Exploring Transformative Learning Within a Community of Practice: A Case Study of Teacher Professional Development in Early Literacy

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Exploring Transformative Learning Within a Community of Practice: A Case Study of Teacher Professional Development in Early Literacy

by

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A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

GRADUATE PROGRAM IN EDUCATIONAL RESEARCH

CALGARY, ALBERTA

DECEMBER, 2017

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Abstract

Despite the general acceptance of the Community of Practice model in the Alberta educational system, questions remain regarding the impact of this model. There is a need for research that provides insight into teacher professional development that transforms pedagogy and moves teachers from practice to praxis. This descriptive single case study explores how different critical factors helped to foster a transformative professional development experience among four elementary teachers. The data gathered through semi-structured interviews identified eleven key factors facilitating a transformative learning experience within a Community of Practice. These findings revealed two groups of key factors: 1) those fostering a supportive learning environment and 2) those acting as catalysts spurring teachers to examine and challenge the status quo of their practice. The findings support the critical action of embedding factors from both these groups into the design of teacher learning communities, maximizing teacher benefit from professional development.

*Keywords*: teacher professional development, transformative learning, case study
Acknowledgements

This journey and final thesis paper would not have been possible without the contributions of many people along the way. It is said that it takes a village to raise a child; it also takes a village to finish a thesis. First, I must thank my husband, Stephen for his undying support. He has read and discussed every word of this thesis with me, giving me invaluable feedback, fodder for thought and endless encouragement. He has been my cheering squad – a thankless job, but an essential one, as without him I would never have finished. To my children, Olivia and Carter, I thank you for your patience and understanding for all those times when, I just didn’t have time to do all those Mom things that I should have.

Next, I would like to thank the members of my committee, Dr. Janet Groen and Dr. Jim Parsons. Dr. Groen has always found the time to meet with me, help me work through my quandaries and often boosted my confidence when I was unsure of myself. Dr. Jim Parsons inspired me from the very first time I presented to him as a teacher several years ago. Thank you for your unfailing faith in the tacit knowledge that teachers have, and the value you place on it.

I am indebted to my colleagues who were also my critical friends, Don Noble, Miriam Ramzy and Diana Kidd, who gave so much of their time to my research project. Your insight, advice and challenging questions provided great guidance for me.

Thank you to Patricia Gillespie Noble and Brock Wojtalewicz for your constant advice throughout this long journey. You often handled my late night, anxiety-driven questions with great insight, grace and the calm guidance I needed.

Finally, and most important is my undying gratitude for my supervisor and my mentor, Dr. Hetty Roessingh. In 2012, Dr. Roessingh came to our floundering little CoP. Without her incredible generosity of time, expertise, and support, our group would never have had a chance. Like all great mentors, Dr. Roessingh brought with her a vision for us far greater than we could have ever imagined. Somewhere and somehow on our journey, that vision became our own, and unbelievably we not only achieved it, but surpassed it. Thank you, Dr. Roessingh, for believing in us and for giving us our wings.
Dedication

I dedicate this thesis to the three teachers in this study, who opened their hearts, minds, and souls to me. Due to their bravery and willingness to share their wisdom, not only was I able to complete this project, but I hope that we all can gain insight into the limitless ability of teachers to take their passion, creativity, and knowledge and transform. I have had the privilege of accompanying each of these teachers on their journey as they went from being great teachers to something more than spectacular. I thank each of them for their limitless patience and wholehearted honesty throughout this process. I have never met three people whom I am more honoured and proud to call my colleagues and with whom I am even more blessed to now have as my friends. Thank you.
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Prologue

Three teachers meet in the hall outside their classrooms. As they shepherd the last of the students out the door, they tidy the shoe shelves and chat with each other about the school day. All three glance at the closed corner door to Ava’s classroom.

“Do you know what Ava is doing? Her classroom door has been shut all day? It is so unlike her?” Madeline asked worriedly.

The teachers shrug their shoulders, not knowing. Just then, Ava’s door opens, and she walks into the hallway with a student notebook in her hand. With a look of defeat, she turns to her colleagues and comments,

“I just don’t understand? I have worked all week on our Pirate writing. We have read books, sketched our ideas, and shared the story pen. I have used all my graphic organizers, and my students are still struggling, I can’t get them to do anything!”

With an exasperated sigh, she holds out the child’s notebook for the other teachers. They examined the lined page with only a few dark angry letters scratched across the top. Large smeared eraser marks rip across the crumpled page. Ava looks at the other teachers hopelessly and asks, “What can I do? I have tried everything. I don’t have any more strategies! My kids hate these pirate stories. They hate writing, and quite frankly, so do I!”

All three teachers stare at Ava blankly. There were no words. None of the teachers had any advice. Each of them knew exactly how Ava felt. As much as they wanted to help, the teachers were defeated too, with no advice to give, despite their best efforts. They all felt that they were failing as teachers of writing.
Chapter 1 – Introduction

At a time when teachers are under more pressure than ever to meet the varied demands from students while delivering a broad curriculum in the classroom, how do we ensure that their limited time spent engaged in professional development is both applicable and meaningful? Over the last 20 years, there has been an unprecedented paradigm shift in teacher professional development from a hierarchical top-down decision-making approach, where policy from government bodies drove the direction of teaching practice, to returning the decision-making power to teachers and schools. This new model emphasizes creating learning cultures at school sites by recognizing teacher professional knowledge and increasing in-school staff autonomy and decision-making to better meet the needs of students within a site-based context. This new structure was heralded as the answer to school reform, one that would give teachers the motivation to individualize their practice to best meet their student needs and radically increase student achievement (Dufour & Eaker, 1998).

Concurrently, the Community of Practice (CoP) model was gaining recognition with its focus on fostering learning through social relationships and the use of meaningful context dependent activities (Wenger, 1998). This CoP structure appeared to be the perfect forum to enact the new site-based teacher Professional Development (PD). The CoP model provided a great opportunity to anchor teachers’ learning in their practice and respond to their school’s unique site-based needs, while simultaneously building collaboration among teachers.

At a more local level, many Alberta school systems moved towards a site-based Professional Learning Community (PLC) model starting in 2000 with the onset of the Alberta Initiative for School Improvement (AISI) project. This model was identified as a key way for schools to meet the new demands of collaborative, site-based PD. The AISI project was intended to be a multi-stakeholder project encouraging teachers, school administrators, and districts to collaborate and innovate in creative ways to improve student learning. The site-based PLCs were based on locally created needs assessments and initiatives in response to those needs (Hargreaves et. al., 2009). As a result, during the years of 2000-2012, numerous schools began school-based professional development and mandated teacher participation in collaborative learning communities. At the height of this movement, 95% of Alberta schools were engaged in the Alberta Initiative for School Improvement resulting in an unprecedented infusion of almost a
billion dollars, targeted towards teacher professional development (Campbell, Zeichner, Lieberman, & Osmond-Johnson, 2017). AISI was groundbreaking for its time and is considered one of the most innovative and ambitious efforts to change professional development in the world (Hargreaves & Shirley, 2009, p.87).

Despite the lofty goals and large sums of money allocated to this new approach, impact from this newer approach was inconsistent (Hargreaves & Shirley, 2009). It is well noted that AISI was instrumental in changing the learning culture in many schools (Hargreaves et al., 2009; Parsons & Beauchamp, 2012). However, significant improvement in student outcomes was inconsistent in schools employing this type of PD (Hargreaves & Shirley, 2009). The aggregate provincial assessment data show a small effect size over the first cycle (three years), but then show little improvement and some decline at both the provincial and local data levels in cycles 2 and 3, over a period of six years (Hargreaves et al., 2009).

Furthermore, Davis, Sumara, and D’Amour’s (2012) observations from their descriptive case study of three AISI school districts revealed a relationship between the measures of student learning and the way the district roles out the professional development, what they term the context of learning, for the teaching staff. Davis et al. (2012) noted the culture of the school can interrupt and amplify the learning of the staff. They observed that school cultures that promote interruption and questioning of common teaching practice result in innovation and knowledge production among the staff, hallmarks of transformative learning. By contrast, other cultures amplify simple enactment of mandated methods, which tend to be less sustainable improvements in practice.

Finally, a more significant problem emerged as the funding for the AISI project was withdrawn in 2012. After the project concluded, there was a noted decline in teacher efficacy and access to professional development (Campbell et al., 2017). In a 2012 Alberta Teachers’ Association (ATA) survey measuring teacher satisfaction with professional development, 23% of teaching professionals claimed to have received no job embedded PD, while 15.2% of respondents reported a decrease in access to PD. A similar survey in 2010 contained no reports of similar problems with access to PD (ATA, 2012). In fact, after comparing the multi-year data in the latest Alberta Teacher’s Association (2016) professional development survey, the ATA expressed serious concern about the negative trend in teacher PD.
A review of data from the three previous administrations of this survey (2010, 2012 and 2014) shows that even with a different informant pool, the data... demonstrates that the principles and conditions that could support engagement in effective professional development are in overall decline from an already precarious position. *(ATA, 2016, p.11)*

This evidence may reflect the feeling of a growing skepticism among teachers of the value of mandated PD *(ATA, 2016)*. Although many parts of the reformed PD created by the AISI project showed promise, it proved difficult to sustain the embedded PD model over time, and student results did not show consistent improvement. The many facets of school culture, such as leadership, appear to have a strong influence on the long-term effectiveness of teacher PD. We must first identify the critical factors and how they facilitate teacher learning in a truly effective PD model.

