. 4)

There is a very strong hint to continuous professional development (CPD) of teachers in the above definition by Day. CPD may be defined as "the continuation of a teacher's professional development beyond their initial training, qualification, and induction" (Continuous Professional Development, 2010). Kelchtermans (2004) defines CPD as a "*learning process* resulting from *meaningful interaction* with the *context* [both in time and space] and eventually leading to *changes in teachers' professional practice* [actions] and in their *thinking about the practice*" (p. 220). A. Hargreaves and Fullan (2012) believe that it is this iterative and lifelong commitment to professional development by teachers that builds professional capacity and enables effective teaching to take place.

How teachers develop professionally

Evans (2011) theorises how teachers develop professionally at a micro level. She describes it as a cognitive process where an individual teacher acquires, through mental internalisation processes, new understanding, knowledge, attitude, skills or competencies which are considered to be superior to and replace previously held understanding, knowledge, attitude, skills or competencies. "Micro-level professional development is about an individual [teacher] discovering a better way of teaching… and to embrace it wholeheartedly, teachers must see it as, on balance a "better" [method] than the one it replaces" (Evans, 2011, p. 865). Furthermore, Evans says that professional development occurs through three dimensions; *behavioural development* which relates to what teachers physically do at work, *attitudinal development* which relates to attitudes and beliefs held by teachers and *intellectual development* which relates to teachers knowledge and understanding. These dimensions are further subdivided

into a total of eleven elements and Evans concludes that "teacher development is a multi-agentic, constantly evolving process [where] teachers' own agency and 'buy-into'" (Evans, 2011, p. 868) is an important aspect of their professional growth. Timperley, Wilson, Barrar and Fung (2007) look at the same issue from an inquiry angle. According to them teacher inquiry into their own practice helps to promote student outcomes through the knowledge building cycle. They argue that if teachers inquire into their students' learning needs and on that basis identify their own learning needs so as to upskill then they better serve their students. Teachers design curriculum/activities on the basis of their acquired new knowledge and attempt to teach in innovative and effective ways. They then analyse the impact of their teaching on student outcomes (Timperley et al., 2007). Along similar lines, Timperley propagates a new 'spiral of inquiry' learning theory with other researchers a few years later. Timperley, Kaser and Halbert (2014) look at teachers as learners, and state that these learners are at the centre of the learning process and are "invited into a new professional learning space" (p. 6) where they develop through learner agency in an interconnected and social environment. They advocate an inculcation of a 'curiosity' mindset where the teachers inquire into their practices and learn new ways of doing things.

Mezirow (2000) looks at adult learning and is also of the view that transformative learning occurs when adults critically explore their existing and taken for granted "'frame of reference' [i.e. perspectives, habits of mind and mind-sets] to make them more inclusive….open, emotionally capable of change and reflective….to generate beliefs and opinions that will prove more true or justified" (p. 8). Daloz (2000) agrees with Mezirow's theory of capacity building of "frames of reference" and states that "for mature transformation to occur, at some point there must be conscious, critical reflection on our earlier assumptions" (p. 113). But Daloz (2000) does feel that "transformative learning is by no means inevitable and depends strongly on the particular environmental and cultural forces at work in the individuals life" (p.105).

Liebermann (1995a) also emphasised the need for a conducive environment along with the cognitive aspects of teacher development. She is of the view that teachers need to be encouraged and provided an environment to take on the role of active learners, just as they would wish for their students, because learning theorists are telling us that "people learn best through active involvement and through thinking about and becoming articulate about what they have learnt" (p. 592). She states that for teachers to really change the way they work, a school wide "culture of inquiry" needs to be an ongoing part of teaching and school life, as it will provide them with opportunities to discuss, think about, try out and hone new practices.

Taylor (2000) summarises teacher development as an ongoing process and not a destination where "at some point adults may look back and discover that the totality of their experience seems somehow greater than the sum of the small shifts that have accrued" (p. 159). On the basis of their research, Richardson and Placier (2001) support this view and state that holistic "deep and lasting [teacher] change requires consideration of a multitude of aspects and interests and should be viewed as an ongoing and local process" (p. 938).

Some common elements which can be concluded on how teachers develop are; teacher change occurs when the need is identified by the individual teacher and the option is considered better than the present method, teacher agency flourishes in a favourable environment and transformative learning occurs when learners are actively involved in critical reflection of their existing beliefs and habits of mind.

Effective professional development

For effective teacher professional development to occur, A. Hargreaves (1994) emphasises the importance of interactions among and integrations between the four dimensions of teaching – technical, moral, political and emotional. He feels that schools should be places of learning for teachers and such learning should be "suffused with excitement, engagement, passion, challenge, creativity and joy" (p. 34). Similarly, Garet, Porter,

Desimone, Birman and Yoon (2001) feel that sustained and intensive professional development, rather than short bursts, is more likely to have an impact on teacher professional growth. They identified three 'core features' (focus on content, opportunities for active learning and coherence with other learning) of professional development that had significant positive effect on teachers self-reported increases in knowledge and skills. These core features significantly affect teacher learning through the three 'structural features' (form of activity, collective participation and duration of activity). They go on to say that focusing on academic subject matter gives the teachers' opportunities for hands on work within their teaching lifeworld and generates enhanced knowledge and refines skills. Along similar lines, DuFour (2014) feels that effective professional development is ongoing and job-embedded, collective and collaborative.

Rosenholtz (1985) looks at school environments which assist in effective professional development. She categorises school climates into isolated and collegial. According to her findings, teachers in collegial school climates participate in collaborative planning, problem solving, collegial support and ongoing professional development. "Good teachers," Rosenholtz says, "working with other good teachers get even better" and is of the view that "effective teachers are 'made' rather than 'born'" (p. 380). Analogously, Borko and Putnam (1996) were well ahead in their thinking, when almost twenty years ago they identified five conditions that provided favourable learning environments for transformative change in teachers:

1. Addressing teachers [current] knowledge and beliefs about teaching, learners, learning and subject matter;
2. Providing sustained opportunities to deepen and expand their knowledge of subject matter;
3. Treating teachers as learners in a manner… of how teachers should treat students as learners;
4. Grounding teachers' learning and reflection in classroom practice; and
5. Offering ample time and support for reflection, collaboration and continued learning. (pp. 700-701)

Research tells us that when teachers engage in extended professional development activities, their classroom practice improves considerably (Barlow, 1999). A prolonged and comprehensive professional engagement on a topic gives them the opportunity to seek ongoing feedback from colleagues and experts. This collaboration among professionals nurtures teacher learning in a safe and collegial environment. Lieberman, Campbell, and Yashkina (2015) also emphasise that creating favourable conditions for teacher learning, through collaboration and 'buy-in', has far more success as compared to the traditional way of 'outside-in'.

Teacher led professional development is not only effective but also has the ripple effect within the teaching profession. A teacher led professional development programme in Lexington, Massachusetts is in operation at present (2014-15) where teachers choose to present according to their expertise and others attend according to their needs. It has more far reaching positive benefits than any other form of professional development (Martellone, 2015). This purposeful and needs based professional development shows creativity, enthusiasm and dedication among teachers. Multiple benefits are witnessed among the participant teachers; the teachers who are presenting feel valued and the participants show a keen desire to learn from their equals, the teacher presenter develops leadership potential and at the same time builds on their own expertise, and lastly, a large reservoir of varied teacher expertise is available for everyone to share for free (Martellone, 2015).

Guskey and Yoon (2009) argue that there are no particular set of "best practice" professional development activities that merit universal implementation. Their research analysis tells us that 'workshops' and 'outside experts' as providers of professional development are not totally devoid of merit. These mediums do provide expertise and research knowledge which may not be otherwise available to classroom practitioners. Also simply providing time may not necessarily yield any benefit, if not used wisely. Therefore, in their view, professional development should be thoughtfully planned and well implemented. Along similar lines, researching adult learning in general, Mitchell (2013)

"emphasises agency" (p. 391) while discussing learning, development and experience. He claims that adults have greater self-direction, varied pools of experience and approach learning for practical solutions. Agreeing with Eraut (1994, as cited in Mitchell, 2013) that the majority of teacher learning happens in the workplace, he is also of the view that "significant professional learning is affected by the attributes and inclination of the individual" (Mitchell, 2013, p. 391).

Sikes (1992) looks critically at professional development and observes that imposed changes challenge pre-set professional experience, judgement and expertise, especially in older/experienced teachers. This may lead to criticism and resistance, if it does not appeal to their objective and subjective career aspirations.

All of the above suggests that teacher professional development needs to be all encompassing as it is a "highly complex and multidimensional phenomenon" (Kelchtermans, 2004, p. 12) and the strength of professional learning comes from working with, rather than on, practitioners (Higgins et al., 2011). In conclusion, "effective professional development requires considerable time, and that time must be well organised, carefully structured, purposefully directed, and focused on content or pedagogy or both" (Guskey & Yoon, 2009, p. 499).

Professional Learning Community (PLC)

Terminology

The term professional learning community is ubiquitous as it exists in many shapes and forms. However, this research is not about electronic Learning Communities nor is it about informal social Learning Communities like Twitter and Facebook. This research is about a professional learning community formed by a group of teachers who show a desire to work together for a specific purpose. DuFour (2004) observes that "a group of staff members who are determined to work together will find a way" (p. 4).

While unpacking the concept of a professional learning community, Bolam et al (2005) emphasise the importance of "being *professional* rather than

being *a* professional" (p. 149), i.e. teachers need to practice professional behaviour which reflects the standards of the profession. *Learning*, which focuses primarily on "promoting… or creating conditions to enable effective pupil learning" (p. 149), is the pivotal essence on which this concept rests and sustains its functionality. The *Community* focus draws attention to the importance of 'the many' as opposed to 'the individual' and is characterised by "mutually supportive relationships… interpersonal caring that permeates the life of teachers, students and school leaders" (p. 7).

In his book 'The Wisdom of Crowds', Surowiecki (2004) talks about why 'the many' are smarter than 'the few'. Collective intelligence is a summation of opinions, perspectives, and ideas of 'the many' which helps make good decisions that are important and beneficial in our everyday lives. "Under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them" (Surowiecki, 2004, p. xiii). Given this rationale and philosophical stance, creating favourable circumstances for teacher collaboration would result in shared understandings and knowledge creation beneficial for all. However, Surowiecki (2004) does caution that diversity and independence are critical to group optimization and the "best way for a group to be smart is for each person in it to think and act as independently as possible" (Surowiecki, 2004, p. xix) within the topic of discussion because it is through disagreement and contest that best collective decisions are coalesced not consensus and compromise. Therefore we can infer that Professional Learning Communities foster learning and effective development through collaboration.

Definition and purpose

DuFour, DuFour, Eaker, and Many (2010) define a Professional Learning Community (PLC) as "an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve" (p. 11). Katz, Earl and Ben Jaafar (2009) define Learning Communities as groups of people "working together in intentional ways to enhance the quality of professional

learning" (p. 9). They explain that the main purpose of Learning Communities is learning through knowledge creation which leads to deep conceptual changes in behaviour and conduct. Lieberman (1996) feels that Learning Communities "offer people membership in a constructive community: a group of professionals engaged in a common struggle to educate themselves so that they can better educate their students" (p. 52). Bolam et al (2005) say that the "key purpose of a PLC is to enhance staff effectiveness as professionals, for the ultimate benefit of the students" (p. 10). Vescio, Ross and Adams (2008) say that the main purpose of the PLC was collaboration with a clear and persistent focus on student learning and "that working collaboratively is the process not the goal of a PLC. The goal is enhanced student achievement" (p.89). Therefore a PLC seeks to develop the competencies of its members through collaboration and provides a platform where they can discuss problems in an environment of trust and support. Members work interdependently towards a shared goal and are mutually accountable (DuFour, 2014).

Enablers

Key enablers or characteristics for the successful functioning of a PLC have been identified by researchers and practitioners. Table 1 lists these characteristics, identified by three different researchers. While the first six are common, the last two in the table are particular to individual researchers. All these characteristics are interconnected and entwine within the whole. The key features of the enablers are explained after Table 1 on the next page.

Table 1: Key enablers/characteristics of successful PLCs

No.	Katz, Earl, Ben Jaafar (Katz et al., 2009)	DuFour, DuFour, Eaker, Many (DuFour et al., 2010)	Bolam, McMohan, Stoll, Wallace, Smith, Thomas, Greenwood (Bolam et al., 2005)
1	Purpose and Focus	Focus on learning	Shared values and vision
2	Collaboration	Collaboration	collaboration
3	Inquiry	Inquiry	Reflective inquiry
4	Accountability	Results orientation	Collective responsibility
5	Building Capacity and Support	Commitment to continuous improvement	Group and individual learning
6	Relationships	Learning by doing	Mutual trust, respect and support
	Leadership		Openness networks and partnerships
			Inclusive membership

Katz et al (2009) feel that a *purpose and focus* of a PLC sets the scene and gives a direction to its members. Shared vision and values help to bring a sense of purpose and provide a "framework for shared, collective, ethical decision making" (Bolam et al., 2005, p. 7). DuFour et al (2010) highlight that the very "focus of a PLC is on [each student] and a commitment to learning of each student" (p. 11).

Collaboration is working interdependently in teams to achieve a common goal. "It goes beyond the superficial exchanges of help, support or assistance" (Bolam et al., 2005, p. 8), and allows teachers to discuss tough problems and issues of mutual concern thereby changing their ideas and practices. Dufour et al (2010) consider collaboration to be a means to an end, not the end itself – a systematic process where teachers work together to improve classroom practice and student outcomes.