Twenty years of research has given us a good understanding of the critical elements that make local school sites strong learning cultures *(Hargreaves & Shirley, 2009; Owen, 2015; Parsons, 2011)*. The research has also established how teachers’ learning can be enhanced through the social context of a CoP, providing opportunities for participants to represent diverse opinions and willingly engage in understanding the viewpoints of others *(Wenger, 1998)*. Finally, research has established a strong link between changing individual teacher beliefs and changing their practice *(Supovitz & Christman, 2005)*. In fact, knowing that teachers’ practice is heavily based on their belief systems, we know that to effect change in practice, one must also consider changing teachers’ beliefs *(Jones & Carter, 2007; Pajares, 1992)*. However, surprisingly little research connects these three elements. In other words, the research around teacher professional development fails to identify how both the social context and the critical factors within a CoP impact teachers and their underlying beliefs and assumptions of practice. Additional research is needed to understand how best to structure teacher professional development to create a sustained improvement in teacher practice.

**Researcher Background**

In 2012, my own school system embarked on a professional development project creating six different Communities of Practice among a staff of 30 teachers. By the end of that year, only one of those CoPs was still active, the one that I had joined. This Writing CoP would continue...
for four more years, while over that same period, I watched as our administration tried to create effective PD for our staff through a series of different PD models. Meanwhile, through the Writing CoP, my teaching practice, perspectives about teaching writing, and my frame of reference for writing instruction all significantly changed. The change in my understanding of myself in relation to learning and the sense of empowerment and agency that I gained from this experience was even more profound. I later came to understand that my work on the writing CoP was what Mezirow (1991) termed transformational. This professional development required me to question many of my fundamental assumptions that underlay my practice and work through the process of creating new understandings and beliefs.

My experience became even more significant as I recognized that my colleagues on the CoP had experienced their own transformations. The four years of the CoP had turned them into very different teachers and people.

I contrast this transformative experience with my next collaborative experience in 2014. In 2014, I participated in a different CoP within the school, addressing a similar topic related to student writing, but chosen by my administration. Although both CoPs met Wenger’s (1998) definitions with respect to domain, community, and shared practice, my experience was quite different. In this second CoP, I struggled to find the work relevant to my classroom practice. I found it difficult to dedicate the time needed to commit to this CoP and felt that, over a period of a year, few sustained changes to my practice resulted. My colleagues expressed similar frustration as they also struggled with the time commitment and finding relevance to their practice. Unfortunately, less than ten months later, this CoP was abandoned.

Reflecting on these two collaborative, site-based professional development experiences, I wondered what the difference was between the two groups. At first glance, the CoPs were setup in a similar fashion with colleagues gathering to discuss issues based in locally observed problems. However, significant differences in the way teachers felt about these groups and the radically different outcomes suggest important variations. Like my colleagues, I was an extremely busy teacher, constantly running off my feet trying to meet the seemingly endless demands of my students. Spending my time engaged in PD for which I struggled to see the relevance to my practice made me frustrated. To motivate teachers to engage and invest in PD, we need transformational professional development that is highly relevant and impactful to
classroom practices. To be effective, professional development needs to challenge current practices and the beliefs that drive it. The question is: How does professional development become transformational?

**Problem Statement**

Despite a significant amount of research and a considerable redesign of the professional development system in Alberta, it is questionable whether there has been a corresponding sustained change in teaching practice and increased student outcomes. Even with increased amounts of time dedicated to teacher professional development, many teachers report that their PD is disconnected from their everyday practice (ATA, 2012, 2016). This disconnect results in frustration for those who are trying to implement professional growth and for the teachers who are the recipients of the professional learning. Furthermore, teacher professional development sometimes improves teacher practice significantly; however, when it does, we do not know why. A need exists to understand what makes these CoPs meaningful to teachers and how they enable teachers to experience transformational learning.

**Statement of purpose and research questions.**

The purpose of this study was to understand the phenomenon of teacher transformative learning within a school-based CoP. An in-depth descriptive single case study exploring the experiences of teachers’ transformational learning would shed light on how different critical factors in a CoP help establish spaces conducive to transformative professional development. This study describes and interprets how transformative learning came about for four teachers engaged in a CoP and the factors that they report contributed to their learning journey. The following exploratory questions were asked:

1. What factors influence a teacher’s level of readiness for change?
2. How do teachers come to question their critical beliefs and assumptions within a CoP?
3. How can teachers move new knowledge and beliefs into practice through a CoP structure?

**Researcher assumptions.**

Based on my background as a participant in the writing CoP, I held three primary assumptions in this study. First, I assumed that, by understanding the commonalities among the teachers’ transformative experience, we could identify key factors that might lead to impactful
teacher professional development. Second, I assumed that the teachers represented their experiences on the Writing Community of Practice as honestly as possible. Because I had a long-term, established relationship with the participants prior to the CoP, there was always a risk that the participants did not want to reveal their true feelings or understandings. Given the authentic and supportive relationships that the members developed during this CoP, I assumed that the participants provided me with honest feedback during this study. Finally, I assumed that all four teachers did undergo what they felt was a transformative experience. The teachers’ actions, email correspondence, and dialogue over the period of three years reflect significant changes in their teaching practice as well as their sense of confidence and agency in their teaching – all indicators of a transformative experience.

**Rationale and Significance**

Understanding how different factors in teacher professional development can foster transformative learning is particularly relevant in education, where teachers want to make their practice innovative but are often constrained by time and school context. In addition, the increased pressure on administrators to deliver appropriate PD, foster teacher capacity, and create the optimal learning conditions for their students, further increases the demand for effective professional development. The rationale for this study emanates from my desire to understand how to engage teachers in PD and maximize its impact. From this case study, we know that changing long-held teacher practices and beliefs is possible. Knowing what teachers need from professional development to change those practices and beliefs increases the likelihood of PD becoming transformative.

By understanding the key factors in these teachers’ transformative experience, we will better understand how to make teachers’ beliefs visible, relate their beliefs to practice, and begin to change their methods. When teacher professional learning becomes transformational, not only are teachers more engaged and motivated, but our students also benefit greatly.

**Definitions of Key Terminology**

**Community of Practice (CoP)** – A community of practice is a group of people who share a concern or a passion for something they do, and learn how to do it better as they interact regularly these communities. A CoP must include the following elements: members who are brought together by a shared learning need, the group’s learning increases the bond between the
members over time, and the members’ actions produce resources that affect their practice (Wenger, 2011).

**Communities of Practice Theory** – This theory is rooted in the notion of *legitimate peripheral participation* (Lave & Wenger, 1991). In 1998, Wenger extended the theory, defining it as, “a process of social learning that occurs when people who have a common interest in a subject or area collaborate over an extended period of time, sharing ideas and strategies, determine solutions, and build innovations” (Wenger, 2011, p. 1). A Community of Practice is characterized by three dimensions: joint enterprise, mutual engagement, and shared repertoire allowing it to function as a learning community (Wenger, 1998).

**Joint Enterprise** – the result of a collective process of negotiation defining the mandate of the community (Wenger 1998).

**Mutual Engagement** – the diverse roles members negotiate within the community of practice to meet the needs of the community (Wenger, 1998).

**Shared Repertoire** – resources and practice created through the process of community members learning about and negotiating the group’s domain (Wenger, 1998).

**Transformative Learning** – involves reflective assessment of premises, which become more differentiated and integrated or transformed by reflection on the content or process of a problem (Mezirow, 1991, p.6).

**Meaning Perspectives** – A meaning perspective refers to “the structure of cultural and psychological assumptions within which our past experience assimilates and transforms new experience” (Mezirow, 1985, p. 21). In 2000, Mezirow further elaborated his definition to include meaning perspective as a frame of reference that comprises of habits of mind and resulting points of view (Kitchenham, 2008).

**Teacher Practice** – actual application or use of an idea, belief, or method that translates and shapes curricular goals and theoretical ideas into classroom activities to build student knowledge, skills, attitudes, and dispositions (Timperley, Wilson, Barrar, & Fung, 2008, p. vii).

**Teacher Beliefs** – “A proposition which may be consciously or unconsciously held, is evaluative in that it is accepted as true by the individual, and is therefore imbued with emotive commitment” (Borg, 2001, p. 186).
Chapter 2 – Literature Review

Teachers are often seen as the bridge between best practice theory and the implementation of effective learning activities for students. However, it remains a long process to mobilize textbook knowledge inside the classroom. This process is complicated by the vast differences in school sites, student needs, and competing contextual factors that teachers have to respond to on a daily basis. Using Social Learning theory, the Community of Practice model (CoP) is valued for its ability to spur innovation, allow for site-based solutions and enhance the learner’s ability to engage through her practice (Wenger, 1998). On the surface, an educational CoP model appears to meet the new demands of effective teacher professional development. However, in reality, teachers’ privatization of practice (Kruse & Seashore Louis, 1993; Little, 1990) can remain a major obstacle with regard to the learning activities that teachers use in their classrooms behind closed doors (Kitchenham, 2003, 2005).