Teacher *inquiry* into their practice allows for stock take on current reality; on the basis of which future best practices can be formulated. Investigating ideas and current practises from different lenses allows challenging of the status quo (Katz et al., 2009). It enables members to "develop new skills and capabilities… [which] transforms into fundamental shifts in attitudes, beliefs and habits" (DuFour et al., 2010, p. 12). The reflective professional dialogue promotes the generation of new knowledge and information to address students' needs (Bolam et al., 2005).

Accountability parallels moral responsibility for a teacher. Katz et al (2009) propose that external accountability is achieved by being open and transparent with the stakeholders whereby the results are disseminated publicly. Internal accountability demands that teachers design intervention programmes based on evidence from student assessment results. Dufour et al (2010) agree that the focus on improved results help to develop measureable goals for the PLC. Bolam et al (2005) go on to say that it is the collective responsibility of the PLC to monitor student learning and this "collective responsibility puts peer pressure and accountability on those who do not do their fair share" (p. 8).

Building capacity and support within the PLC is "creating the conditions, opportunities and experiences of collaboration and mutual learning" (Katz et al., 2009, p. 15). Group and individual learning occurs through collective knowledge creation, as all teachers are learners of a common cause and this "professional self-renewal is a communal rather than a solitary happening" (Bolam et al., 2005, p. 9). A commitment to continuous improvement, results from a "persistent disquiet of the status quo and a constant search for better" conditions for learning (DuFour et al., 2010, p. 13).

Productive *relationships* are the "connective tissue" (Katz et al., 2009, p. 12) in any organisation. Their intricate cobweb builds social capital which allows people to work together and exceed what anyone else could accomplish alone. Bolam et al (2005) identify mutual trust, respect and

support as foundation pillars to build good relationships and are necessary among staff for an effective learning community. Lieberman (1996) is also of the view that trust and support provide opportunities for members to discuss their work and tackle problems effectively.

Katz et al (2009) discuss the importance of leadership in a PLC. They feel that promoting and acknowledging formal and informal *leadership* is critical to the effective functioning of a PLC. Bolam et al (2005) feel that administrators and ancillary staff can also be members of a PLC, especially in a primary school context.

Benefits

There are accrued benefits of successful functioning PLCs. Hord and Sommers (2008) feel that the direct and immediate effect is on *staff development* and growth. PLCs draw teachers out of the silo by blurring the boundaries of the classroom. When teachers engage in meaningful discussions on teaching and learning, the generation of shared knowledge increases their repertoire of skills, builds confidence and increases teacher efficacy. The teachers "exhibit higher morale as they support each other… feel renewed and inspired professionally… and demonstrate higher commitment" (Hord & Sommers, 2008, p. 17) towards the goal of learning. Sharing builds trust among staff as they collectively experience a deeper understanding of the learning process which results in transformation of practices for the benefit of the students. Student outcomes are enhanced through greater academic gains and positive relationships. Research shows that an improvement in staff-student relationships result in a drop in truancy and dropout rates (Hord & Sommers, 2008). Shared leadership builds confidence and capability in teachers, cultivates trust and collegiality as they participate in collaborative groups.

Participatory Action Research (PAR) as pedagogy

There has been an attempt to advocate participatory action research (PAR) as pedagogy by some researchers. They have explored the use of PAR as pedagogy under various scenarios and I analyse their contributions in this area, in this section of the literature review. At this juncture, it is important

to note here that PAR has also been used as a strategy/methodology in this research study. So PAR as a methodology has been discussed in detail in Chapter Three. It is imperative to highlight here that there is a subtle difference between 'methodology' and 'pedagogy'. Whereas methodology is used to refer to "a system of teaching and learning activities", pedagogy is "a theory of teaching and learning encompassing aims, curriculum content and methodology… to relate the process of teaching to that of learning" (Grimmitt, 2000, pp. 16–17).

In order to appreciate how PAR is embedded into pedagogy it is important to understand the concept and how it promotes ownership to learning and thereby transforms the learners. "Participatory action research" is considered as "a proper subset of action research (AR)" (Udas, 1998, p. 602). Action research as outlined by Lewin (1964) is a series of cyclical steps involving inquiry, action, and reflection. This action research process has seen many variations and adaptations over the years. In the last two decades however, "the emphasis on the full participation of all participants in the action research process has come to be known as… participatory action research" (Udas, 1998, p. 602). Contrary to AR, the researcher is an active participant in the PAR process. In PAR, all participants organise themselves into self-reflective groups and commit to participate, reflect and share their views (McTaggart, 1991).

Udas (1998) states that PAR is co-designed, conducted by, related to participants and "is a means of self-examination, improvement and emancipation" (p. 607). A PLC operating in the PAR process also fosters 'reciprocal accountability' (Elmore, 2007). Along with being a participant, the researcher/facilitator takes the responsibility of providing resources, environment and opportunity for all participants to develop professional capability in lieu of their active participation in the process.

PAR is a meaning generative process where collaboration creates space for participants to give voice and movement to their perceptions of what learning/meaning is and could be (Anderson et al., 2015). The knowledge sought in PAR serves the participants as it is used for improvement of

practice. "There is value in both the PAR process and its outcomes. The process is developmental rather than deficiency based, which in itself can be an empowering experience for participants" (Udas, 1998, p. 606). All participants are learners and participate actively in generating shared knowledge by contributing their perspectives, beliefs and experiences for the benefit of the group.

"Being involved as a learner and a participant provides openings to new knowledge and broadens the agenda for thought and action" (Lieberman, 1995a, p. 593). Learning and development become varied and engaging for all participants. The power of 'learning by doing' was implied by Confucius when he said, "I hear and I forget. I see and I remember. I do and I understand". DuFour, DuFour, Eaker and Many (2006) start their book on PLCs with "we learn best by doing" (p. 1). It is pertinent to note here that their emphasis is on '*we*' and '*doing*' which helps to achieve the target of learning for all. '*We*' refers to *all* participants and '*doing*' is the *active* participation of all participants.

Mezirow (2000) feels that "transformative learning involves participation in a constructive discourse… to use the experience of others… to generate [new] beliefs and opinions… making an action decision based on the resulting insight" (p. 8). Deep and higher order learning occurs through active and non-threatening collaboration. Validating discourses result in expanded awareness of participants and critical reflection moves participants towards a fuller realisation of agency (Mezirow, 2000). "The powerful collaboration that characterises professional learning communities is a systematic process in which… teachers work in teams, engaging in an ongoing cycle of questions that promote deep team learning" (DuFour, 2004, p. 3). However, Mezirow (2000) does feel that "consensus building is an ongoing process, and a best collective judgement is always subject to review by a broader group of participants" (p. 12).

A PLC operating in the PAR domain has a greater likelihood of building collective capacity among its participants (DuFour et al., 2010).

Collaboration facilitates understanding and empowers participants and establishes the link between lived context and learning. This helps them to accurately identify and interpret the issues that influence and shape their experiences (Anderson et al., 2015). Timperley et al. (2014) outline the importance of active participation in their 'spiral of inquiry' theory

> motivation and energy build, as educators together find compelling reasons to change what they are doing, and as they take joint responsibility for doing so. As they engage in deeper forms of inquiry, the process becomes central to their professional lives. They will not, in fact cannot, go back to earlier, unquestioning ways of doing things. (Timperley et al., 2014, p. 6)

Udas (1998) identifies four guiding principles of PAR. Firstly the *methodology*/process must be participant-centred and non-alienating where collaborative inquiry is based on mutual respect, trust, potential benefits and responsibility. Secondly *participation* needs to be effective and this happens when the nature and context of the problems directly concerns the participants. It becomes the responsibility of the facilitator to promote a learning environment. Thirdly critical reflection on their *action* should encourage and empower participants to embrace new understandings for future improved outcomes. Lastly, PAR is aimed towards liberation and emancipation of the participants and promotes social justice. It questions current practice through critical reflection of the situation and collaboratively looks for alternate solutions thereby enhancing the quality of lives. Similarly McTaggart (1991) suggest nine principles for PAR as pedagogy four of which are very similar to the ones outlined by Udas.

Given the principles of PAR outlined by Udas and McTaggart and the consistency with which research tells us that active participation of participants in the AR cycle fosters learning through collaboration, it is not surprising that many organisations have used PAR as a pedagogy (Anderson et al., 2015; Udas, 1998). Udas further explains that learned helplessness can be successfully overcome through PAR as it is able to

break the cycle of iterative failure experiences through self-evaluation and emancipation.

Conclusion

An education system needs to serve the society, especially when it is undergoing profound and accelerating change. It is the responsibility of the teaching profession to mediate and facilitate such change by equipping its future citizens with skills and competencies to make meaningful contributions to the society. Therefore teachers "must adapt a great deal so that they can act in a constructive manner" (Coolahan, 2002, p. 9) to serve their students. Coolahan is of the view that the main purpose of professional development is to prepare students to become active global citizens. Guskey (2002) identifies three main goals of professional development; "change in classroom practice of classroom teachers, change in their attitudes and beliefs, and change in the learning outcomes of students" (p. 381). This change in attitudes and beliefs happens at a micro-level (Evans, 2011) and if teachers develop growth mindsets (Dweck, 2010), inculcate curiosity (Timperley et al., 2014) and a culture of inquiry (Lieberman, 1995a) then they develop professionally and are able to serve their students better. Professional Learning Communities are one forum which facilitate teacher growth through a shared vision, effective collaboration, inquiry into their practice and positive relationships (Bolam et al., 2005; DuFour et al., 2010; Katz et al., 2009; Timperley et al., 2014). Participatory Action Research as a pedagogy may serve as a vehicle for the PLCs to facilitate effective and transformative teacher professional development (Anderson et al., 2015).

The next chapter outlines the research design for the study.

Chapter 3: Research Methodology and Design

Introduction

For more than a decade, as a New Zealand secondary school teacher, I was exposed to professional development (PD) which was compulsory, piecemeal and non-contextual. A Post Primary Teachers' Association (PPTA) research report on professional learning and development (PLD) clearly states that "the least effective PLD is… a whole staff transmission model delivered in-house" (PPTA, 2013b, p. 5). This prompted me to research a possible alternative strategy for teacher professional development and growth.

This research study investigated the effect of a purposeful and sustained professional learning community (PLC) on teacher professional development (PD). A research methodology was chosen to carefully encapsulate the setting and context of the research. It was important to capture the views of participant teachers' accurately to show trustworthiness and generalisability. As PD is done with and not to teachers, the aim was to intermingle with the teachers participating in the research. This would help to discern from their discussions if a purposeful and sustained PLC could provide a freshness of perspective that would invigorate their desire for learning new skillsets.

This chapter outlines the research philosophy, methodology, design, research process and reveals the challenges faced in the research study. First, the ontological and epistemological stances justify the location of the research. Second, the framework of the research is explained where validation of PAR methodology is outlined. The third section describes the research design and process. The fourth section highlights the method used for data collection and the analytical procedures that were used to decipher the data. A conscious and concerted effort was made to ensure the ethical safeguard of participants and thereby the rigour and reliability of the data collected was protected. In the last section the challenges and difficulties faced during the research process are revealed.

Research ontology and epistemology

My ontological viewpoint that social discourse generates shared knowledge motivated me to conduct research with a group of teachers. Teachers are leaders in their own rights and develop a wealth of professional knowledge over the years in their area of work. When this knowledge is shared among colleagues "knowledge creation [becomes] a collaborative process" (McNiff & Whitehead, 2011, p. 31). This generation of shared knowledge gives a deeper understanding of the situation, in the given context. Every teacher is exposed to different work conditions which influences their worldview. Analogously, a teacher's personal worldview also influences their behaviour in the given condition. The complex interaction of variables in a teacher's lifeworld can generate different insights for different teachers to a given situation. Further, a given situation can result in individual teachers experiencing different realities (Krauss, 2005, p.760). Teachers actively interpret and construct their teaching world where situations are fluid and changing. "Events and behaviour are richly affected by context and evolve over time" (Cohen, Manion, & Morrison, 2011, p.17).

The research will be situated in the critical theory paradigm where "the purpose is not merely to understand situations and phenomena but to change them" (Cohen et al., 2011, p. 31). The critical theory epistemological stance contests the idea of discovering facts in isolation from their cause and questions the view that "empirically derived knowledge is the only type of knowledge" (Hoffman, 1987, p. 236). It advocates that the creation of knowledge is a result of a critical reflection on the situation or problem given the context and time (Hoffman, 1987). Further, it "seek[s] not simply to reproduce society via description but to understand society and change it" (Hoffman, 1987, p. 233) and provides the "basis for the understanding of [human] action within a common tradition" (Hoffman, 1987, p. 235). The application of the critical theory to a contextual-based situation "calls for the imaginative understanding of the studied phenomena… allow for indeterminacy rather than seek causality

and give priority to showing patterns and connections rather than to linear reasoning" (Charmaz, 2006, p. 126).

The research seeks to understand a change in a teacher's sense of self-worth through sustained and purposeful knowledge creation, in their natural surroundings. It searches for "the meaning people [teachers] have constructed, that is, how people [teachers] make sense of their world and the experience they have in the[ir] world" (Merriam, 2009, p. 15). Findings are categorised into themes using the thematic method and the inductive process (Merriam & Associates, 2002) used to analyse the findings. The discussion is both descriptive and constructive and the humanistic component is its focal point (Hoffman, 1987). Teacher critical consciousness combined with effective collaboration can change the culture of the institution, transforming it into a living and learning organisation (Senge, Kliener, Roberts, Ross, & Smith, 1994).

The research question

Keeping in view the iterative and interpretive nature of the project, the following research question will be investigated –

"Does a purposeful and sustained professional learning community have an effect on teacher sense of self-worth and hence classroom practice?"

This overarching question was broken down into separate focus areas:

- Does a PLC need to be purposeful (to the teacher context) to be effective?
- Does a PLC need to be sustained (over several cycles) to be effective?
- Does a purposeful and sustained PLC improve teacher self-worth – in terms of confidence?
- Does a purposeful and sustained PLC influence teacher classroom practice – in terms of pedagogy?
- Does a purposeful and sustained PLC improve student outcome – in terms of student engagement, student empowerment?