Teacher transformative learning, where adults investigate the assumptions guiding their actions and change their behaviours based on new learning, appears to be the key to changing practice inside classrooms. Although Wenger, McDermott, and Snyder (2002) claimed that CoPs can enhance the learner’s ability to engage in a transformative learning experience through the social context within a CoP, little is known about how this occurs (Amin & Roberts, 2008; Henderson, 2015). The mechanisms through which CoPs have significant impact on teacher practice are unknown. A need exists to understand what makes these CoPs meaningful to teachers and how teachers experience transformational learning through them. Levine (2010) stated:

Writing about PLCs often integrates tried and true strategies for staff development and school leadership with research on professional communities (Dufour & Eaker, 1998; Dufour, Eaker, & Dufour, 2005; Hord & Sommers, 2008) rather than aiming to produce a theoretical account of how communities of teachers learn and change. (p.117)

Given that this study involved three areas of study – teacher professional development, Communities of Practice, and transformative learning – I will include a discussion of all three constructs. In this chapter, I first present the conceptual framework for Community of Practice and a literature review of the benefits of the CoP model for teacher PD, along with criticisms of
viewing learning as participation. Next, I outline Mezirow’s Transformative Learning Theory (TLT) and how it relates to teacher PD in the literature. Finally, I give a brief historical overview of teacher PD and the significant contextual factors that make it effective.

Communities of Practice

An overview of Social Learning Theory as Community of Practice.

At its most basic, a Community of Practice consists of “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger, 2011, p.1). However, when Lave and Wenger coined the term Community of Practice in 1991, they had a much more profound idea, one that involved the lived experience of participation in a learning relationship. The conception of learning that Lave and Wenger put forward in their ground-breaking book, Situated Learning: Legitimate peripheral participation, was radically different from the prevalent cognitivist and behaviourist theories of learning at the time. Prior to this, learning had been viewed as a fundamentally individual process that involved acquiring knowledge that changed an individual’s mental state or behaviour (Hughes, Jewson, & Unwin, 2007). Instead, Lave and Wenger argued that learning was the process of membership.

This new conceptualization of learning shifted the focus from the individual to a collective. As such, the view of learning as participation (Beckett and Hagar, 2002) is predicated on four basic assumptions. First, humans are social beings, and learning happens through participation in shared practices of a community. Second, knowledge is a matter of competence. Through experience, we gain specialized knowledge, which is an asset. Third, individuals are conceived as constituting and as constituted by the social world, not as separate beings who move in and out by their own choice. Along with this is a culture of practice in different disciplines that guides how we see ourselves and interpret our world. Finally, what we learn is defined by our identity formation, not by our knowledge acquisition. This learning paradigm has its foundation in the belief that you cannot separate individuals from the world they live in.

“Theories of situated everyday practice insist that persons acting and the social world of activity cannot be separated” (Lave, 1993, p.5 as cited in Hughes, Jewson, & Unwin, 2013).

Originally Lave and Wenger were concerned with “legitimate peripheral participation,” which focused more on apprentices rather than the structured professional development groups we are familiar with today (Hughes, Jewson, & Unwin, 2007). It was not until Brown and
Duguid (1991) made the connection between the different elements of community, domain and practice that CoP became a type of organizational structure. Communities of Practice became pivotal to Lave and Wenger’s social learning theory as the CoP provided the containers of experiences that allowed learning as participation to develop.

The label, *Communities of Practice*, has been criticized for its lack of definition and hence the difficulty in operationalizing the concept of community (Fuller, Hodkinson, Hodkinson, & Unwin, 2005). In response to these criticisms, Wenger refined his concept of learning within a Community of Practice in his book, *Communities of Practice: Learning, meaning and identity* (1998). Here, Wenger more clearly defined community as comprising of three fundamental elements: mutual engagement, sense of joint enterprise, and a shared repertoire of communal resources.

Mutual engagement is the sense of negotiated role and action of each member of a CoP. Members bring their unique viewpoints and use their unique competencies as the members investigate a shared practice (Wenger, 1998). Joint enterprise binds a community together and is developed collectively as members negotiate an understanding of what a community is about. The members then hold each other accountable to their negotiated mission (enterprise). The third characteristic of a Community of Practice is the development of a shared repertoire, including tools, routines, concepts, and actions that the community has produced or adopted throughout its lifespan.

The three elements of mutual engagement, joint enterprise, and shared repertoire establish the potential for learning to occur in a community. The participants’ competence (and thereby learning) is dependent on these three elements. To contribute to the community, the participants must understand and be dedicated to the community’s purpose, the joint enterprise. The participants’ engagement within the community is reflected by the role and actions they take within it. This mutual engagement reflects the participants’ competence, which in turn determines the contributions determines the contributions to the shared repertoire and their access thereof. Therefore, Wenger (2000) argued that the Community of Practice provides the system within which participants negotiate competence through direct participation, ultimately leading to full membership or learning. Figure 1 presents an overview of the three dimensions of a Community of Practice.
In 2002, Wenger, McDermott, and Snyder’s book, *Cultivating Communities of Practice*, seemed to reframe CoP as a structural model versus a learning theory. Since their book was published, there has been much confusion and debate over whether CoP exists as a theory, a framework, or an analytical tool (Henderson, 2015). It can be argued that, between Wenger’s 1998 and 2002 publications, the concept of CoP moved from a social learning theory to a model enabling organizations to move organizational knowledge (Amin & Roberts, 2008; Henderson, 2015). This discrepancy led to some confusion in the literature, where studies often reported the existence of a CoP yet failed to adequately describe or investigate the processes within the structure studied. Therefore, it becomes difficult for readers to determine which concept of CoP – either social learning theory or an organizational management model – is being applied.

The CoP structural model (Wenger et al., 2002), while appreciably more accessible or ‘operationalizable,’ risks the oversimplification of sociocultural processes involved in the ongoing negotiation of identity and practice. It focuses on CoP as a means by which organizational knowledge can be managed. It dramatically simplifies the role of identity and the way in which members negotiate their practices. (Henderson, 2015. p.134)
Lave and Wenger (1991) began with the concept of legitimate peripheral participation as a type of conceptual bridge between the processes that impact change in the individual’s identity in practice and those that impact the learning and change of a group. In his 1998 book, Wenger clarified that personal identity and community should not be seen as a dichotomy; instead, they are mutually constitutive, and the focus becomes the processes whereby they interact. One’s identity is negotiated while engaging in group interactions and interpreting those interactions through an individual lens coloured by unique individual experiences. Wenger’s focus of identity is on what happens when individuals engage in the group practice and those interactions ultimately lead to changes in the group’s learning. Hence, CoP theory does not deny the unique experiences of the individual, but emphasizes the interaction of the individual and the community where identity is defined, and learning occurs.

Important for this study is the concept that identity and practice are inextricably connected and develop together. Engagement in practice, what we do, how we do it, and what is noticed by others in our group gives personal meaning to how we view ourselves in our job, which contributes to our identity construction. It is a lived experience of participation within specific communities that creates identity in practice (Wenger, 1998). Hence, Wenger’s three conditions of community – mutual engagement, joint enterprise, and shared repertoire – become an integral part of identity formation. In other words, it is not just how we interpret our job experiences individually, but it is a layering of our interpretation of experiences, combined with how our community interprets the experience, that influence future roles, responsibilities, and positions within the community, constructing who we are and what we do.

**Benefits of the CoP model.**

Many studies outline the benefits of a CoP model for teacher professional development (Bolam et al., 2005; Louis & Marks, 1998; Vescio, Ross, & Adams, 2008; Willemse, Boei, & Pillen, 2016). Among the benefits listed are the sharing and reification of knowledge in a community that is often difficult to make visible. In addition, the CoP provides a context for participants to enrich and extend their current practice by gaining exposure to new perspectives and practices and an opportunity to try those new practices out. Finally, the CoP provides a way for participants to increase their social capital, change their identity by gaining acknowledgement...
and respect for their knowledge and practice, and create a strong sense of belonging and membership.

**Exchanging knowledge.**

Levine (2010) suggested that Lave and Wenger’s theory offers an archetype for understanding how knowledge moves from novices to experts in a group. This type of learning can be explored by examining the ways in which joint work and sharing practices can make teaching practice visible for learning and discussion.

Lave and Wenger’s (1991) original conception of *legitimate peripheral participation* highlights the importance of mobilizing tacit knowledge from experienced members to others in the group through membership activities. The CoP structure is critical to making this type of knowledge visible. However, Levine (2010) did not limit the CoP to novices learning from experienced members; instead he proposed that CoP models may help broaden the understanding of how those more experienced teachers are exposed to new practices and eventually adopt these practices, as well (p. 121). The community provides opportunities for these teachers to see, talk about, and practice new pedagogy with support, creating a medium through which an often-tacit knowledge can be explored and learned.