Research methodology

The research is based in the interpretive paradigm and participatory action research (PAR) methodology used to generate iterative data through focus group meetings. PAR as a democratic and empowering activity will provide an arena for generating rich and authentic discussions among teachers given the reflective and cyclic process of this methodology. Teachers "acting and researching on, by, with and for themselves" (Cohen et al., 2011, p. 349) will address fundamental issues in their immediate work place. My belief that effective teacher collaboration improves teacher efficacy motivated me to design the research around the PAR methodology. As observed by Atkin (1992), "it is in action that practical knowledge and belief are distinctively developed, tested and revised" (p. 386).

In the following paragraphs, various research methods that could have been used to conduct the research have been described and compared. By scrutinizing the suitability of different research methods, the choice of PAR methodology is justified. Teacher research, action research, participatory research and participatory action research have been explored below.

Teacher research is defined as an inquiry that is "intentional, systematic, public, voluntary, ethical and contextual" (Mohr et al., 2004, p. 23). Classroom practitioners with an open mind tend to question their teaching practices and continuously refine the process according to the needs of their students. This teacher inquiry process of constant self-evaluation may be classified as research. It may also be noted here that "teacher research as a general term embraces many methodologies and many situations" (Check & Schutt, 2012, p. 264).

Action research emerged in the 1940s and is defined as a "series of research activities that use a cyclical action reflection model to investigate and attempt to make changes in an organisation, for example, a whole school" (Check & Schutt, 2012, p. 264). Action research is carried out by the researcher and tends to veil a subtle power differential between the

researcher and the participants. It is more often than not, characterised by the researcher being the outsider and generally observing from or directing from the outside (Check & Schutt, 2012).

Participatory research however, concerns with "doing research *with* people rather than doing research *to* or *for* people" (Cohen et al., 2011, p. 37). Participatory research promotes *conscientisation* (Freire, 1993) and self-development initiatives. "*Conscientisation* is a process of critical self-inquiry and self-learning and thereby developing the confidence and capability to find answers to questions on one's own" (Rahman, 2004, p. 18). The participants are initiated into the process of self-discovery and then are expected to feed off each other to provide and introduce programmes for self-improvement. The researcher slowly opts out – implicitly – from the core group of participants as they tend to become self-sufficient and liberated. "Authentic liberation is a praxis: the action and reflection of men and women upon their world in order to transform it" (Freire, 1993, p. 60).

Participatory action research (PAR) however, appears to be an amalgamation of action research and participatory research. PAR is defined as a "recursive process that involves a spiral of adaptable steps that include… questioning a particular issue, reflecting upon and investigating the issue, developing an action plan and implementing and refining the plan" (McIntyre, 2008, p. 6).

McTaggart (1991) explains that the participatory action research process "starts small and develops through a self-reflective spiral: a spiral of cycles of planning, acting, observing, reflecting and then re-planning" (McTaggart, 1991, p. 175). McIntyre (2008) has captured the essence of the process in the diagram given below.
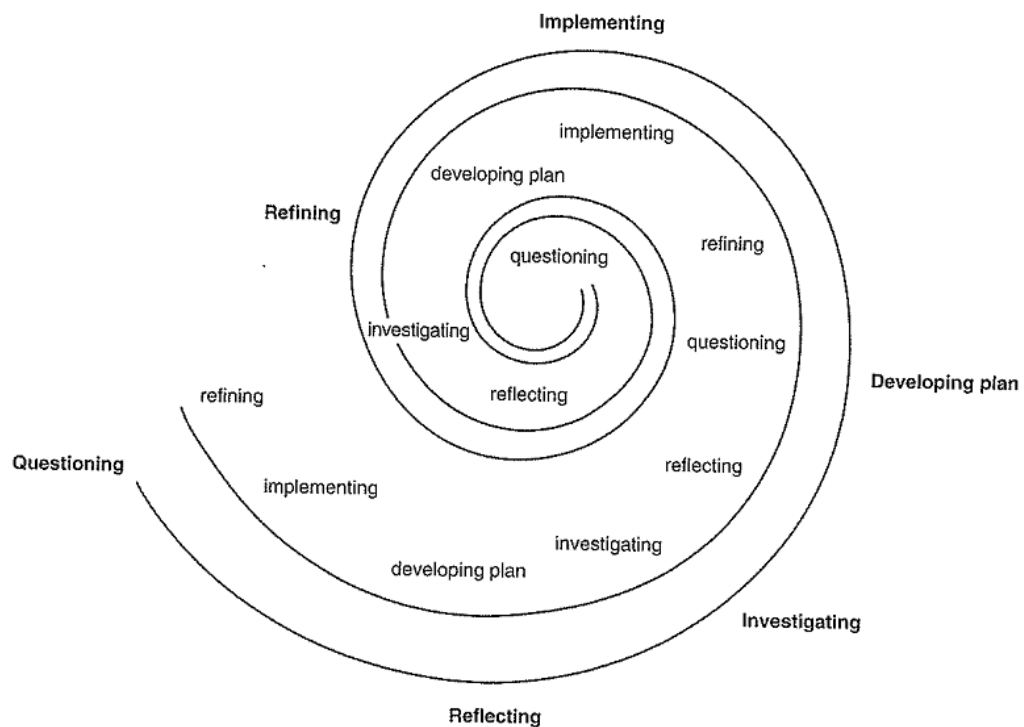
Figure 1: The Recursive process of Participatory Action Research

Source: (McIntyre, 2008, p. 7)

In PAR the participants and the researcher organise themselves into a self-reflective focus group and commit to *participate* (as opposed to being *involved*) in the production of new knowledge by participating in the research process, reflecting on it and then sharing their views. *Participation* is different from *involvement*: whereas involvement is doing research on people, participation is doing research with people (McTaggart, 1991).

In the PAR process, a researcher "approaches a particular group inviting them to explore a particular issue" (McIntyre, 2008, p. 8) and is an active, equal participant. It has been observed that formulating procedures and policies on the basis of data generated by researchers as outside observers, is likely to violate the integrity of the researched and can be deeply dis-empowering (Galtung, 1975, pp. 264–276). Consequently, techniques and methodologies used by social science (education) researchers that treat the researched individuals (teachers/students) as generators of raw data, to churn out generalised information for school or

ministerial authorities, tends to hijack the essence of highly intricate networks in schooling systems.

A PAR approach develops "communities of practice to address specific tasks through creating networks of reciprocity within and beyond the boundaries to create learning communities" (McIntyre-Mills, Kedibone, Arko-Achemfuor, Mabunda, & Njiro, 2014, p. 121). In the context of a school setting, a learning community has the advantage of operating in a natural environment and has the capability to transcend traditional boundaries. Such learning communities in school settings are inter-twined with a strong ethic of respect and trust which is marinated by the flavour of collegiality. Further, within the learning community "the agendas and areas of focus are identified by participants themselves, so they are rooted in reality, are authentic and 'owned' by the participants" (Cohen et al., 2011, p. 349).

The PAR process mandates the researcher to be an active participant. "The key difference between participatory and conventional methodologies lies in the location of power" (Cornwall & Jewkes, 1995, p. 1667). Power differentials between the participants and the researcher are minimised when the researcher is an equal participant. This gives the researcher a better insight into the views and opinions expressed in discussions. Hence the researcher is able to interpret better the interactions among participants.

In PAR, "the members are actively engaged in the quest for information and ideas to guide their future action" (Whyte, Greenwood, & Lazes, 1991, p. 20). Gaps tend to occur unknowingly and quickly in practises of individual teachers, in today's changing education world. A participatory action research approach attempts to uncover these gaps which may then be addressed with collegial support and encouragement. Active involvement of teachers in their own professional development helps to improve teacher confidence as "the outcomes are most likely to be used for improving aspects of practise and, therefore, there is less likelihood of resistance from participants" (Koshy, 2005, p. 84).

PAR is considered the most participatory among other research approaches. This has been aptly depicted by Carr-Chellman and Savoy (2004) in a continuum which analyses empowerment of participants in research approaches. They feel that "PAR empowers those who have traditionally had research done *to* them instead of actually participating" (p. 712) actively in the process. Their view is that PAR generates shared knowledge which is consensually available and hence used more, has a purpose within a context and its ready applicability helps to improve organisations.

Taking into account the above analysis of various research methods, PAR methodology was the preferred choice given the research question. The study was directly related to participant issues and the knowledge sought in PAR "is for the improvement of practice, not for the construction of an abstract theory-base" (Udas, 1998, p. 603). It is a process of self-examination and improvement and the process itself is of immense value to its participants. Incremental growth in teacher self-confidence through generation of shared knowledge, adds to the plethora of *decisional capital* (A. Hargreaves & Fullan, 2012) that already exists within a teaching community.

Research Design and Research Process

Research design

The traditional approach to research design confers absolute power in the researcher - from creating to implementing the designed model. The "traditional approach to… [research] design disenfranchise[s] the learner from the design process" (Tracey, 2014, p. 18). Therefore "the role of the learner was simply to use the solution (or perhaps circumvent it)" (Tracey, 2014, p. 18). The programme or model that is presented to the end consumer, who has not been consulted, is reluctantly accepted and rarely implemented effectively by the consumer. This "one sided, often unsuccessful diffusion of innovation" (Carr-Chellman & Savoy, 2004, p. 701) can result in frustration and a waste of research time and resources. This has been observed especially in education, where policy makers and providers have bombarded schools and school teachers with programmes

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(e.g. Virtues, PB4L, and Restorative) and pedagogical tools (e.g. blended learning, project based learning) assuming universal applicability, even though the initiatives may have tested successfully only in some schools, in particular contexts.

Where teacher 'buy in' has been successfully achieved, implementation of strategies and positive work output are achieved with fun and a definite purpose (Carr-Chellman & Savoy, 2004) during professional development. Successful programmes have elements of ownership and a stamp of approval from its participants. This comes about from their belief that it will benefit them.

Research design for the study revolved around PAR. A focus group of teachers collaborating within the PAR domain would help each other to achieve the goal of learning a new pedagogical tool. Action research develops teacher confidence through iterative cycles. "Carrying out action research is all about developing the act of knowing through observation, listening, analysing, questioning and being involved in constructing one's own knowledge" (Koshy, 2005, p. xiv). In this research design, the teachers learn through relevant readings of articles and then share their thoughts on the articles in cyclic focus group meetings. Then they implement the newly learned strategies in their classrooms in comfortable chunks, without disrupting the normal class routines. "The main role of action research is to facilitate practitioners to study aspects of practise… with the view of improving practise" (Koshy, 2005, p. xii). The aim was to investigate change in teacher self-worth through building teacher capacity.

The research design was teacher centric and driven by teacher need. The design was kept flexible to accommodate teacher requests for specific PD sessions/opportunities. The participant teachers were keen to witness teaching in their colleagues' classrooms and also in a completely different but similar school. This request was fulfilled towards the end of the research. "Gaining insights and planning action" (Koshy, 2005, p. 21) by participants was an unexpected and organic outcome of this research design.

Triangulation of data was to be achieved by collecting student voice through surveys. Students of participant teachers were to be surveyed periodically in order to gauge students' perceptions of change in their teacher's classroom practice. Student validation would be measured from their responses to their engagement and empowerment in the classroom, before and after their teacher implemented the new pedagogical tool.

Merriam (2009) is of the view that "a qualitative design is emergent" (p. 169). The humanistic component in the research was a dynamic variable: it involved not only the teachers but the Principal of the school, the students and their parents. This resulted in modifications and adjustments to the initial design. An educated and informed decision had to be made to carry on with the research. The student voice component of the research design had to be removed as a parent sought clarifications about the involvement of their child. In consultation with the school Principal and my supervisor it was thought prudent not to involve the students in the research as parents appeared confused and reluctant to involve their children in the research.

Research process

For professional development to be effective - teachers 'buy in' is essential. They need to identify and willingly seek to gain skillsets which most enable them to carry out their professional duties of teaching and learning, efficiently and effectively. Accordingly it becomes important for them to voluntarily participate in professional development sessions.

With the above underpinning philosophy in mind, the research process was initiated through a PowerPoint presentation to the teaching staff of the school, where the aim and details of the study were outlined. Later a copy of the research proposal was emailed to the staff. The teachers were invited (to volunteer) to participate in the research as members of a focus group. The aim was to form a PLC that would look at purposeful and sustained professional development through participatory action research methodology. To ensure transparency and eliminate the possibility of a bias, the participants were chosen on a first come first serve basis. On the

basis of responses received, verbally and via email, four teachers were invited to participate in the research project.

The invitational letter required teachers to identify a pedagogical tool (from a list of nine pedagogical tools, or to come up with one of their own) they would like to learn and implement in their classroom over a period of two/three school terms. Professional development would potentially take place within the focus group setting via participatory action research methodology over several cycles.

In the first focus group meeting, the teachers were required to identify by consensus, on a meeting time which would be outside their normal school working hours. They were also required to decide on how frequently they would like to meet as a focus group. Then they were prompted to identify a pedagogical tool they would like to learn and implement in their classroom. The choices of all participants were discussed and debated by the group and a consensus was reached on learning a pedagogical tool. They decided on meeting biweekly on Tuesdays after school to learn and implement 'differentiated learning' pedagogy in their classrooms.