Pareja, Ormel, McKenney, Voogt, and Pieters (2014) also noted that shared activities within the CoP, such as teacher brainstorming, lesson plan presentations, sharing strategies and resources, and discussions are mechanisms through which teachers’ practical knowledge are elicited. In addition, opportunities for dialogue during meetings allow teachers to access each other’s knowledge and expertise, explore alternatives, and develop shared understandings about teaching and learning. These activities require tapping into teachers’ tacit and practical experience. Making knowledge visible and, more importantly, the impact of that knowledge on identity construction and the resulting action become critical factors in conceptualizing how a CoP transforms practice.

Essential to teacher change is the exploration of new perspectives and practices. Much research on CoP suggests that it provides a context for sustained collaboration where the perspectives and expertise of various stakeholders are explored (Levine, 2010; Pareja et al., 2014). The elements of community, joint enterprise, mutual engagement, and shared repertoire create the space where exposing, considering, and reflecting on participants’ ideas becomes a
critical part of the practice (Brouwer, Brekelmans, Nieuwenhuis, & Simons, 2012; Keay, May, & O’Mahony, 2014; Murugaiah, 2013).

Through the process of mutual engagement in a Community of Practice, members are held accountable to take action, and joint enterprise creates accountability for those members in deciding which ideas should be sought out, shared, or examined (Wenger, 1998). In the process of finding the best path to reaching the community’s goals, group members bring forward different perspectives and expertise (Palinscar, Magnusson, Marano, Ford, & Brown, 1998). Brouwer et al.’s (2011) analysis of teacher teams within school communities highlighted how teachers became more receptive to different perspectives during discussions when working in teams to find solutions to common problems. This included participants’ explicit invitations of different perspectives. Furthermore, having a joint enterprise establishes a point of mutual understanding and shared practice provides the members a common starting point from which diverse perspectives and practices can be shared and then negotiated (Young & Mitchell, 2003). Given that team members are held accountable to find the best solution through mutual engagement, the CoP becomes a vehicle where different perspectives are not only solicited, but also valued.

Finally, the element of shared repertoire not only sets the conditions for the exchange of knowledge, but also provides the opportunity to try alternative practices and roles in a safe environment (Akerson, Cullen, & Hanson, 2009). Murugaiah showed in her 2013 study of an online community of practice that exposure to new ideas and theories within a CoP affords experienced teachers opportunities to adopt new repertoire. Once exposed to new ideas, members try out new practices and negotiate how they might use them before permanently adopting them (Levine, 2010).

Impact on practice.

According to Wenger (1998), practice is not a result of design; rather, it is a response to design. Stated differently, while a set of procedures can be imposed by the institution, the way in which those procedures are enacted is dependent on the participants in the community and the result of negotiated meaning by the community members (Henderson, 2015). Community members can use their exposure to new knowledge and diverse perspectives to create solutions to a problem or they can reify the practices that are already present. Therefore, when looking at the
impact of CoP participation on teacher practice, one must examine how the CoP influences practice (Vescio, 2008; Levine, 2010).

In a 2008 review of Teacher Learning Communities, Vescio found that all the learning communities resulted in change of either teaching culture, teacher practice, or student achievement. However, the type of change varied depending on the learning community, emphasizing the need to understand the processes within each community. Louis and Marks (1998) concluded that schools using learning communities typified by shared values, a focus on student learning, collaboration, de-privatized practice, and reflective dialogue could account for part of the positive changes in the quality of classroom pedagogy. This study provides robust support for the positive impact of professional communities on classroom practice. The literature suggests that a CoP creates conditions for strong social support of teachers, helping to situate teachers’ new learning, shifting the school culture, and helping teachers feel higher levels of self-efficacy. It becomes important to understand the specific impact on practice in each of the above areas.

The small and intimate learning communities afforded by a CoP can offer a supportive environment for teachers to learn about new materials and practices (Supovitz & Christman, 2003). These communities also provide a place for teachers to work out implementation of new practice and problem solve before implementing them in the classroom (Akerson et al., 2009). Pareja et al. (2014) noted that the regular team meetings in teacher communities allow teachers to share and develop their practical knowledge as they evaluate the results of their actions, offer each other feedback, and revise their instruction. The intimate environment also makes teachers feel more accountable for their practice and encourages them to try new practices (Strahan, 2003; Vescio, 2008). Printy (2008) added that, through the CoP, teachers establish norms of practice and become more accountable to the group, which, in turn, motivates teachers to question their own practice. Although a limitation in Printy’s research is that the data is all self-reported, involvement in a CoP appears promising for creating the atmosphere of social support needed to foster change in practice.

Exposing teachers to new practices is one thing; however, convincing teachers to apply new practices independently in their classrooms, in a sustained way, is a much more difficult process (Henderson, 2015, Kitchenham, 2003; Levine, 2010; Supovitz & Christman, 2003).
Akerson and colleagues (2009) theorized that a CoP can help teachers situate their learning in their own contexts, interact with other teachers and program staff to develop new ideas, and then apply learning to their own individual situations. Studying a teacher CoP on the Nature of Science (NoS) practice, Akerson et al. (2009) reported that participation in joint activities, such as classroom observations, along with the follow-up discussions, encourages teachers to reflect on their practice. However, the researchers reported that participation in this CoP alone was not enough to change teachers’ views and teaching practice. To foster a change in practice, the CoP environment needs to be paired with modelling and explicit reflection. Furthermore, to foster a change in underlying belief systems around the NoS, teachers need to attempt new classroom practices on their own and work through the contextual challenges of the new practices. This underscores the importance of understanding what happens within a CoP to help foster not only change in practice but also teacher beliefs.

**Change in Culture.**

The literature almost universally reports that CoPs improve school culture, demonstrating that CoPs can lead to fundamental shifts in the habits of mind of teachers (Musati & Pence, 2010; Vescio, 2008). After participation in a CoP, changes in collaboration, teacher confidence and efficacy, as well as a focus on student learning have been noted. The sense of collaboration that results from a CoP has many benefits (Akerson et al., 2009; Musati & Pence, 2010; Vescio, 2008). Teachers report increases in collaboration as they worked in learning communities, reducing the sense of isolation inherent in traditional work environments (Vescio, 2006).

Traditionally, teachers can be resistant to new ideas, particularly if they are presented from non-practicing, outside sources which can be seen to lack credibility (Banilower, Heck, & Weiss, 2007). By fostering increased reflection, teachers are able to examine new ideas through the mutual engagement of the group (Akerson et al., 2009). Collaboration within the group provides an element of moral support, which is often critical for teachers to confront and change their beliefs and practices (Akerson et al., 2009; Bolam et al., 2005; Musati & Pence, 2010). The process of learning through participation in a CoP also increases the sense of agency and teacher efficacy. As they work through reflection of their own beliefs and begin to co-construct new understandings with their colleagues, teachers become empowered. Teachers report more clarity of their belief systems as well as confidence in defending their practices and in making
pedagogical choices (Akerson et al., 2009; Supovitz & Christman, 2005). Furthermore, Young and Mitchell (2003) suggested that a CoP provides a medium through which participants can gain social capital. Through their engagement in the group, each participant gains knowledge and has the opportunity to reify that knowledge with the group, gaining more credibility, membership, and confidence.

It is important to distinguish between teacher-reported feelings of self-efficacy and increased morale from a sustained change in practice. Although the literature overwhelmingly supports that CoPs have several effects on the teacher culture, less evidence suggests that any changes are sustained or lead to greater student achievement. Supovitz and Christman (2005) clearly found a change in teacher culture; however, they also found that group practices were generally static from year to year, suggesting that teams do not substantially deepen their practice over time. In this study, the CoPs only showed an influence on student learning outcomes when the group had a specific instructional focus, such as a literacy initiative. These findings accentuate the importance of understanding how CoPs lead to sustained change in practice.

Several studies suggest that learning through participation in a CoP is a complex process and that resulting changes in practice are difficult to predict (Akerson et al., 2009; Henderson, 2015; Levine, 2010; Supovitz & Christman, 2003; Vescio et al., 2008). Learning is negotiated within each group differently, and participants’ beliefs and practices are influenced by factors unique to the individual. The literature is clear that CoPs have many benefits, but to fully understand how to change teacher practice, we must study the interactional dimensions of teacher change. In other words, what in the group interactions within a community allows teachers to challenge their existing understandings?

**Criticisms of Community of Practice Theory.**

*Learning as Participation.*

One weakness of the Learning as Participation theory is a narrow definition. Learning is only considered as social participation, and the individual’s acquisition of knowledge is absent in the theory (Fuller, 2007; Hagar, 2005; Hodkinson & Hodkinson, 2004). A fundamental tenet of Lave and Wenger’s (1991) CoP learning theory is that learning cannot be examined at the level of the individual. Hence, learning can only be viewed in relation to the group. Lave and Wenger
have captured this complex notion in their term 'legitimate peripheral participation'. They explain in learning that “each of its aspects is indispensable in defining the others and cannot be considered in isolation. Its constituents contribute inseparable aspects whose combinations create a landscape -shapes, degrees, textures- of community membership (p. 35).

Outlined in this literature review are three problems inherent in the definition of learning as participation: the disregard of outside individual learning on the group, the influence of situational experiences on each group member, and the difficulty isolating learning to only the group.