In the subsequent focus group meetings, all participants decided to source and read journal articles and books to upskill themselves on the chosen pedagogical tool. As they started to come to grips with the intricacies of the pedagogy, the teachers started to (tentatively) experiment with implementing the strategies in their classrooms, in small chunks and manageable activities. They met biweekly to start with; to discuss their experiences in the classroom and to bounce ideas off each other. As the frequency of implementing the strategies in classes increased, the teachers chose to meet every week. as their grasp and understanding of the pedagogy improved there was a noticeable decrease in their enthusiasm and attendance at meetings. Towards the end of the research they decided to visit another school to witness the practical applicability of the pedagogical tool in a different but similar school. This they hoped would help them to authenticate their teaching practise and also pick up new strategies from their colleagues working in a different environment.

Data collection

Focus group were the preferred data collection tool in the research project. Focus groups "collect data through group interaction on a topic determined by the researcher" (Morgan, 1997, p. 6). Freeman (2006) describes a focus group as a form of group interview which places special emphasis on discussions between members whereby "focus groups aim to promote self-disclosure among participants" (p. 492). Bowling (2002) defines focus groups as "unstructured interviews with small groups of people who interact with each other… they have the advantage of making use of group dynamics to stimulate discussion, gain insights and generate ideas in order to pursue a topic in greater depth" (Bowling, 2002, p. 394). Morgan (1997) further states that the two defining features of focus groups are "the reliance on the researcher's focus and the groups' interactions" (p. 13).

A well-articulated research objective makes it possible for quick, easy and efficient collection of information. Freeman (2006) highlights the importance of the research question when using focus groups as a tool for collecting data. One of the strengths of focus groups is to "produce concentrated amounts of data… directly targeted to the researchers interests" (Morgan, 1997, p. 13). However, the flip side could be a compromise on the naturalistic generation of data.

In order to capture the naturalistic component in a focus group setting, I provided the opportunity of negotiation to the participants. They had to decide on a pedagogical tool they would like to learn as a PLC. The initial letter of invitation to all participants listed nine pedagogical tools for them to choose from and also a space for indicating a tool they may wish to explore, if it was not already listed. In the first focus group meeting they were given the opportunity to discuss and decide the pedagogical tool they would like to learn as a focus group. Once the consensus was reached the research got underway.

The naturalistic element of a focus group was further protected by providing a safe and authentic environment for the participants. The focus group consisted of four secondary school teachers from one school. All

participants were female. Three teachers had finished University study in the last two years whereas the fourth had finished her study six years ago, and so they could relate to each other's life situations easily. Two teachers worked in the same faculty and the other two teachers supervised student 'lunch break' together once a week for half an hour. The participant teachers met informally and exchanged anecdotes with each other and other staff during staff meetings, and breaks. This built a sense of belonging and collegiality among the participants. The meetings were held in their comfort zone; onsite, after school, in a small office next to a classroom which was easily accessible. A conscious effort to minimise disruption and workload in their daily 'teacher life' was attempted. As such, interactions and discussions among focus group members were cordial and ongoing – sometimes they flowed on after the focus group meetings were over. The group shared experiences, exchanged anecdotes and commented on each other's views on a topic. The forum provided each member with a platform of mutual support, trust, understanding and where feelings could be expressed freely (Freeman, 2006). All teachers taught some junior classes and were keen to trial a new pedagogical tool. They did not want to disturb their senior classes as their exams were due in a few weeks.

The ideal size of a focus group ranges between four and twelve members. To this effect the first four teachers who showed an interest in the research project were selected to be a part of the focus group. The participants were chosen from a secondary school as this was the population of interest. The small number of participants allowed for individual yet diverse contributions from the participants without being unmanageable (Freeman, 2006). It enabled a participant to explore the beliefs, attitudes and perspectives of other members and clarify differences on topics of interest.

Cyclic focus group meetings require 'member consistency' (Freeman, 2006). In order to capture consistent, authentic views of participants and to establish a true representation of their problem, a concentrated effort was made to maintain member consistency. Timely reminders with adequate

notices were given to participants. However, there were issues of member consistency in the research when all members were not present on a number of occasions due to various reasons.

The focus group meetings were teacher driven; the frequency changed from biweekly to weekly meetings, the place changed from the conference room to a more central and acceptable room adjacent to a classroom, and timing for the meetings changed from after school to meeting during breaks. The changes occurred when a proposal was put forward by a participant and other members agreed or when a problem occurred and someone suggested a solution that was acceptable to all. Consensus was the mantra on which these changes were enacted. The meetings were discontinued when the members felt they had achieved their purpose.

Finally, focus group was the preferred method in this context as it depicted all the features of a self-contained research tool (Morgan, 1997). It was preferred over other qualitative methods of data collection as it was felt that the participant teachers would actively and easily discuss a common topic of interest (Morgan, 1997, p. 17). They came together voluntarily to address a given situation which was affecting all of them and therefore they freely expressed their opinions on the research topic. Although the research design catered for triangulation of data, this focus group had the elements of a self-contained research tool and gave me the confidence that "the results of the research [could] stand on their own" (Morgan, 1997, p. 18).

Data analysis

Data analysis involved interpreting and giving meaning to the discussions and perceptions of the participant teachers. According to Merriam (2009) "data analysis is the process used to *answer your research question"* (Merriam, 2009, p. 176). I analysed data by identifying segments within the focus group discussions that provided specific information to the research questions. These bits of information were categorised into themes and organised into descriptive accounts. The data analysis was "primarily *inductive* and *comparative*" (Merriam, 2009, p. 175) as it involved making

meaning of participants perceptions and comparing their individual positioning vis-à-vis the context.

Merriam (2009) has noted that "the process of [interpretive] data collection and analysis is recursive and dynamic" (p. 169). The cyclic focus group meetings allowed participants to reflect on the proceedings of the previous meetings and address contentious areas and debate common issues in the following meeting. The recursive nature of the research enabled dynamic knowledge building among the participants. The data analysis process saw a constant movement from specific raw data to abstract categories and concepts with the aim of identifying recurring patterns across all the data. This enabled me to understand the significance of the study and articulate in written form, a generalisation of this study vis-à-vis similar settings and context, which was implied by the data analysis.

Data validity and reliability

An effort was made to represent situational reality. This was done by forming a natural homogenous focus group of teachers with a pre-existent problems and concerns, so that the findings could be generalised within similar settings and context (Freeman, 2006). In the homogenous focus group, teachers were communicating in their own distinct vocabulary. They were sharing their knowledge, and thus exploring what other teachers in "the group think, how they think and why they think in that way" (Kitzinger, 1995, p. 299). The research emphasis was on member reflexivity given that the focus group was operating within the participatory action research domain (Kemmis, 2006).

Freeman (2006) cautions that forming focus groups with pre-existing issues may compromise external validity. It may hinder free flow of ideas among members influenced by pre-existing relationships and thus portray the notion of being biased. However, in this particular study, the homogenous nature of the focus group generated rich and ready discussions among equals. Parker and Tritter (2006) further caution that the selection of members of a focus group is likely to prove crucial in relation to the form and quality of interaction. Strained group dynamics

may stifle individual voices and compromise confidentiality. This focus group had only two participants from the same faculty and discipline. The diverse nature of the group facilitated a rich and free interaction among the participants. Transparency (Freeman, 2006) of the research project was achieved by forming a focus group on a first come first served basis. To me, a prompt response from the participant teachers showed the deep desire for the teacher to engage in professional development.

Internal validity of the research was achieved by coding data for themes and ideas. Thematic analysis was used to make sense of data collected.

As frequent focus group meetings were to be convened, internal stability (Kidd & Parshall, 2000) was desired. To achieve this, efforts were made to inform members in advance about the meetings and if possible they were politely reminded to attend.

To avoid groupthink and generate meaningful discussions, MacDougall and Baum (1997) suggest implanting of a devil's advocate within the group, especially when the "group is made up of people with differing levels of power" (p. 540). I was particularly conscious of this issue and was mindful to ensure that the focus group did not inherit power differentials through recruitment of members.

Reliability is described as "consistency or stability… [and] whether, if the measure is repeated, one would obtain the same result. It reflects the generalisability of ones findings" (Koshy, 2005, p. 106). I feel that the self-contained (Morgan, 1997) nature of this focus group does offer a degree of generalisability to the research, within similar settings and context.

Ethical Issues

Teachers were introduced to the research project by a PowerPoint presentation and an invitation letter was emailed to them. They were fully briefed about their rights to withdraw from the research at any stage but they were not permitted to withdraw their contributions to the focus group data, given the iterative nature of data generation. Their participation was based around ongoing informed consent (Cohen et al., 2011) throughout

the data collection process. As a researcher, I continually reflected on my own ethical conduct.

Students were to be surveyed electronically vis-à-vis their engagement and achievement on a periodic basis. However, this component of the research project had to be removed as some parents expressed concern.

Every endeavour was made to ensure participant and school anonymity (Bell, 2010; Masson, 2004). The data contributed by participants was confidential to the project. This was conveyed to participants on a regular basis. They were informed that the research will be publically available but there will be no way that it can be linked back to them (Menter, Elliot, Hulme, Lewin, & Lowden, 2011, p. 62) and their rights to express individual views will be respected. All participants were requested to respect each other's views and not discuss sensitive information and views of personal members outside the focus group.

There was no disruption to class time and student learning. The research was conducted in the Junior School (Year 9 and Year 10) in Term 3 and Term 4 so that the senior classes were not disrupted in their preparation for the external NCEA examinations.

Participants were required to voluntarily participate in pre-agreed cyclic focus group meetings of approximately 45 minutes. The meetings would stop by a mutual agreement between the teachers.

The salient features of participatory action research methodology were explained to the participants and their active participation was encouraged for effective generation of shared knowledge. The focus group meetings were to be arranged until its members felt the need to meet for further professional development.

I had no position of authority or influence over the participants. However, I did have a professional relationship with them. I was actively conscious of any personal bias which may affect the findings from the research and was reflexive in my role as a researcher, where all the ethical issues were constantly considered. I kept an audit trial of all issues that arose during

the research, which I shared with my supervisor on a regular basis (Onwuegbuzie, Leech, & Collins, 2010).

Within the focus group and its meetings, the members were requested to refrain from personal bias and judgment which may harm other members' emotional, cultural and social dispositions. Before, during and after focus group meetings, I was consciously watchful to any social or cultural misunderstandings that may arise. I clarified with participants prior to starting the research if there were any cultural or social beliefs or concerns that may affect them during the research.

Challenges and difficulties

A major challenge was to obtain permission to do research in schools. Three schools were approached. School A did not even consider the research proposal because the management felt that their teachers already had too much to do. The principal of School B invited me to speak to their staff but then there was no follow up. Although the staff of this school did show some interest in the research project it did not materialise into a viable focus group without the proactive support of the management. The Principal of School C, agreed to let me conduct research at the school and the staff responded favourably.

It was difficult to convince school managements that the research would benefit their teachers in particular and education in general. Considering the busyness of schools, a potent challenge was to get the full and complete support of the management for the research. The management was probably mindful of the workload of their teachers and did not want to add another chore to their list of 'to do' jobs. Therefore the participant teachers (who were volunteers) had to work around their already tight school commitments. In hindsight, I feel that the research did benefit the school through more competent and confident classroom teachers. This also came through subtly in teacher anecdotal exchanges.

The student survey section had to be removed from the research as one parent found the informed consent letter convoluted. The surveys were to

be used for data triangulation purposes. Due to this the reliability aspect of the research was compromised.

Another difficulty was to ensure member consistency. Despite repeated reminders and requests to participant teachers to attend focus group meetings there were absences due to various reasons.

A difficulty faced by the participant teachers was the huge teacher work load in Term Four. Most of the teachers were involved in marking internal assessments and preparing students for NCEA external examinations. They were also planning for the next year. All this affected their engagement and professional progress.

Conclusion

In conclusion, the social constructivist approach was used to carry out the research study. In particular the participatory action research methodology was selected as it best suited the epistemology and ontology of the researcher, the research question and the context within which the research was situated. The research design emphasis was on participant empowerment and the research process was participant driven.

Data were collected through a self-contained focus group of teachers and thematic analysis helped to make sense of the data. Teachers' anecdotal experiences and articulated perspectives resulted in generation of shared knowledge. Their critical reflection helped to understand the issue and look at alternatives for personal development. "Research in applied fields is important for extending the knowledge base of the field" (Merriam, 2009, p. 264) as it can contribute to theory.

The findings of the study are highlighted in the next chapter.

Chapter 4: Findings

The findings of this study were derived from data collected through a focus group of secondary school teachers operating as a Professional Learning Community, using the Participatory Action Research methodology. The data was collected keeping in mind the following research questions of the study:

> *"Does a _purposeful_ and _sustained_ professional learning community have an effect on teacher sense of self-worth and hence classroom practice?"*

> *This overarching question was broken down into separate focus areas:*

> - *Does a PLC need to be purposeful (to the teacher context) to be effective?*
> - *Does a PLC need to be sustained (over several cycles) to be effective?*
> - *Does a purposeful and sustained PLC improve teacher self-worth – in terms of confidence?*
> - *Does a purposeful and sustained PLC influence teacher classroom practice – in terms of pedagogy?*
> - *Does a purposeful and sustained PLC improve student outcomes – in terms of student engagement, student empowerment?*

By keeping myself involved as a participant in the research focus group I attempted to "build theory from observations and intuitive understandings" (Merriam & Associates, 2002, p. 5). I have used "the inductive process; that is… gathered data to build concepts, hypotheses or theories" (Merriam & Associates, 2002, p. 5). I have attempted to make meaning of data collected by organising it into themes or categories. I have either summarised the conversations or included entire snippets of the conversation to justify the themes or categories. Changes in teacher and

student outcomes articulated in the focus group conversations are teacher reported increases in knowledge and skills in several different areas.

I did not present the findings as individual participant stories as one of the participant teacher was going through a patch of low confidence and self-worth. Individual stories would have highlighted her and therefore for ethical reasons and privacy issues I have presented the findings in themes across all participants. I have not used actual names but prefer to call the participants as T1, T2 …… and T5 for no particular reason.

The first theme of the findings is *purpose and focus* of the PLC. It identifies why the teachers joined the research and what they hope to achieve out of it. The second theme links *sustained* focus group meetings to teachers' professional progress. The next theme looks at the effect of relationships, collegiality and trust on *collaboration.* The fourth and most important theme describes *building capacity* in teachers through a chronological series of steps. The next theme looks at teacher *accountability* to their students and their colleagues in the PLC. The effect on *student outcomes* is captured through teacher voice. Throughout the focus group meetings anecdotes and issues highlighted the importance of *teacher time*. This has been included under a separate category.

Purpose and focus

The main *purpose* of the participants volunteering to participate in the research study was to improve their teaching. To solve a problem one needs to first identify it. Then one needs to look for strategies that will help to overcome the problem. The participants' comments hinted that their joining the research was due to the fact that they felt they had identified an issue with their teaching and they wanted to address that issue. Following are some of the comments that have been captured:

> **T1** – "Disillusioned with everything. I needed something to motivate me to push my skills as a teacher. Noticing a change in what my students need and how I am doing it… disillusioned because I feel that the ways I have been teaching have not been as engaging as they could be, so I need different and interesting ways to teach it to

my students, so I am trying to look for different ways that I can be teaching and making learning accessible for students beyond just 4 periods in a week."

T2 – "I am as enthusiastic as ever and I want to find different tools and strategies – when I was at school it is a long time ago now and it was all very traditional and I feel I want to catch up in a hurry."

T3 – "I just feel that (a heavy sigh!) my teaching has become methodical and I want to get some more tools and different ways of teaching… I do feel like I do try new strategies but they do not seem to work the way I want them to work."

T4 – "Left teaching for a year and so I feel I have forgotten everything… to find readings to refresh what I learnt."

T5 – "We are all on the same page… we find ourselves to be lacking in and maybe not adequately prepared to teach our students."

In their first focus group meeting, the participants decided to *focus* on exploring 'differentiated learning'. In order to address their felt inadequacy in teacher skillsets they decided to trial this pedagogical tool in their junior classes. The participants constantly came back to their main focus by setting fresh goals for themselves as they achieved their current goal.

To start off the participants requested that the participant-researcher find information on different learning styles and also source a learning styles test for them to administer to their students. Furthermore they expressed their desire to observe other teachers who were actually practising differentiated learning in their classes. Some participants also wanted to visit other schools as stated below:

T1 - "If we can see theory [differentiated learning] in action then we can comprehend what is happening but until we do that it is all an abstract idea."

T3 – "I would like to see it in action in a secondary school. Intermediate schools are ok but they have the students all day. If I

was at an intermediate school I could mark the books after school and put all the grades up but how do I do it when I have six classes and a group room. I would like to see it happening in a secondary school."

As the teachers started to understand the pedagogical tool, by the fourth focus group meeting, they were making fresh goals for themselves. It seemed a logical step forward for them:

T1 - "I will concentrate on the learning styles – read write, visual, kinaesthetic and oral. For me differentiated learning is giving choice but this gives a little more guidance around it."

T4 - "I will be concentrating on ticking all the boxes [differentiated choices] when I provide instructions."

By the fifth focus group meeting, all the teachers felt that they were benefiting from the meetings. They felt that the readings were helping them to look at pedagogy from a new angle. In their classrooms, they were implementing the thoughts and strategies they had either read in the readings or picked up from their colleagues in the focus group discussions.

By the eighth and ninth meetings most of them felt that they were achieving their goal and it would have been really helpful if this opportunity had been available from the start of the year. The positive correlation between purposefulness and effectiveness is articulated by all the participants:

T1 – "I think it definitely has to be purposeful to be effective. I wish it would have happened earlier in the year. Purposeful is really important. It has to relate to what I am doing then I am more likely to use it. I would agree that it has been good motivator for me to push myself further to be consistent in what it actually means and learning more of the pedagogy behind it versus just kind of doing it and 'winging it' and probably doing just a half job as compared to doing a job I am proud of and it has had a big impact on my kids."

T2 – "I definitely think it needs to be purposeful otherwise it is lost with the teaching stuff you do. To be effective on practise it needs to be purposeful."

T3 – "it has helped me in reading up on differentiated learning and how people learn. I really like differentiated learning and I think it is helping me create more engaging lessons… has worked on some students. If I keep at it I am sure it will have a more wide spread success. I am going to implement and use differentiated learning in my classes in the future."

T4 – "I agree that it has to be purposeful in order to retain the knowledge."

Sustained meetings

In their first focus group meeting, the participants agreed on a meeting time after a lot of discussion. After taking into consideration every participant's professional/personal commitments – a meeting time was agreed to by all participants – i.e. Tuesday after school at 3 pm on every alternate week. A backup time was also arranged. The free and uninhibited sharing of personal commitments and professional expectations prompted sincere and practical solutions from the group. This depicted mutual trust, respect, collegiality and a deep desire to find time for participate in the PLC.

At every meeting the participants set targets for themselves for the next two weeks. They felt that this helped them to stay on task and sustained their interest in the topic:

T2 - "and also to keep it to the forefront of your brain."

At the eighth focus group meeting the participants agreed that coming together regularly to talk and discuss on the topic made them think about it constantly. This reminded them to differentiate their teaching on a regular basis:

T3 – "Yes I think meeting regularly has helped because we can discuss how things are going. It needs to be purposeful and

sustained for it to be effective like I quite liked the way that it went from being held once in two weeks to every week. This helped me to keep re-focusing on what we are here for as well. Yeah, like I have a pile of things that I have gathered when we go for PD and really cool ideas but then you forget about them because you are not consistently thinking about them."

T4 – "It has to be sustained because I had so much going on last week that I do not know what happened. The fact that it is a consistent thing we get refreshed and get to remember, so as to draw on past knowledge and attach it to new knowledge."

T5 – "Something that I really enjoy is that it reinforces and validates what I am thinking when I hear it from you all. So I feel that I am actually there and not somewhere lost in the wilderness."

However, **T2** felt otherwise. Although it was not an emphatic statement she did not consider that the meetings had to be necessarily sustained:

T2 - "Just a one off occasion and have really really awesome conversation. It still will be effective maybe not as much but somewhat effective."

Collaboration

After a lot of discussion and taking into consideration school constraints and personal preferences/needs etc. the participant teachers agreed to learn about differentiated learning.

Positive and constructive collaboration with ready and instant collegial sharing and helping was the underpinning flavour of this PLC. These characteristics were displayed in words and actions in every meeting.

The need for collaboration on the topic was vocalised here:

T2 – "It would be great to have people to talk to and share successes or failures."

T4 – "and using you guys as a refresher." (First Year teacher)

T3 – *"It would be really good to have just the support of everyone to try out these different tools and try out what works and what doesn't… just hearing other people stories about strategies and the sense of collaborativeness which we miss out in our individual classrooms. We miss out on the support and collegiality as such."*

T5 – "It will be good to feed off each other."

T2 – "I had gone for a course/workshop of something similar to differentiated learning and have some material I am willing to share with you."

The importance of professional exchanges was further highlighted when participant teachers mentioned that they talk to each other when they supervised student 'lunch break' on a Thursday and discuss issues at that time. Other participants did mention that they do talk to other teachers informally during the course of their day – in the staff room, after meetings etc.

The participants felt that the journal articles would enable them to think and reflect about what they have read and thereby make meaningful contributions at the focus group meetings.

The spirit of sharing and helping came to the forefront when at the third focus group meeting most of the participants had not read the resource material due to lack of time but they started talking and sharing nevertheless – one of them had read some parts and started informing others about the text. Slowly others joined in by relating the text to their practical experiences. This was successful feeding off each other as they were including and affirming each other's viewpoints:

T1 - "I was just scanning thorough the book… I saw that most of the stuff was quite routine but introducing a part where you practise differentiation can be tricky and you have to work so hard at it."

T3 - "I was trying to look at the part which had teacher tools at the very end. That seemed quite interesting. Most of the stuff could not

have worked for me BUT it gave me a good idea of about how I could do it… like building relationships with my group."

T4 - "I am doing similar things with my group ….."

"Yes." "Hm…." Others are nodding and contributing affirmative responses. This corroborates the views of other participants.

T1 - "Another good thing was the bar graph… where you could ask the students to set up… I thought that could be quite a structured activity for the special need kids."

One of the teachers had already designed the learning style survey on google docs and was willing to share it with the others. Similarly others who had completed their learning styles assessment shared the process and their experience and how it had worked for them. They also agreed to share websites and articles with each other via email and moodle. A very collegial and caring, sharing atmosphere existed among them.

At the fourth focus group meeting one participant expressed her desire to meet every week instead of biweekly. All participants agreed to the proposal. She felt the need to:

T2 – "talk about our classroom experiences sooner rather than later, as it would be fresh in our minds."

One participant was not able to attend some meetings due to personal circumstances and expressed her unhappiness via Facebook communication with the researcher: "I really enjoy our meetings so am gutted that I am missing out. I find the group really supportive… Yeah, I find the readings really helpful and have heaps of ideas and would like someone to bounce them off but it is also draining in terms of time and effort."

At the seventh meeting the participants seemed to have understood the pedagogical tool and were keen to collaboratively produce generic activities:

> **T3** - "Maybe if we could start sharing some activities for different styles."

> **T2** - "I would like to get together to come up with some generic activities or are you happy just producing your own for your classes."

> **T3** - "It would be nice to get more effective activities that would probably make my life easier."

> **T1** - "That will be cool."

> **T2** - "We may have different classes and subjects but we can adapt."

> **T4** - "I would really like to see what different activities you guys come up with."

Participants mentioned that they would like to get together in someone's room for about an hour and discuss on making generic activities. Two participants were willing to come together in the October school holidays and work on some generic activities. One mentioned a source which she was using:

> **T3 -** "I got an ECE book and I found that I can adapt the activities in my classes. I am taking what fits in and planning for the future".

The First year teacher had a lot more non-contact time and was thinking of visiting other participants' classes to observe differentiated learning and she was being encouraged by others to do so.

Throughout the entire research study there was small talk among the participants before, in between and after the focus group meetings, about their personal likes and preferences. This showed that the participants were comfortable with and knew each other well. They invariably talked about other activities (not related to the research) that were happening in school. They shared anecdotal episodes and all would listen carefully. Mutual respect was clearly evident.

Teachers 'building capacity'

Teachers 'building capacity' came through as a prominent and important theme in the study. On analysing this theme, it was discovered that

building of teacher capacity was an incremental process; curiosity germinated in the initial focus group meeting, it was nurtured through professional dialogue, sustained by innovation and corroboration and finally blossomed into new knowledge through iterative focus group meetings. Therefore, to highlight the pathway of building teacher capacity and self-worth in participant teachers, sub themes have been organised in chronological order – from identifying the problem to seeking a solution.

The process of building capacity was particularly beneficial for one teacher who was low of confidence and self-worth. She had taken time off school, was not able to attend the focus group meetings and communicated with the researcher on Facebook: "I'm on stress leave at the moment… I know I have to be more positive in the classroom but I am struggling because I have lost my own confidence… as I have said, I've done heaps of reading and have heaps of ideas, it's just putting them into practise that I struggle with." She mentioned in a one to one meeting that she had taken the help of the Specialist Classroom Teacher (SCT) for her classroom practice. She had also observed other teachers teach. But the style, activities and personality of SCT and other teachers did not suit her individual teaching style and personality and therefore they were of no help to her. Hence she had volunteered to participate in the PLC research study.

Challenging existing knowledge

As identified in the purpose section of this chapter the purpose and focus for the teachers was to improve their teaching practice. The participants felt that reading relevant articles enabled them to think and reflect about what they have read. They then got together to share their thoughts with the others in the meetings.

When the researcher handed out a test that assessed the learning styles of students, there was a lot of animated and excited discussion among the participants. The participants discussed the resource for some length of time. They discussed how the resource can be used in their classes.

In subsequent meetings the participants identified potential problems with the practical application of the tool/resource and offered solutions:

> **T1** - "Realistically we will not be able to differentiate for each student in a high school system with the kind of systems we have in place."

> **T3** -"But we can maybe club them into major styles. For example we can say that the majority of my class is a specific style, say kinaesthetic, and then we can design activities for that style to cover most of the students."

> **T2** - "I will plan to find out where my students are and then maybe plan to introduce at least one activity. Maybe not every class at the moment. At least once a week, having a choice of activities. And maybe even observing if they go for the learning style activity that they have."

The participants read various articles on differentiated learning and discussed their new found understandings at the meetings. This helped them to understand the concept. One teacher commented:

> **T4** - "Yes, it is helpful as it tells us the reality."

Professional discussions

A safe, cordial and non-threatening environment facilitated a robust discussion at every meeting. During the early stages of the research the discussions among the participants tended to be observations and reflections on the readings and validations of these observations by other participants. Sometimes a link was established between theory and practice. For example one participant mentioned that a resourced article did not seem to have anything to do with differentiated learning when she read it the first time. But when it was discussed with the other participants at the meeting they all agreed that it did provide a different perspective for looking at differentiated learning.

Another instance was when a participant said:

> **T1 -** "there has to be an element of choice in differentiation. This is what you need to know and how you present is up to you. This is

where the element of differentiation and choice comes in. So that's how we can differentiate a little bit. So I think it could work."

Other participants responded positively with:

"yeah", "cool", "that's nice" agreeing with the observations.

This gave further confidence to the participant who was visibly happy and confident that her statements and future actions were getting a stamp of approval from her colleagues. Another participant felt that:

> **T3 -** "the focus group is helping me out and I get to hear all the views and stay fresh you know… getting time off and interacting with other teachers is more beneficial to me."