Several studies show that outside aspects of an individual’s life influence group membership, identity, and learning (Billett, 2008; Edwards, 2005; Hodkinson & Hodkinson, 2004). Billet argued that there is an important role for the individual within the social learning group. It is the individual’s engagement and learning that drive the learning of the group. Furthermore, the group’s norms and practices are mediated by the individual’s own intentions, interests, and subjectivities (Billett, 2008, p. 56). Billet proposed that learning needs to be understood as interdependence between the social influence of a community, the situational factors of the workplace, and the individual influence of the participants through their negotiations of membership. “So, there is a need to go beyond accounts of learning that privilege situational contributions. Instead, a more comprehensive and convincing account of learning throughout working life needs to include and reaffirm the contribution and mediating role of individuals” (p. 41).

Reviews of literature using the metaphorical lens of ‘learning as participation’ often are criticized because they fail to consider how the learning of the group is open to change as influenced by the complexities of the individual’s experiences (Billet, 2003; Edwards, 2005). Billet (2003) conducted a study examining how groups of hairdressers solve problems at different sites (England and Australia). This study targeted the link between sociocultural practices, situational factors, and individual choice in terms of their participation in learning settings. Billet found that the learning in this study reflected preferred norms in each learning environment, indicating that strong social influences in groups contribute to group problem solving. This would be expected according to legitimate peripheral participation. However, Billet
also found that individual differences to the same problems existed even within the same group. Many of these differences were related to personal histories.

Billett concluded that sociocultural and situational factors shape the learning in a group. However, the choices individuals employ as a result of learning are also influenced by their own personal histories. In other words, learning happens both through group negotiation of meaning and simultaneously at the level of the individual. Printy (2003) added that individual background influences learning at both the individual and group levels. The findings suggested that the level of participation of high school science and math teachers in the CoP was influenced both by social and professional background differences, such as ethnicity, gender, and level of experience. Edwards (2005) advised that the removal of these individual differences influences how we engage in group learning and therefore must be considered when studying learning. To consider the influence of these types of factors would require examining group learning, not only though social learning, but also through the lens of an individual.

Finally, Hagar (2005) viewed learning as two interlocked cycles. Hagar noted that it is impossible to isolate learning from the group; instead, he argued that learning from the group and the knowledge the individual brings to the group and then later revises outside the group are interlocked in a type of continual cycle. Therefore, the two spheres of influence cannot be separated. Hagar argued that examining learning only as part of the social group context negates half of the cycle and ignores learning when it takes on more of an individual form. Billet (2003) and Haggar (2005) suggested that further research should be done to investigate how these two spheres of influence impact the overall learning of the individual.

Community of Practice boundaries.

The absence of a clear definition for Community of Practice is frequently cited in the literature (Fuller, 2007; Henderson, 2015; Hodkinson & Hodkinson, 2004). Lave and Wenger (1991) defined CoP as “a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice” (p. 98). This nebulous definition romanticizes the concept of community, undermining the processes required for learning to occur in the group. It also serves to obscure the boundaries of the group and makes it difficult to delineate the many influences on the group’s learning (Amin & Roberts, 2008;

The romanticized notion of *community* as a harmonious, comfortable, and supportive environment (Henderson, 2015) overlooks Wenger’s own warnings that a CoP needs diversity and tension between its members. Recognizing the importance of rich negotiation and its connection to constructing knowledge becomes an important element to look for when reading research regarding CoP. Often the word *community* does not indicate whether this type of tension and negotiation was present in the learning group. Grossman, Wineburg, and Woolworth (2001) questioned the value of such a broad term, claiming that “Community has become an obligatory appendage to every educational innovation” (p. 942). Amin and Roberts’ (2008) review of over 300 articles published on CoPs reveals that several intrinsically different types of communities exist. The authors argued that over a period of 20 years, the term CoP has become more of an umbrella term that lacks its original focus. This view is supported by Henderson (2015), who suggested that the lack of clear definition and understanding of the original intent of the CoP undermines the integrity of the research done on CoPs. Overall, these studies suggest that until the literature begins to focus more on the processes that occur within the CoP and is consistent in its application of the term CoP, we will be limited in understanding the usefulness of the CoP’s theoretical constructs.

A second problem regarding the definition of CoP emerges in relation to boundaries. Several studies show that simultaneous participation in multiple communities influences participation in each respective group and therefore the groups’ learning (Fuller, 2007; Hodkinson & Hodkinson, 2004). According to Lave and Wenger’s (1991) definition, many types of social groups could be considered CoPs and individuals would belong to several CoPs simultaneously. On the other hand, several examples of CoPs fit better with Wenger’s (1998) modified and narrower definition. In these cases, the participants formed a tight, subject-specific group where the learning of all participants was centrally concerned with social relations and belonging to a singular group (Wenger, 1998). This boundary dilemma illustrates the difficulty in determining where to focus the lens on learning. Is the focus on a single group, the overlapping groups, or the interaction between the individual, immediate group, and larger social context?
The lack of clarity in the boundaries of community prevents the analysis of which communities are contributing to learning and how they are contributing (Jewson, 2007). In today’s modern society, an individual’s identity is more likely a result of membership in multiple groups (Jewson, 2007). In addition, individuals bring different levels of knowledge and background experience to the group and share different levels of outside influence with the members of the group. This outside influence is mediated by the individual participant. To understand how participation across several groups contributes to learning, one must analyze learning at the level of individuals, what they bring to the group, and their influence on it.

**The Influence of individual factors.**

Given that Lave and Wenger’s (1991) theory puts the emphasis squarely on the learning through group processes, they underplay the role of individual characteristics (Billet, 2008). Yet, much of the available literature has clearly shown the influence of individual characteristics, such as motivation and expertise, on group learning. Hodkinson and Hodkinson’s (2004) case study of teachers illuminates how individual’s motivation plays a considerable part in the learning experience. The secondary teachers in this study responded to pay structures, as well as the need for privacy and self-determination, in deciding their level of participation in their CoP and, in the end, their level of membership in the group.

An additional factor is the role of individual expertise in learning as participation. Lave and Wenger (1991) described a system where the participants move from novice to expert through learning the *skills* and *practice* from the experts in the group, ensuring continual reproduction of a community of practice. Often in today’s complex workplace, the movement from novice to expert is not a slow learning process, nor is it a one-way trajectory. Fuller et al.’s (2005) study examining the novice-to-expert relationship in four steel companies provides evidence that the learning trajectory is not always linear from expert to apprentice. They argued that, in some companies, newcomers take on expertise very quickly while other aspects of the job are learned at a surface level. Furthermore, they suggested that novice workers show or explain their knowledge to other colleagues more than half the time, skipping the linear progression from peripheral to central expert of the group.

According to Lave and Wagner (1991), novices in this scenario would never reach full membership as these novices do not have the opportunity to develop into highly skilled experts.
Also, Fuller et al. (2005) maintained that the organization’s needs drove the learning rather than the members of the community who determined what was to be learned. They concluded that, as novices frequently enter jobs with a range of qualifications and more experiences than the traditional apprentice, novices play much more central, rather than peripheral, roles in the CoP. Overall evidence seems to indicate that both external motivating factors and expertise play a central role in group membership and thereby learning. Given that Lave and Wenger’s traditional concept of Legitimate Peripheral Participation does not account for these additional influences on social learning, it becomes essential to widen the lens of learning beyond the group to understand how learning comes about within a CoP at both a group and individual levels.

**Power and linguistic negotiation.**

CoP theory has often been criticized for not placing enough emphasis on issues of power (Jewson, 2007; Tusting, 2005; Wenger, 2010). Wenger maintained that there must be tension and dissention within a community, otherwise CoPs can stifle innovation and will simply reify old ineffective practices (1998). Negotiation is at the core of a group’s joint enterprise and is an element for learning. However, negotiation means a possibility that certain voices will dominate and determine which ideas will be considered key, resulting in unequal power within the group (Lea, Barton & Tusting, 2005; Levine, 2010). Unbalanced power in a CoP can result in many obstacles, such as unequal status between members, different values attributed to discourse, and differences in motivation levels, which all influence learning as participation.

Power results in unequal status between CoP members. There are always power-laden associations between group members (Somekh & Pearson, 2002). Wenger (2010) stated that participants belong to multiple communities simultaneously. People are positioned accordingly, not only in terms of their relationship within the community, but also in terms of their positions in their other communities. However, others propose that the affordances and constraints of outside communities and the hierarchical relationships between communities affect members’ participation, which in turn affect their status within the CoP. For example, DePalma and Teague (2008) examined the interactions between teachers and university researchers as they worked on a collaborative CoP. Despite attempts to equalize status among the members, the university researchers held additional power. The nature of the participants’ jobs determined their level of participation in the group. The teachers’ job requirements (their membership in
another group) reduced their level of participation in the research group whereas the university researchers gained capital by participating in the group. Lave and Wenger (1991) determined learning as participation through a member’s level of involvement and role within the group, yet this learning theory does not consider how roles outside the CoP may determine status and levels of membership which in turn impact learning.

Power inequity in a CoP can also be triggered through discourse. Language use both constructs and internalizes social hierarchies within communities (Tusting, 2005). Discussion plays a central role in the activities in a CoP, particularly in negotiations of meaning. The conversations we engage in are influenced by our own conceptions of expertise, vocabulary, and experiences. This influence includes how we act within the social hierarchy, for example who speaks when, whose ideas are taken at face value, and who is questioned (Tusting 2005). In other words, social order always permeates the conversation.