As their understanding of the tool increased, they started implementing the thoughts and strategies they had either read or picked up from the focus group discussions. The focus of discussions and observations moved towards practical applicability. Some participants wanted to "see it in action." They felt that they understood differentiated learning in theory but:

> **T3 -** "how does it actually happen – what does it look like."

A First year teacher wanted to observe other classes and learn:

> **T4 -** "what you guys, the experienced teachers, think as is probably second nature… do trouble shooting together… if we have a bad day we can talk to someone who actually understands and discuss the problem to help each other by sharing of what actually is… like I can't get my head around to actually how I do it… how do I tailor it to fit my lessons to my student's needs."

From the sixth meeting onwards, there were positive comments and validations from all participants. They felt that the focus group was supportive and it felt good as one teacher's success contributed towards feelings of positivity for others. Every teacher had a success story which they shared at the meeting or via Facebook. Below is a very interesting sequence of dialogue which ensued on a certain topic:

T3 - "My class has been finishing up the war unit. I have been differentiating with my class as we are finishing a review of a piece of writing. To be frank that went quite well. We looked at songs and we looked at pictures. They have come up with some very good ideas. It has been invaluable… let's put it that way. Next week they have got a speech and I am thinking of ways how I am going to differentiate it. I mean they are going to speak it obviously but rather than me deciding what to do I am going to give them choices based on their learning styles. So some will be speaking from their papers but others may want to take the help of some visual aid or something of that sort."

T1 - "Yeah I saw a kid give a speech on how to change the skin of a drum. It was for almost 10 minutes but totally awesome."

T5 - "Yeah for example I cannot give a speech while standing on a place. I would like to move around and I generally pace the room when I am thinking. So I would prefer to have cue cards but then I would like to move around."

T3 – "Yes, yes and this is why I want to give them choices. I am excited about this and I think it is going to be good, I am pleased. I am happy because this gives me a chance to think and I am going to do it in a way that is going to suit them. I am going to do it in the next coming weeks."

T1 - "For me it hasn't been any huge things but just small things like I have enjoyed the fact that I am more aware of the different way the kids can do stuff… they came up with some hilarious things… some students came up with graffiti art and how it is done from top down. So it is really cool and especially for kids who have not engaged much."

T3 - "Just doing a lot of these observations and getting into a learning community and talking about it is and seeing what is out there is very beneficial."

Consensus on new understanding

As the meetings progressed there were new shared understanding generated through discussions and the participants reached consensus on many occasions. All participants agreed that they understood differentiated learning to be – "teaching to the student".

At the third focus group meeting the teachers were talking about the various ways in which they could change and adapt the activities in a particular resource book, to suit their lesson plans and for their specific students. They spent some time discussing the students (sometimes in general and sometimes specific students) and the various ways in which they could differentiate their instruction.

Another instance of consensus is highlighted through the following sequence of dialogues. They were talking about:

> **T4 -** "some literacy credits that I think are too easy."

> **T2 -** "Well, we want them to get it. We know that they can talk."

> **T3 -** "Yes, but they are too easy. If they can get easy credits then they do not work for the other credits and find it too hard."

> **T2 -** "But if we have to do it for stats and performance then why not do it."

Their body language and acquiescence to the last comment resulted in smothering any further discussion on the topic, thereby signalling consensus or maybe an agreement to disagree.

On the basis of their new understandings the participants felt the need for collaboratively design and produce generic activities they could use in their classrooms.

Innovation and risk taking

From organised chaos comes order. As learning progressed, the participants existing practise was being challenged; they seemed to have understood the theory behind the pedagogical tool, they felt competent

and bold enough to implement what they had learnt in their classrooms but there was a sense of uncertainty and a calm disquiet among them.

From their conversations, all participants appeared to be more confident with the differentiated learning tool and what it meant. They agreed that the next step was to come up with relevant activities and implement them in their classes.

They shared their frustrations and felt failures:

> **T2** – "it is going quite well for me. I have designed the tasks and they are not particularly complex but I am trying to give them a choice of tasks based on learning styles which seems to be going quite well. However, I did have quite a bad period today - I am not finding them particularly nice."

> **T4** – "yeah I had a period something like this. I am doing three different projects with my year 10 class so I had an entire period like "miss", "miss", "miss" … normally … they are little angels but today it was so…"

> **T2** – "I am glad that is not just me! But yesterday they were ok! But in general they are doing well."

Teachers talk about technological problems they are having with inaccessible computers as it seems to be an integral part of their efforts to implement differentiated learning. They seem very frustrated.

Towards the end of the research study the participants were sharing their classroom experiences which depicted chaotic activity among the students which ultimately manifested itself as small success stories:

> **T1** - "In terms of the kids – we get to see the results a little later. They really love the freedom. The plan is that when they come back we do a differentiated assessment. Looking at society basically. They have an option of how they present and how they find the material. But they do not have the option of what they are doing. So it will be interesting to see how it all happens."

Other participants applaud this innovative effort of the teacher and inquire for details:

>**T4** - "have you given them some guidelines for presentation or can they present anything?"

>**T1** - "I am thinking of giving them some guidelines like some positives and some challenges of each society. Still thinking on it."

Another teacher expressed concern at an innovative strategy she is trying with her class:

>**T2** – "I must comment here that I thought that my lower able Year 10 students may respond better to creative writing but this is not the case because they take a *long* (emphasis by teacher) time to do the work. They need two or three weeks while other students could finish it in one week. I thought it would work by breaking it up but it is not happening."

However one of the teachers quizzed her about success in other areas:

>**T4** – "are they more interested in it though"?

>**T2** – "yes, I would say that they are definitely more interested and engaged."

While another looked for some positives in the activity:

>**T5** – student outcomes involves engagement, interest. I guess once the engagement and interest increases the speed will come with time.

>Other participants respond with "yeah" "yeah".

Another teacher summarised the chaotic activity in her classroom by linking student work output to the new innovative pedagogy that they were implementing:

>**T4** – "I have two year 10 classes and they are scattered over two rooms and I have tools in one room and materials in another and it is manic but the kind of work that is being produced is great. They

are doing it but there is a lot of hard work for me. Also at the moment I am concentrating on the seniors and I do not have time to sit down get this orgainsed."

Corroboration

As the research progressed there were more success stories coming forth. Teachers were using differentiation strategies more regularly and with confidence:

> **T1** – "me as a teacher, I am more confident in terms of understanding the ways of differentiating for my kids. So knowing the different methods of how to differentiate in terms of learning and doing it. So I am doing it more regularly not just every now and then. My confidence in terms of differentiation has improved… I am doing it in different ways."

> **T2** – "Yes, similar. I feel like it has made a difference to my practise and my understanding of differentiation."

> **T3** – "it has helped in reading up on differentiated learning and how people learn. I have got tools on how to design and use the tools. How to engage students with different abilities and learning styles. So that has been really useful. It has given me more confidence in what I am looking for and I know what to do. So that is definitely useful."

Teachers expressed satisfaction at differentiation taking effect at different levels – students planning, collecting and presenting information:

> **T1** – "In terms of my classroom practise, my Y9 class are doing an assessment on society and the way they are getting their information is different – through phone, notes, dictionary, using each other etc. how they are presenting it is different as well. Everyone is planning but everyone is planning differently. Their presentation is different – one of my students is presenting it as a news report. He is going to film himself and it is going to have more of a society report. So that is kind of COOL. (**T1** shows excitement

and happiness from her actions and tone of voice). He is writing his script. Someone is drawing it on the iPad and talking to it. So just trying different ways of doing it and I have no idea how it is going to work but at the moment all of them are into it. One of the kids said "it is boring" so I said "is it? What is boring about it" and he said "oh it is not boring but it is just hard and I can't think" so that's quite cool because normally he would have said it is boring and walked off. He actually realised it is hard and it his pushing him. So I am kind of enthused at that."

T5 – "your confidence has improved in terms of classroom practise in that you are not only teaching in a differentiated manner but your students are collecting information in different ways and are also presenting it in different ways."

T1– "I hope so, I feel like it is, yeah I feel like it is."

Teachers felt that it improved their practice across the board:

T2 – **"**I feel that although we are doing this with juniors I find that a lot of it is coming into use in the seniors where I what them to think about ideas and I want them to understand them and there a lot of different ways in which you can understand ideas. I know that is not the focus we have but I am finding that it has improved my teaching practise across the board."

T1 – "It is applicable. It has been easy to apply it for all my classes. It works for everyone not just my juniors or seniors. So it is a skill that is going to be really valuable in the future."

Teachers present nodded in consent that concentrating on this pedagogical tool has not only changed their pedagogy in the particular class but across their whole teaching practice in general, resulting in better classroom outcomes for their students.

A teacher fresh out of University found solace in failing alongside her senior colleagues:

T4 – "I found this amazingly helpful. Because I am fresh out of Uni and having the support of my colleagues actually helped me initiate it and doing it in class has been amazing because if it did not work in my class it is OK because somebody else has tried and failed as well."

New knowledge

New knowledge and understandings prompted one teacher to relook at her pedagogy vis-à-vis her students learning responses:

T2 - "I have a comment to make. I find that my expectations of my students over different activities have changed based on knowing what their learning styles are because if they are doing an activity where they are doing a lot of writing those who are far more visual were struggling but when they got into colouring areas of the paragraphs they really got into it so I turned around and thought I can actually understand why you are struggling with this one but then you are enjoying the other one."

While another adjusted her new learning to cater to her students' needs:

T4 – "In my class I find it so helpful, adjusting my learning to the interests of my children."

A third teacher was able to change practice and design new curricula with her new knowledge and learning:

T3 – "Because I have been part of this learning community I have been able to design a new unit of work on differentiated leaning and have also been able to do team teaching. It has made a difference to my confidence and my planning my lesson plans."

Teachers reported that the new knowledge and understandings increased their confidence and self-worth:

T4 – "It has increased my confidence, as being a first year teacher everything I do is new but it is good to see more experienced teachers like hm… that did not work so let me take a step back and redo it or that really worked and let me try."

> **T2** – "Yes it does increase teacher's self-worth because you are thinking more deliberately on it. I think it improves classroom practise in terms of pedagogy because you are constantly feeding back to the group on what you have done so it is going to influence you."

One teacher felt that the new knowledge had increased her confidence as it authenticated her novice forays into this particular area of teaching. She felt that she would have benefited more if this had happened earlier in the year:

> **T1** – "I reckon it has had an impact on my confidence in terms of continuing doing the things I was already doing and being aware of the strategies I can put in place for differentiated learning."

This teacher was particularly pleased as the new understanding reinforced her belief in her practice and prompted her to further extended herself:

> **T1** – "I definitely tried to differentiate in some ways earlier but I am more cognizant of it now which wants to make me do it more. I kind of always tried but lacked the motivation to do it properly… there are still areas I can improve on so it has given me a good push to keep looking at it and I have decided to join a course next year which is kind of related to it."

Teachers were able to understand differentiation at various levels:

> **T1** - "What I have really enjoyed is getting a better understanding of that differentiation can be how they learn the information attest the information, how they show their understanding. So to see how the different way differentiation works instead of just being one model or differentiation is just when you assess. So it has been quite good for me. It's more of a prompt to say to do it more to be more thoughtful about how I do it. I am thinking about it more now."

Teachers also felt that they would have benefitted more if the opportunity had come earlier in the year:

T1 - "I wish it would have happened earlier in the year, say in Term One and Term Two. It is going to have more of an impact on how I am going to start next year versus how I have used it this year. So I found that really useful. It definitely has had an impact for me. So I have a better grasp of it."

T2 - "I wish I could have got this about a Term before and that could have been really useful."

Accountability

Findings tell me that teacher accountability was prominently visible in three distinct areas – towards colleagues participating in the PLC, towards themselves in terms of upskilling and towards their students.

Participants felt a sense of obligation towards the members of the focus group. A participant mentioned that she was a lurker in an online PLC and others agreed that this was common among online Learning Communities such as English, Social Science and Media Studies. However, they all felt that this may not be possible here as it required physical presence and everyone knew each other. One of the participants commented that we need to:

T1 - "make meaningful contributions at the focus group meeting".

Another participant put it across lucidly:

T2 - "you are constantly feeding back to the group on what you have done… and if you have not done anything then that is what you are going to feedback".

Participants were keen on upskilling themselves. Firstly they volunteered for the research because they wanted to improve their pedagogy. They agreed on a pedagogical tool of their choice and requested specific readings to learn and discuss its methodology. They felt that they needed to have a good understanding of differentiated learning before actually going to watch it in action. Teaching strategies would be helpful and identifiable only if they understood differentiated learning. Once they felt confident they started implementing the strategies in their classrooms.

They willingly shared their experiences with others in the group. They talked about identifying schools that are differentiating learning and expressed a desire to visit later in the year. There was a distinct sense of purpose and keenness to improve their pedagogical skillset cache and the pace was set by the group as a whole.

Numerous instances have been recorded where the participants hinted or specifically articulated accountability to their students. They also expressed happiness when their students showed progress.

For one participant, her initial comments were:

> **T4 -** "like I can't get my head around to actually how I do it… how do I tailor it to fit my lessons to my student's needs."

But then there was a change in her feedback as she got a grasp on the pedagogy:

> **T4 -** "A teacher should be continually asking that what I can do for this student… we are responsible for making them continually learn using different things that they are good at, not just only visual things because you are a visual learner… I will see how I will do my demonstrations at the start differently."

For another:

> **T2 -** "I will give instructions in all learning styles, on the board for read and write, orally I will be talking, and visually as well as kinaesthetically I will do it so that they can see it."

A third said:

> **T3 -** "I will plan to find out where my students are and then maybe plan to introduce at least one activity… maybe having a choice of activities."

Another instance which stood out was that the teachers teaching senior classes did not want to go visiting other schools until their senior classes left for study leave as their senior students would suffer.

Student outcomes

Participant teachers were asked for feedback on their perceptions of student outcomes as their learning and implementation of the pedagogy progressed.

Most of the teachers felt that there was a marked increase in the engagement level of the students:

> **T3** – "I have had some success stories with a handful of my students which is encouraging. One boy in particular has gone from being totally disengaged and disruptive to completing Merit/Excellence work in the classroom… the students in my class were more engaged."

> **T1** – "I reckon there has been an improvement in student outcomes in terms of achievement, engagement and effort. It is a bit hard to measure but I have seen kids engaged in doing activities. Initially all the class is engaged and then they can get disengaged maybe as they get bored etc. but that is something I am learning about. But yah, it has definitely helped."

The general feeling among the teachers was that the engagement level of the students increased because differentiation allowed students to be involved in interest based activities and they felt empowered and took responsibility for their own learning:

> **T3** – "And it has improved the student outcome in my class. It has made it a lot harder for me but I found that with the kids choosing work that really interests them, you get such a high level of work from them because they want to show you all the knowledge they have gone and found themselves. They felt self-worth and empowerment because they are smart."

> **T4** – "In my class I find it so helpful… I have a couple of kids that keep coming in at Break (recess) time because they are so interested in carrying on with the project. Yeah I found it really cool.

I had to walk to few kids to PE because they would not go. So yeah, it has been great."

T1 – "It has had a big impact on my kids. I am liking some of the conversations that are coming out now as a result of the different activities we are doing. They are applying the ideas in different ways and they are doing this because we have been doing differentiated activities and interest based activities. So that is kind of cool."

Time, content and leadership issues

Time was a prominent aspect that surfaced in focus group discussions over and over again. Lack of time in a teacher's normal working day prevented them from doing what they wanted to do due to other commitments:

T2 – "it is not only time but also the fact of implementing those ideas – to do it on your own it takes an awful lot of effort – I spend as much time as I can but I have got other commitments."

For the sake of time management, the participant researcher was requested to read all articles and decide the most appropriate, which the participants could then read in preparation for the next meeting. The participants requested the researcher to source a learning styles test and other readings and literary resources for them because they did not have the time to research and find the appropriate material.

Lack of time came across as one of the main constraining factor to differentiated learning:

T3 – "How do I do differentiated learning when I have six classes and a group room… but with 200 students to teach it is not possible [to differentiate] in a secondary context… it is a ridiculous amount of work that will need to be done. Then there is marking also. So it needs to work for the teacher also."

> **T4** – "Realistically we will not be able to differentiate for each student in a high school system with the kind of systems we have in place."

An ebook on differentiated learning had been uploaded on moodle. However, most of them had not read the book due to lack of time.

One teacher felt that she fell behind because of ill health and also lack of time. Another felt that she also did not have the time to give the learning styles test to her classes and therefore was not able to progress with designing the activity and implementing it in the class. The third teacher felt that the activities that embed kinaesthetic components may not give her enough time to finish the content.

The fourth focus group meeting was postponed by one week as the teachers did not have the time to make appropriate progress with the goals set in the last focus group meeting.

The sixth focus group meeting was postponed as the teachers were busy with school work during the scheduled meeting time.

Towards the end of the research study the participants wanted to get together to create generic activities but time was a constraint as the end of the term was hectic for all of them.

Teacher workload and curriculum content hindered their efforts to implement differentiate learning in their classrooms.

A teacher felt that:

> **T2 -** "a lot of assessments we have to cover in English. So there is a lot of writing that needs to be done… spelling is not becoming all that important now due to spell check and all but there is a lot of writing to do because they have to write essays and all and they find it boring… essay writing assessments are not fun."

A second agreed that:

> **T3 -** "there are a lot of essays like, film reviews, text review etc."

Another felt that the activities that embed kinaesthetic components may not give her enough time to finish the content within the required timeframe as the class was reading a novel. The fourth teacher felt that the subject content was a lot to cover in a year.

The teacher workload is substantial in Term Three. There were annual reports writing, annual exams for seniors, marking and preparing the senior students for their exams. This impacted on their progress.

The next chapter discusses the above findings by juxtaposing them with the literature reviewed in Chapter Two.

Chapter 5: Discussion

Introduction

This chapter discusses the findings of the research keeping in view the research question – *Does a purposeful and sustained professional learning community have an effect on teacher sense of self-worth and hence classroom practice?* It establishes links between the literatures reviewed in Chapter Two with the findings in Chapter Four.

Keeping in view the iterative nature of the research, this study uses the inductive process (Merriam & Associates, 2002) is make sense of the data generated in the focus group meetings. It discusses the role of professional learning communities as an alternative approach to teacher professional development with respect to teaching effectively in 21st Century Schools.

The key ideas discussed in the chapter are the role of a professional learning community:

- in re-defining teaching and teacher expectations in a contemporary secondary school
- for sustained professional development
- for building teacher capacity and self-worth and finally
- PAR as a PLC strategy to improve practice.

Re-defining teaching and teacher expectations

At the very first focus group meeting of the PLC the purpose of teaching and the teaching activity itself was reviewed by the teachers. A sense of moral responsibility (Day, 1999; A. Hargreaves, 1994) among the participants was evident from the very start and was articulated by them in their discourse. As stated by three different teachers, they joined the research because they felt they were not meeting the needs of their students:

> **T1 -** "I needed something to motivate me to push my skills as a teacher. Noticing a change in what my students need and how I am doing it."

T2 – "my teaching has become methodical and I want get some more tools and different ways of teaching."

T3 – "lacking in and maybe not adequately prepared to teach our students."

Since time immemorial, teachers have been categorised as moral flag bearers of the society and are expected to model desirable qualities of human behaviour to young children in a caring environment (Hansen, 2001; Huebner, 1996). The teachers care for and accountability towards their students was manifested via subtle words and phrases used by them. They expressed a desire to keep abreast with current pedagogy to meet their students' needs. In order to make authentic connections between the curriculum and the real life of the student the teachers felt that they needed to be adequately prepared. Day (1999) takes the notion of moral responsibility a step further by stating that every action of the teacher has moral consequences and that 'there is no escaping this" (p.12). A. Hargreaves (1994) validates this by declaring that teachers make choices between better and worse decisions rather than wrong or right ones. From their observations, it would not be wrong to infer that a teacher is always expected to make better choices for the students. From the discussions in the focus group meetings I could infer that the teachers were aware of their moral responsibility towards their students. This came out clearly when they critically analysed their current practises and were conscious of their shortcomings. They felt the need to do something about it as they were falling short of their own expectations in delivering meaningful education to their students. It was their moral purpose which prompted them to participate in the research.

Lupton (2013) and Greene (2001) describe teaching as an art as it allows for responding spontaneously with finesse and tact to address students' needs. Keeping in view that their decisions may have a profound influence on students, a teacher needs to handle them with finesse and tact so as to instil creative and critical consciousness among them. The teachers participating in the research perceived they had become mechanical in

their teaching and it had ceased to be an art; an art where they could engage students actively in meaningful activities. One teacher mentioned that she was from a traditional teaching background where she had been taught in that way and had herself taught traditionally till now. These felt inadequacies were due to lack of time for contextual teacher professional development and they felt that they had to learn higher order teaching skills in a hurry. The participant teachers expressed a desire to develop ability to respond spontaneously to students needs when they decided to focus on exploring the differentiated learning pedagogical tool. Probably the main reason for them to decide on this tool was to personalise learning for their students and thereby reclaim their lost 'art of teaching'. As such towards the end of the research study they all agreed that differentiated learning was – "teaching to the student" and felt more confident to address their students' needs.

Teaching in the contemporary classroom requires higher order teaching skills. Heidegger's (1968) proclamation that teaching calls for "to let learn" (p. 15) is far more applicable on today's context as teachers start to play the role of a guide and mentor to their students rather than depositors of curriculum content (Freire, 1993). Both, Heidegger and Freire, question the authority of the teacher as a 'know-it-all'. The teacher should have the ability to engage in authentic teaching of the curriculum by relating it to the student's lifeworld, so that it gets them thinking. Riley (2011) summarises their views when he says that "*the teacher has to learn to let them learn*" (p. 811). In fact, Dweck (2010) advocates that the teachers should be involved in cultivating growth mindsets in their students to help them learn. If teachers have to teach 21st Century survival skills (Wagner, 2014) to their students, then they need to "possess higher-order thinking skills and deep content knowledge" (Darling-Hammond et al., 2009, p. 2). The participant teachers showed awareness of the lack of this aspect in their teaching and were very focused during the research to learn new higher-order teaching skills. They were aware of the new and innovative teaching trends prevalent around the world. They also appeared to be aware of the 21st Century teacher competency expectations, whose students were

digital natives. To play the role of a facilitator and guide to students, to allow them to self-learn, appeared to be intriguing for the teachers. It was this new way of teaching and pedagogy which appeared to mystify them. The entire progress and process to acquire the requisite higher order teaching skills followed an organic and sequential pathway. This is explained in greater detail later in the chapter.

Towards the latter end of the research there was a visible drop in participants attending the focus group meetings and I could also sense a drop in the level of enthusiasm among the teachers. This probably could have been due to the fulfilment of their purpose.

Sustained professional development

In very simple terms, professional development may be defined as development in one's profession (Professional Development, 2010). Continuous professional development is a lifelong commitment to build professional capacity (A. Hargreaves & Fullan, 2012). The teachers were not only looking to upskill themselves but to also keep abreast with the new innovations and developments taking place in education globally. Their curiosity (Timperley et al., 2014) and an inquiry mindset (Timperley et al., 2007) sought better methods and strategies to engage students.

At the start of the research the teachers expressed a lack of preparedness to deliver meaningful education in a contemporary classroom (Barlow, 1999). Now, to solve a problem one needs to first identify it. Then one needs to look for strategies that will help to overcome the problem. The teachers acknowledged the chasm that has developed between current expectations and the feeling of preparedness among them. Therefore, they felt that there was a need to re-establish a 'connect' with their students.

Evans (2011) is of the view that teacher agency and 'buy into' is an important part of their professional growth. Dufour (2004) agrees when he states that teachers who are determined to work together for professional growth will find a way. The teachers participating in the research juggled their personal and professional lives to engage actively in focus group

meetings. Their commitment, body language and honest discussions portrayed determination and a deep desire to become better equipped teachers.

Sustained and intensive job embedded professional development has a profound impact on teacher professional growth (DuFour, 2014; Garet et al., 2001). One participant commented:

> **T3** - "I think meeting regularly has helped because we can discuss how things are going… keep re-focusing."

while another stated:

> **T4** - "we get refreshed and get to remember, so as to draw on past knowledge and attach it to new knowledge."

A group of teachers engaged in sustained and extended focus group discussions have the opportunity to seek and share ongoing feedback from each other (Barlow, 1999). To sustain interest and offer effective feedback the participants decided to meet every week rather than biweekly.

Collaboration and sharing with other good teachers makes good teachers even better (Rosenholtz, 1985). The teachers were particularly focussed on learning the pedagogical tool. For example they regularly set targets for themselves at every meeting and this helped them:

> **T4** - "to keep it to the forefront of their brain."

Collaboration and ready support were instrumental in aiding the participants to make significant strides to grasp the intricacies of the pedagogical tool they were learning. Towards the end of the research they reported an improvement in their classroom practice and student engagement.
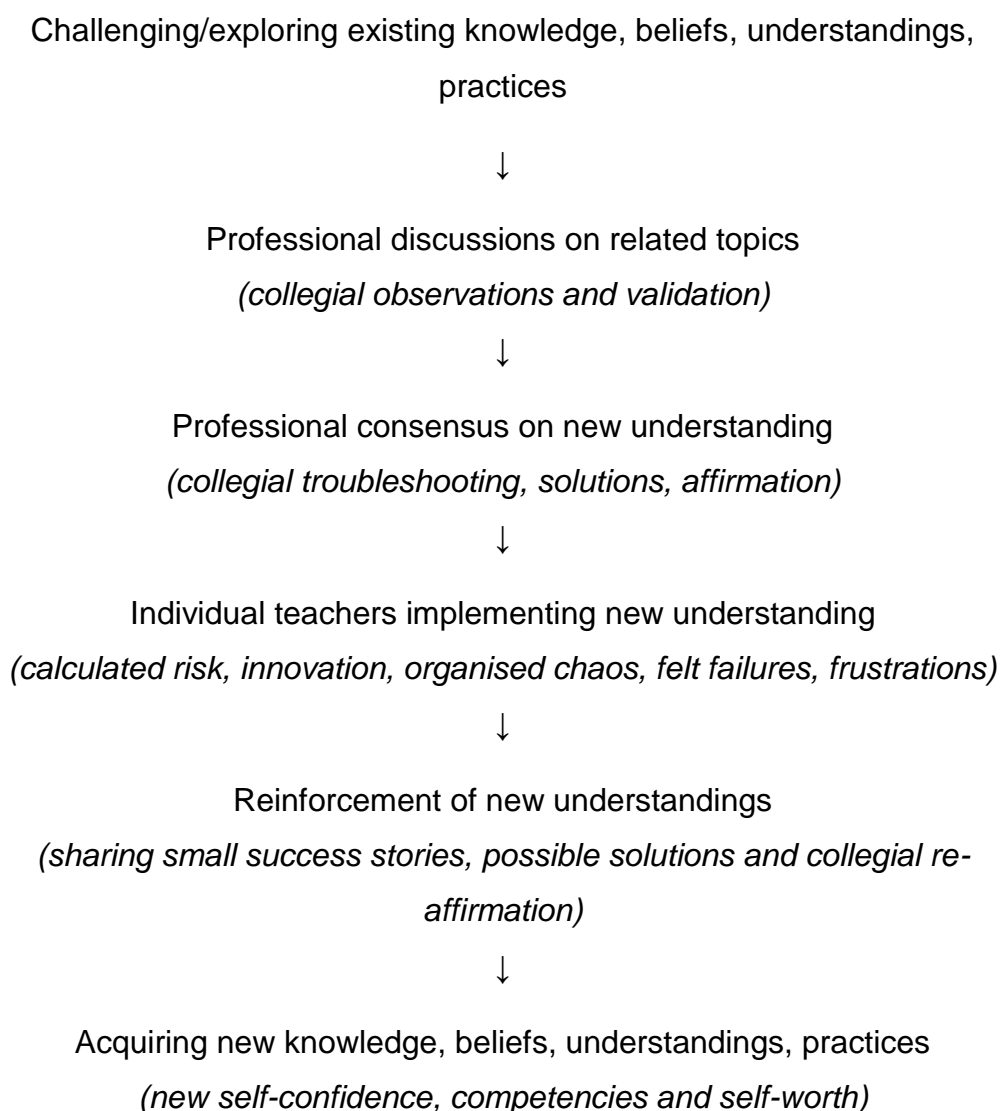
Teachers building capacity and self-worth

According to A. Hargreaves & Fullan (2012) teacher capacity is the ability to take intuitive and spontaneous decisions for the benefit of the students. It is this capacity for improvisation through insight (Bowling, 2002; A.