Finally, power plays a role in members’ motivation to participate. Given that the member’s level of participation defines their learning in a CoP, power plays a pivotal role in the learning process of all participants. In DePalma and Teagues’ (2008) study, the teachers in the research project were accountable to the school administration, who did not want drastic changes to practice implemented. The university researchers from the research group felt a need to find significant results and show change in the program’s implementation to demonstrate ‘worthiness’ for grant support. The motivations of different parties led to different levels of participation within the group, influencing the level of learning. In CoP theory, it must be recognized that power is a central component of the community and impacts the learning process. Yet Wenger’s (1998) CoP theory does not give us a mechanism to assess the way power affects community. Only by conceptualizing the individual’s experience can we gain a sense of how the role of power impedes or fosters the learning process.

CoP theory affords us the ability to understand learning in a different way – not as a form of individual change, but instead as situated cognition where learning is seen as the ability to participate in certain social practices (Wenger, 2010). Viewing learning through this lens allows us to understand how teachers create the context to make their tacit knowledge visible, consider new perspectives, and shape their practices. As they begin to negotiate their position in the community, teachers begin to establish their identity through their participation and their position.
in the CoP. This identity impacts both their practice and their actions across all their communities, including inside their own classrooms. However, CoP theory does not give us the conceptual tools to examine how learning within the community impacts changes at the level of the individual beyond that CoP. As Levine (2010) suggested, “Scholars and practitioners seeking to look within teacher communities across different types of activities may need to draw on more specific theories of learning to make sense of what actually happens within a teacher community” (p.124).

Using an individual cognitive lens to examine learning and the processes that teachers engage in as they begin to change the belief systems and assumptions may help us to better understand how teachers come to change their actions in the classroom.

**Overview of Mezirow’s Transformative Learning Theory**

Mezirow’s (1991) Transformative Learning Theory (TLT) attempts to explain how adult learners make sense or meaning of their experiences. The theory endeavors to explain the structures that influence the way adults perceive their experiences and what happens when they begin to question and modify the meanings of those experiences. Mezirow’s TLT has been developed and refined over a period of almost 35 years. As with any theory that evolves and attempts to address shortcomings over a period of time, ideas have been modified and vocabulary in relation to the theory has been refined. For the purposes of this literature review, I attempt to use the ideas and terminology presented in his most current writings from 2009.

Mezirow first introduced his concept of an adult learning theory in the 1978 edition of *Adult Education Quarterly*. He later refined his ideas through his seminal 1991 work, *Transformative Dimensions of Adult Learning*. The theory grew out of constructivist thought with an emphasis on the following assumptions: meaning exists within ourselves rather than externally, those meanings are validated through human interaction, and those meanings are handled in and modified through an interpretive process. Although the theory uses some of Habermas’s (1987) ideas around rational discourse and Freire’s (1970) *conscientization*, Mezirow has maintained that his work does not derive from any specific theory. Instead, it incorporates ideas from a wide array of fields such as philosophy, psychology, sociology, and education and is premised primarily on Mezirow’s (1978) own study of experiences of adult women returning to higher education. Through his theory, Mezirow seeks to explain the way
adult learning is structured and to determine what processes modify and change how adults interpret experience. As such, Transformative Learning Theory provides a lens to examine how teachers learn, and more importantly, how that learning influences their beliefs and ultimately their practice.

**Interpretation of experience.**

Transformation is a reconstructive theory where an individual reinterprets an old experience (or a new one) based on a new set of expectations, thus giving a new meaning and perspective to the old experience (Mezirow, 1991). This theory attempts to provide a model to help understand how adults learn in various settings (Mezirow & Taylor, 2009). When we encounter an experience we do not understand, our expectations, based on previous experiences, guide what we pay attention to. Elements from our past experiences help us make connections to the new experience. Understanding the ways in which people organize and interpret their prior experiences becomes critical to the theory. The way we interpret each experience is influenced by our frames of reference, like viewing the world through lenses that are coloured by our beliefs, values, and previous experiences. Our frames of reference selectively shape and limit our perceptions, feelings, and how we think about what we are experiencing (Mezirow, 2012).

Frames of reference provide us with a sense of stability and continuity in our lives. As such, they are robust and produce opinions and interpretations that are more likely to be justified and defended.

Frames of reference are composed of habits of mind and a resulting point of view. Habits of mind are sets of assumptions that act as a filter for interpreting the meaning of experience. Habits of mind occur in a variety of areas, such as moral-ethical, sociolinguistic, and epistemic. On the other hand, points of view set specific expectations that directly shape how we interpret an experience and determine how we judge others’ perspectives or points of view.

Often, we move through life without reflecting on or questioning these underlying frames of reference. Mezirow stated that transformative learning happens when we have a problematic frame of reference and we are exposed to an alternative perspective that leads us to call into question the way we are interpreting our experiences.
Critical elements of learning.

Habermas’s (1987) work outlining different learning domains was a key factor allowing Mezirow (1991) to formulate his Transformative Learning Theory (TLT). Building on Habermas’ work, Mezirow (2012) noted three possible domains that learning can involve: instrumental, communicative, and transformational.

The instrumental learning domain concerns the way we control and manipulate our environment. Instrumental knowledge involves observable events that we can prove as correct or incorrect. The validity of our frames of reference in this learning type is determined through testing things out and observing the results. We use task-orientated, problem-solving to either confirm our ways of understanding or to change our course of action and test it again.

The purpose of the second domain, communicative learning, is to understand what others mean and to make ourselves understood. Mezirow (1991) maintained that most significant learning in adulthood would be considered communicative. This learning is heavily shaped by cultural and linguistic codes and social norms and expectations. We validate our perceptions of what others say and the validity of their statements through achieving consensus with others.

Typically, one engages in both instrumental and communicative learning for the third domain, transformational learning (TL), to happen. I must connect both what I observe happening around me and confirm my ideas with others that might result in a change of a frame of reference. For example, I may believe teaching children to print is not important. However, over my years of teaching, I observe my students struggling to write and yet my teaching partner’s students, who are explicitly taught printing, continually appear as more competent writers. After a time, I decide to work explicitly on printing instruction and observe a change in my students’ writing behaviours as a result.

This is instrumental learning, where I test a hypothesis and observe the impact. I then begin to talk with my partner teacher about explicit printing instruction and attempt to understand why she thinks it is important. I am exercising communicative learning. Through our conversations, I come to realize that perhaps my assumption that printing was unimportant and not connected to writing was wrong. As a result, I modify my belief that explicitly teaching printing is unimportant. By changing my underlying frame of reference and acting on those changes, I have engaged in transformative learning.
Inherent in the transformative process is reflection (Cranton, 1994). Mezirow (1991) outlined three essentials types of reflection: reflection on content, process, and premise. Content reflection involves examining the content or description of a problem. For example, my students are not producing quality writing. As a result, I query what the problem is. Could it be that they are not good printers? Process reflection involves checking on the problem-solving tactics being used. Why are my students not picking up printing on their own? Premise reflection is when the problem itself is questioned. The teacher might ask herself why she thinks teaching printing is not important.

Much of this reflection occurs through reflective discourse, which is dialogue devoted to searching for a common understanding and assessment of the justification of belief (Mezirow, 2012). When I seek opinions on explicit teaching of printing, through conversation, I am exposed to alternative perspectives and begin to question my own methods and beliefs. Later, as I develop new perspectives, I might begin to seek others’ opinions to find support and consensus for my newly-formed views. Through this reflective discourse, we critically assess our assumptions. Similarly, discourse allows individuals to tap into collective experience and to help us assess whether our assumptions are valid or if they need to be altered (communicative learning). We begin to expand and alter those meaning schemes by negotiating meaning with others through discourse (transformative learning).

Given the foundational nature of reflective discourse in transformational learning, Mezirow (2012) put great emphasis on the conditions for discourse that allow for TL. His later writings focus on the awareness, empathy, and control needed to engage true reflective discourse and he lists seven conditions for this type of discourse to take place.

**Transformative learning process.**

Transformational learning occurs when we become aware that a frame of reference is problematic and begin to question some aspect of that frame of reference. For the learning to be complete, we need to elaborate existing frames of reference or learn new frames of reference by transforming points of view or habits of mind. The questioning of our frames of reference might involve a sudden, dramatic change (epochal), or it might happen slowly over time (incremental), where individuals are exposed to a variety of small experiences, leading them to question their
interpretations. In addition, TL may occur through critically reflecting on someone else’s assumptions or critically reflecting on one’s own assumptions (Mezirow, 2012).

TL comes about by moving through a series of phases. These phases were first described in a national study of women returning to college and the work force and later refined (Mezirow, 1978, 1991). They are:

1. a disorienting dilemma;
2. self-examination with feelings of fear, guilt, or shame;
3. a critical assessment of assumptions;
4. recognition that one’s discontent and the process of transformation are shared;
5. exploration of options for new roles, relationships and actions;
6. planning a course of action;
7. acquiring knowledge and skills for implementing one’s plans;
8. provisional trying on new roles;
9. building competence and self-confidence in new roles and relationships; and
10. a reintegration into one’s life on the basis of conditions dictated by one new perspective.