Hargreaves & Fullan, 2012; Koshy, 2005; Mezirow, 2000) and judgement that assists the teacher to make better choices (D. H. Hargreaves, 1994) for favourable student outcomes. When teachers exercise that capacity and are able to inspire better student outcomes there is a warm feeling of self-worth and confidence that engulfs the teacher as a being.

Once the purpose, focus and sustainability aspects of the professional learning community were firmly in place, the teachers experienced robust and organic professional growth through building capacity. I outline below the path/process of teacher development and growth which fell in place as the research study progressed. These steps came to light from the findings when the data was organised into themes for analysis. Each step has been explained after Fig 3 on the next page.

Figure 2: Building Capacity in teachers through PLCs

Challenging/exploring existing knowledge, beliefs, understandings, practices

↓

Professional discussions on related topics
(collegial observations and validation)

↓

Professional consensus on new understanding
(collegial troubleshooting, solutions, affirmation)

↓

Individual teachers implementing new understanding
(calculated risk, innovation, organised chaos, felt failures, frustrations)

↓

Reinforcement of new understandings
(sharing small success stories, possible solutions and collegial re-affirmation)

↓

Acquiring new knowledge, beliefs, understandings, practices
(new self-confidence, competencies and self-worth)

The initial focus group meetings were interspersed with questions and queries from the teachers that were either niggling their conscience or statements that expressed frustration at their felt 'lack of preparedness' to teach effectively in a contemporary classroom. They were challenging their existing knowledge and practices. Teacher agency (Timperley et al., 2007) and the 'spiral of inquiry' (Timperley et al., 2014) mindset was evident as teachers were keen to undertake the role of learners and engage in parallel learning (Heggart, 2015) with their students.

Subsequent focus group discussions witnessed the participants' quest for new knowledge on the topic, which was sourced through relevant readings and articles. This new knowledge and their understandings of it were

shared by the teachers at focus group meetings. Collegial discussions prompted quizzing each other, sharing personal viewpoints and overall professional observations by participants. Collective troubleshooting eventually resulted in affirmation and validation of ideas and views of participants.

The third and fourth meetings were distinctly a phase of collaboration, support and generation of shared knowledge through consensus. Good teachers become even better teachers when they work with other good teachers (Rosenholtz, 1985) and they were becoming better and more confident in each other's company through professional consensus.

As their learning progressed, participants expressed a tentative confidence to innovate and apply new pedagogical strategies in their classrooms. When the teachers came back to report on their classroom experiences they shared their successes, frustrations and felt failures, some of which were beyond their control. However, they did not show any sign of regret and remorse, rather they acknowledged the chaotic nature of the change and risk they were taking. They took solace in the fact that most of them had similar experiences:

> **T4** – "I am glad that it is not just me!"

Solutions were offered and reflective inquiry (Bolam et al., 2005) co-constructed an implicit commitment to revisit their activities, so as to make them more effective. A collective passion for continuous improvement prompted them to refine their strategies for closing the knowing-doing gap (DuFour et al., 2010). This collective passion for continuous improvement was neither articulated nor discussed in any concrete way but was a by-product of a vibrant, collegial and trusting environment.

After the fifth focus group meeting, every successive meeting was a reaffirmation of their new understanding. There were anecdotes of little success stories and these were celebrated collectively with emphatic bursts and stamps of approval; "COOL", "this sounds exciting", "yeah, yeah", "in general they are doing well". The benefits of mutual support and sharing were being exhibited in high morale. Collaborative collegiality

inspired them professionally (Hord & Sommers, 2008). Suggestions were made on how to improve a certain activity and teachers shared their personal classroom experiences through anecdotes.

New knowledge and understanding instilled a sense of new self-confidence in the teachers. Some of their comments and observations were:

> **T2** – "I find that my expectations of my students over different activities has changed based on knowing their learning styles… so I turned around and thought I can actually understand why you are struggling with this one but then you are enjoying the other one."

Another teacher acknowledged that she acquired new competencies:

> **T1** – "it has had an impact… in terms of continuing doing the things I was already doing and being aware of the strategies I can put in place for differentiated learning."

Another reflected on the process in its entirety and the impact it had on her teaching:

> **T4** – "it is good to see more experienced teachers like hm... that did not work so let me take a step back and redo it or that really worked and let me try."

Another commented on her increased self-worth:

> **T3** – "increases self-worth because you are thinking more deliberately on it. I think it improves classroom practice in terms of pedagogy because you are constantly feeding back to the group on what you have done so it is going to influence you."

A concluding comment expressed their collective feeling very aptly:

> **T4** – "found this amazingly helpful."

Evans (2011) feels that teachers develop professionally through mental internalisation processes when they discover and embrace a better way of teaching than the one it replaces. In this instance, the teachers were

actively seeking better pedagogy and did learn the new pedagogical tool. Towards the end all participants had become more confident and were able to implement the pedagogy in their classrooms with a renewed confidence. They acknowledged that sometimes they did not know where they were going but expressed confidence in being able to guide the students along.

PAR as a PLC strategy

Participatory action research was the underpinning philosophy and tool used in the study. My role was deliberately woven into the research as a teacher researcher so as to observe from the inside. All participants were organised into a self-reflective focus group and were keen to participate, reflect and share their views (McTaggart, 1991; Udas, 1998) in focus group meetings. A conscious effort was made to minimise any power differentials (MacDougall & Baum, 1997) in the focus group. Full and uninhibited participation of all participants was solicited and encouraged (Udas, 1998). I must acknowledge here that there was no doubt or hesitation from the participants in their acceptance of me as a teacher researcher. There was no time spent on building collegial relationships and mutual trust as it already existed.

All participants in the focus group were determined on addressing the research question from the very first meeting. They were involved in co-constructing the goal that related to the participants' need for professional development. The process started off as a means of self-examination with a desire for improvement and culminated in empowerment of the participants (Udas, 1998). In a series of self-reflective focus group meetings the participants gave voice and movement to their perceptions on the topic of learning (Anderson et al., 2015). The generation of shared knowledge was used by the participants for improvement of practice and towards the end of the research study all agreed on a new understanding of the pedagogical tool they were learning.

The emphasis in PAR is on learning by doing (DuFour et al., 2010) in a collaborative environment. The participant teachers were learning and

discussing in a collaborative environment and then applying the shared new knowledge in their classrooms. Deep and higher order learning occurs through active and non-threatening collaboration, critical reflection and mental internalisation processes based on resulting insight (Evans, 2011; Mezirow, 2000). It is an ongoing process fuelled by the spiral of inquiry mindset (Timperley et al., 2014). Once the participant teachers had trialled their activities in their classrooms they reported back to the group. There were frank, open discussions on successes, frustrations and felt failures which resulted in critical reflection and troubleshooting among the participants. Participating as an active learner results in expanded awareness and critical reflection moves participants towards fuller realization of agency (Lieberman, 1995b; Mezirow, 2000). There was also evidence of reciprocal accountability (Elmore, 2007). Mutual accountability among the participants was evident as one participant commented:

> **T3** - "you are constantly feeding back to the group on what you have done… and if you have not done anything then that is what you are going to feedback."

Bolam et al (2005) make a point of this when they say that "collective responsibility puts peer pressure and accountability on those who do not do their fair share" (p. 8).

The above analysis of the salient features of PAR, identifies with the four guiding principles of PAR outlined by Udas (1998). Udas says that the process is participant-centred, collaborative and non-alienating. Secondly, participation is effective and directly related to the participants. Thirdly, critical reflection empowers participants to embrace new understandings and practices. Lastly, it is liberating and promotes a sense of self-worth and new confidence in abilities. On analysing the entire research process I feel that the PAR methodology served the participants as a valuable and effective method to learn a new teaching tool.

Conclusion

The research was an exploration of the effect of PLCs on teacher professional development. From the findings and the ensuing discussion it can be concluded that a professional learning community:

1. needs to be purposeful (to the teacher context) to be effective,
2. needs to be sustained (over a period of cycles) to be effective.

Further, a purposeful and sustained professional learning community:

1. builds teacher capacity to improve confidence and self-worth,
2. improves classroom practise through better and competent contemporary classroom teachers and
3. improves student outcomes (as reported by teachers).

Finally, using PAR as a PLC strategy for teacher development is an effective way to build teacher preparedness for the contemporary classroom.

Chapter 6: Conclusion

This final chapter highlights the impact of PLCs on other aspects of teacher development which are equally important for understanding the holistic nature of teacher professional growth. Some recommendations are given on the basis of the research findings. Finally, areas of future research are identified.

Differentiation in learning for teachers

On analysing the findings from the research study it is clear that PLCs, in general, need to be purposeful and sustained to build teacher capacity and self-worth. A safe, trusting and collegial environment encourages free flow of thoughts and the outcomes are positive for the participants. However, there are many factors that influence and contribute to teacher professional development as "teacher development is a multi-agentic, constantly evolving process [where] teachers' own agency and 'buy-into'" (Evans, 2011, p. 868) come into play.

In the research study, all participants reported an increase in their self-worth through acquiring new teaching skillsets. All the enablers for the robust functioning of a PLC were present and this maximised outcomes for the participants. Therefore, apart from learning a new pedagogical tool, each participant experienced a boost in their teaching capacity in different ways. It has come to light from the study that building capacity was different for different teachers depending on their personal and professional understandings at the current moment. What each participant hoped to gain and actually took away from the entire process was unique for each individual. At the start of the study, all four teachers articulated their understanding and beliefs in quite different ways and worked independently in a collaborative way to address their unique needs. While one teacher worked at building capacity to improve her teaching practice another was busy upskilling herself to address a felt lack of preparedness in a contemporary classroom. Another teacher, fresh out of University, was looking for support and affirmation from senior colleagues on her classroom practices. A fourth teacher was addressing her lack of

confidence and self-worth due to ineffective practices in a contemporary classroom. By the end of the research study all participants reported various degrees of growth in their personal and professional needs at the particular time.

Therefore, although the PLC was a group activity with a common goal, the outcomes for each individual were quite different.

Professional development 'done with not to' teachers

Active and effective participation by all participants in the PLC was instrumental in achieving a high degree of positive outcomes for the teachers. Mutual teaching was occurring through the germination of new beliefs, understandings and content while the learning took place through its application in classrooms and appreciation of multiple perspectives. Further, due to the sustained nature of the focus group meetings, other fleeting encounters among the participants became more purposeful. Therefore, it is pertinent to note here that professional development and growth cannot be 'done to' teachers but has to be 'done with' teachers.

In conclusion, active participation of teachers in a PLC, supported by effective PLC enablers, provides a perfect vehicle for positive professional development outcomes in individual teachers.

Physical presence in PLCs

Participant's views in the discourse tell us that physical presence of members in a PLC promotes effective collaboration. Reciprocal accountability puts pressure on all members of the focus group to do their fair share. Active collaboration facilitates understanding and empowers participants to establish links between lived context and learning. The presence of other members allows everyone to accurately identify, interpret and clarify issues that influence and shape experiences of participants, individually and collectively.

In conclusion, purposeful and sustained PLCs allow for and promote instant and effective collaboration among its members.

PAR as pedagogy

To start off with, PAR was intended to be used as a methodology for conducting the research. However, as the study progressed, it metamorphosed into pedagogy; the participants set common goals, sourced relevant content, applied new knowledge in classrooms, shared lived teaching experiences through anecdotes, and learnt in a collaborative environment. The entire process, in retrospect, was essentially a conglomeration of teaching and learning activities "encompassing aims… content… methodology… to relate the process of teaching to that of learning" (Grimmitt, 2000, pp. 16–17).

PAR is a cyclic process and the emphasis is on learning by doing. "There is value in… the PAR process… [it] is developmental… which in itself can be an empowering experience for participants" (Udas, 1998, p. 606). Further there is a strong element of 'buy in' by the participants as the outcomes are most likely to be used for improving aspects of their practise.

In conclusion, PAR as pedagogy is a viable strategy for PLCs and worth exploring further.

Recommendations

It is recommended that

- purposeful and sustained PLCs are formed within and across New Zealand secondary schools for teacher change and development,
- PAR as pedagogy be used as a PLC strategy for positive professional development outcomes for teachers,
- schools and policy makers need to relook at the present school day structure for secondary school teachers to achieve a productive balance between the time/teacher workload and effective teacher professional development.

Further research opportunities

It is felt that possibilities for further research exist in this area. Student voice, parent voice and senior leadership voice may be incorporated in

researching the impact of purposeful and sustained professional learning communities on teacher professional development.

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