Questions of Transformative Learning Theory.

Mezirow’s TLT has undergone a range of criticisms over the last three decades. Early on, Mezirow was criticized for failing to recognize the social aspects of learning (Taylor, 1997; Taylor & Snyder, 2012). There were criticisms that Mezirow had failed to consider individual factors, such as a person’s ethnicity, gender, and sexual orientation that would influence their transformation (Christie et al., 2015; Taylor, 1997). Mezirow’s work is often viewed as Eurocentric and as fostering a dominant North American narrative. His reliance on a rational cognitive model and his lack of consideration for other ways of knowing something (i.e. spiritually, emotionally) are also viewed as limiting factors (Cranton, 2006; Dirkx, 1997; Taylor & Cranton, 2012). Finally, there is criticism for his lack of recognition of context on learning, such as the influence of social relationships and power (Chin, 2006; Clark & Wilson, 1991; King & Heuer, 2008; Taylor & Cranton, 2012).

Although Mezirow’s TLT is based on rational and analytic thought, another strand of TL research has emerged viewing this theory as involving creativity, emotion and intuition. Several studies use these frameworks to present clear evidence of the impact of affective processes on TL (Cranton & Wright 2008; Dirkx, 1997). Dirkx (1997) emphasized that transformative learning often involves not only the learner’s conscious understanding, but also the deeper and unconscious mental layers. He suggests that making our unconscious feelings visible is often the
most significant outcome of transformative learning (Illeris, 2014). Hutchinson and Rea (2011) found that students all self-reported significant transformations after being placed in situations outside their comfort zone and after experiencing anxiety, confusion, and uncertainty. All clearly described the emotional impact of the experience with the conclusion that significant events can have “deep and powerful effects on emotions or beliefs” (Hutchinson & Rea, 2011, p. 558).

Cranton and Wright (2008) called our attention to how the transformative process can be fostered by engaging the affective domain in adult literacy learners. The researchers used Mezirow’s (1978) conceptual framework and Belenky and Stanton’s (2000) concept of connected knowing to examine how teachers fostered TL by attending to the emotional needs of their learners. The researchers suggested six common themes relating to students’ transformative experiences. These themes involve a sense of safety, trust, developing a sense of possibility, overcoming fear, self-discovery and acknowledging the whole person. All the themes relate to affective rather than cognitive domains. In other words, TL occurs through working with the whole person, including their emotions.

Since the 1990s, other scholars have worked to provide a more contextualized model of TL (Dirkx, 1997; Hagar & Hodkinson, 2009; King & Heuer, 2008; Sandlin & Bey, 2006; Taylor and Snyder, 2012). Clark and Wilson (1991) claimed that Mezirow’s TLT is flawed due to its failure to recognize context. The authors explained that, although Mezirow recognized the existence of context, his theory failed to link context to the meaning of experience and the role it plays in the interpretation of experience. Clark and Wilson (1991) viewed this as problematic, as Mezirow’s theory fails to account for the multiple ways in which the world shapes the individual. Watkins (2015) used both Mezirow’s TLT and advanced learning theory (Drago-Severson, 2004) as the theoretical framework in their study on a teacher transformative learning. This study considered the impact of contextual factors, such as experience, relationships, and a sense of competency on teacher transformative learning. Watkins argued that an individual’s learning capacity (determined by skills, experience, situational context, and a sense of social engagement with others) impacts teacher openness to alternative ideals, which in turn fosters transformative learning.

Other perspectives on TLT attempt to embed context in the transformative process by connecting cognitive and social learning. Hagar and Hodkinson (2009) combined the metaphors
of learning as transformation (Mezirow, 1978) and learning as participation (Lave & Wenger, 1991). Connecting the two ideas, they proposed looking at learning as social and embodied (practical, physical, emotional and cognitive) in a reciprocal way. Hager and Hodkinson (2009) stated that “people become through learning and learn through becoming whether they wish to do so or not, and whether they are aware of the process or not” (p. 13). In this sense, the process of how we understand the meaning of our experiences is bound in context, through our social interactions and emotional interpretations. Similarly, the discourse around these experiences changes our interpretations of experience and our resulting actions; this happens in a reciprocal process that we call transformation.

Drawing on the concept of context and TL, Christie, Carey, Robertson and Grainger (2015) showed that individuals across cultural contexts begin transformational learning by gaining an awareness and by questioning their assumptions. Despite the influence of cultural and contextual factors, they still experience the same phases of transformation. Their action research case study involving three culturally discrete cases evidenced this. Though all groups were engaged in a variety of tasks, Christie and colleagues concluded that, if given the motivation, the means and the knowledge to critically assess and challenge their assumptions, students evoke the processes of transformative learning.

Considering these findings, the study of transformative learning must consider context in addition to the cognitive domain. Factors such as individual preferences and motivations, group dynamics, emotional readiness, and security influence the transformative process. However, given the right contextual factors, transformative changes can be fostered in a person’s cognition across contexts and cultures.

**Fostering Transformational Learning.**

Most of the research regarding TL continues to focus on how to foster it (Taylor & Snyder, 2012). Mezirow (1997) stated:

> To facilitate transformative learning, educators must help learners become aware and critical of their own and others’ assumptions. Learners need practice in recognizing frames of reference and using their imaginations to redefine problems from a different perspective. Finally, learners need to be assisted to participate effectively in discourse. (p. 10)
The research over the last 20 years clearly reveals that TL is not a singular approach; instead, it is necessary to consider the individual and the context where the learning is taking place (Taylor & Laros, 2014). To foster TL, individuals need to fully participate in activities that involve group deliberation and problem solving with materials based in real life experiences (Mezirow, 1997). Literature now suggests several essential components that frame a transformative approach (Taylor & Laros, 2014).

1. Awareness of individual experience. The degree of experience that the individual brings to the context is influential. In addition, intense experiential activities can act as a catalyst for TL.
2. The promotion of critical self-reflection among learners. Fostering critical reflection on the content, process, or premise of a problem is an important part of the TL process. Writing, in particular, may strengthen the reflective experience (Taylor, 2009).
3. Engagement in critical dialogue. Through critical dialogue we reflect on our experience and assumptions around those experiences, reason through what is being asserted, and the credibility of opposing views (Mezirow, 1991; Taylor, 2009).
4. Presenting a holistic orientation to teaching. Engaging students in other ways of knowing in addition to rational discourse, such as through affective knowing and presentational ways of knowing (such as music, dance, or storytelling).
5. Developing an awareness of context. The need to develop a deeper understanding of the personal and sociocultural factors that are influencing individuals and the group as a whole.
6. Establishing authentic relationships. By building trust in the group, individuals develop the confidence to deal with learning on an affective level and more easily engage in critical discourse (Taylor, 2009).

**Teacher Transformative Learning.**

Mezirow’s Transformative Learning Theory (1991) helps us understand how teachers make meaning of their experience and how that meaning influences both their interpretations of their world and their subsequent actions (Christie, et al., 2015). Understanding how individuals construct meaning and act on their beliefs is particularly important as teachers make decisions.
daily on what to present, how to present it, and how to prioritize their time in their practice. Viewing teaching practice through the lens of TL helps us understand that our own personal experiences with education and our teaching and learning preferences shape our habits of mind about teaching. As a result, teachers often do not question why they teach the way they do and instead fall into regular teaching habits because they are familiar and comfortable (Cranton & King, 2003). Cranton and King stated that effective professional development can bring our habits of mind into our consciousness where we can examine them critically and analyze how they impact our practice. Unfortunately, much of teacher professional development focusses instead on instrumental learning – on acquiring new tricks of the trade (Cranton, 1996; Cranton & King, 2003). Rather, Cranton and King (2003) suggested:

Meaning professional development must go far beyond learning to use a new piece of software or a new trick for increasing student participation. It must involve educators as whole persons – their values, beliefs and assumptions about teaching and their ways of seeing the world. (p. 33)

To put it another way, if we want teachers to change their practice, they must understand why they practice the way that they do. Unless professional development acts as a catalyst for teachers to critically reflect on and evaluate the assumptions and beliefs that underlie their practice, it will not change.

King’s 2004 study of educators’ continued learning demonstrated that teacher professional development can serve as a catalyst to inspire teachers to examine their previously unconscious beliefs and assumptions. In studying the experiences of 58 adult educators and transformation in their perspectives, King reported that PD led teachers to feel greater open-mindedness, a stronger reflective orientation, and motivation to reconsider some of their deeply held assumptions. The participants also reported a better understanding of their adult students through their PD experiences. King suggested that PD engages participants in approaching new ideas, reflection, and dialogue to foster a transformative experience. Missing from King’s study is an analysis of whether perspective transformation led to a change in practice for these adult educators. Flint, Zisook, and Fisher (2011) went a step further to determine that teachers
involved in a Community of Practice PD model not only changed their beliefs and attitudes, but these changes also resulted in observable changes in their teaching practice.

As we attempt to understand transformative teacher professional development, our focus shifts to understanding how these changes in perspective happen through PD. Flint et al. (2011) suggested that the processes of engaging in conversations that clarify teacher intentions and push them towards new perspectives encourage transformation. Likewise, Whitney (2008) found evidence that teachers who engaged with the National Writing Project Summer Institute (PD that encourages teacher reflection through group sharing) experienced all ten of Mezirow’s (1978) transformative phases. However, she notes that reframing their initial interpretations of the experience was central to changing the teachers’ perspectives. After the teachers had questioned their underlying beliefs and assumptions, they chose to modify them or to adopt a new lens through which to look at their experiences. Therefore, Whitney makes the case that exposure to new perspectives is not enough and that teachers make individual choices whether to engage with the new ideas and practices.

Whitney also noted that evidence showing a resulting change in practice is often difficult to find. She posited that, when true transformation of perspective happens, change in practice is not always immediately visible, because perspective transformation is much larger and more nebulous than a change in skill. It first requires a reorientation of practice where teachers must consider new ways to align their overall practice with their new perspectives. Although some of the same practices remain in the classroom, the intentions, questions, and understandings that shape those practices have changed. These internal perspective changes might not translate into easily observable change in practice.

A review of these studies regarding teacher professional development confirms Mezirow and Taylor’s (2009) recommendations that engaging in critical reflection, allowing for dialogue, and allowing the space for reflective insight will foster transformative learning for teachers. Given that much of teacher PD is now done on site, how does the locality of the PD impact TL? During site-based PD, teachers often critically reflect on their own practice-based questions and use artifacts from their classrooms, thereby linking their personal experiences to their underlying beliefs. In this way, the connection between practice and the frames of reference upon which practice is based is made visible. Site-based PD gives teachers a better opportunity to examine
their ineffective practices and perspectives and ultimately change them, leading to a more sustainable change in practice.

**Site-based Teacher Professional Development**

The final part of this chapter deals with the development of teacher PD towards site-based PD. As the research shows, carefully considered, well-thought-out PD might, at the very least, create an environment where teacher TL is possible. Developing PD where teachers work with experiences from everyday contexts, consider complex practice problems, are exposed to new perspectives, and have the time and impetus to critically reflect, allows the process of transformation to begin. As Poutiatine and Conners (2012) stated, “an intention grounded in formational and transformational concepts can effect developmental changes in participants’ behaviors and beliefs” (2012, p. 74). Nonetheless, the context in which these processes take place is just as important as the processes themselves (Mezirow & Taylor, 2012).

As Kitchenham (2003) argued, for teachers to benefit from the transformational process and move perspective change into practice in their classrooms, factors such as collaboration, strong infrastructure, and time all contribute to enacting the process. Therefore, the approach to teacher PD in the local context has a large impact on the TL process. What follows is a brief historical overview of how the intent and implementation of teacher PD has evolved over the past 20 years and what the literature suggests as the most effective types of professional practice with regard to engaging teachers in examining their practice in order to create sustained change.

**Movement towards site-based learning communities.**

Until the late 1980s, most teacher PD was delivered through an expertise-training model with the intent for teachers to gain instrumental knowledge that could be simply transposed over individual teachers’ practice (Little, 1990). Frequently, this type of professional development left teachers feeling dissatisfied or resulted in poor uptake in practice (Hargreaves & Fullan, 1998; Kitchenham, 2003; Sparks, Loucks, & Harsely, 1989). By the mid-1990s, with a growing awareness of constructivism, a new movement for a different type of PD was afoot, inspired by a series of writings from seminal authors such as Hargreaves & Fullan (1998), Talbert and McLaughlin, (1994), Little (1990), and Darling-Hammond and McLaughlin (1995). This movement was also a response to the previous ten years of imposed standardization, increased reliance on rules and regulations, and a primarily top-down approach (Dufour & Eaker, 1998). A
model with an emphasis on site-based decision-making, where schools decided on specific interventions and how they would address local contextual problems and circumstances, was beginning to grow.

Initial efforts at this new site-based PD did not produce the expected positive results. Several studies indicated that sites where schools took control of their PD elected to focus on marginal issues rather than the core issues of teaching and learning. Instead of grassroots-driven PD to best meet students’ needs, school improvement often ended up being relegated to administrative policies and more top-down action delegated within the schools (DuFour & Eaker, 1998). To effect true site-based change, more than administrativ-based decision-making was needed; instead, all staff, and, in particular, the front-line educators, would need to become active participants in the problem-solving process.

In the late 1990s, teacher PD began to focus on three areas. Inquiries were based at the local level, teachers were the central participants in the learning, and the inquiry would be specific to school-based problems. In the literature, this new type of PD model is referred to by many terms – Communities of Inquiry (COI), Communities of Practice (CoP), Teacher Learning Communities (TLC), and Professional Learning Communities (PLC) to name a few. In this literature review, I refer to this model of PD as Professional Learning Community (PLC), defined as “a group of educators that meets regularly, shares expertise, and works collaboratively to improve teaching skills and the academic performance of students” (DuFour, 2004, p. 4).

**Common elements in effective PLCs.**

Overall, this movement of PLCs is about teachers partaking in a process of learning how to put knowledge into practice (Schlager & Fusco, 2003). Much of the research conducted between 1995 and 2015 reflects six elements in various combinations that are present in effective learning communities. These elements include a collaborative community that exemplifies shared values, a focus on inquiry, using practice-based artifacts and activities, fostering reflection, working over a sustained period of time, and supportive leadership (Dufour & Eaker, 1998; Hord, 1997; Kruse, Louis & Bryk, 1995; Owen, 2014; Scott, Clarkson, & McDonough; 2011; Sparks, Loucks & Horsely, 1989). A brief discussion of each of these attributes follows.

Previous studies have demonstrated a link between effective PLCs and PD groups establishing common values. Newman et. al. (1996) believed that shared values and norms must
be developed with regard to such issues as, “the group’s collective views about children and children’s ability to learn, school priorities for the use of time and space, and the proper roles of parents, teachers, and administrators” (p.181). DuFour and Eaker’s 1998 book, *Professional Learning Communities at Work*, builds on the importance of shared mission, vision, and values. The authors argued that a shared mission and values are central to participants believing in and working toward what they want to enact in their school and practice. Forming common objectives allows teachers to focus the lens through which they can examine their problems, driving progress.

Research to date has shown a link between collaborative inquiry, teacher learning, change in teacher practice, and student learning. PD centred on teacher inquiry developed around site-based student needs appears particularly effective (Cochran-Smyth & Lytle, 1999, King, 2004; Marzano, Heflebower, Hoegh, Warrick, & Grift, 2016). In this literature review, I adopt Cochran-Smith and Lytle’s (1993) definition of teacher inquiry: systematic, intentional research by teachers. Collaborative inquiry helps teachers see causal connections between their practice and student needs. Gallimore, Ermeling, Saunders, and Goldenberg (2009) noted that, when teachers participate in inquiry along with other PD measures, they become more adept at seeing causal connections and identifying student needs, which then fosters acquisition of key teaching skills and knowledge. Teachers working in the context of inquiry are also able to theorize about their own work and practices and relate their work and the associated problems to a bigger context, such as political, social, and cultural issues within the site (Cochran-Smith & Lytle, 1999). Cochran-Smith and Lytle noted the following:

> When work in communities is based on knowledge-of-practice—whether that work is referred to as teacher research, action research, or practitioner inquiry—the goal is not to do research or to produce "findings," as is often the case for university researchers. Rather, the goal is understanding, articulating, and ultimately altering practice and social relationships in order to bring about fundamental change in classrooms, schools, districts, programs, and professional organizations. (p. 279)

It appears that inquiry helps to connect the inquiry problem, the actions taken, and student outcomes, which are keys to impacting teacher practice.

The use of practice-based artifacts, combined with teacher inquiry, help teachers make an even stronger link between teacher practice and student needs. Timperley, Wilson, Barrar and
Fung’s (2008) synthesis of the research on teacher professional development found that combining inquiry with the use of practice-driven artifacts helped to focus the inquiry, making it more effective.

Ineffective PLCs lack teacher engagement in the reflective process (Schmoker, 2004). Gallimore et al. (2009) found that using reflective practice fosters the development of key skills, such as identifying problems and key teaching strategies, critical to their specific student population. They suggest the traditional workshop model leads teachers to simply adopt a practice rather than reflect on the intent and impact of their own practice. They found that, teachers who engage in purposeful reflection through PD are better able to connect knowledge to practice and see causal connections.

Reflection can be fostered several ways within a PLC. Martall (2014) concluded that “teacher research offers an important way to foster reflection leading to improved instruction, which ultimately will have a positive impact on student learning” (p. 28). Martall promoted teacher reflection by rooting teacher discussions of practice in collecting data, analyzing and reflecting critically on that data, as well as reflecting on how their changes were affecting their students. Dialogue is another way to foster reflection and help teachers connect to the issues around their projects.

When educators engage in this dialogue, they examine their school’s operation and their individual practices with a critical eye, looking for discrepancies between the values they have endorsed and the day-to-day workings of their school. They articulate their assumptions, attempt to identify the origins of those assumptions, and then explore them from new angles. (DuFour & Eaker, 1998, p.134)

Cochran-Smith and Lytle (1999) suggested that the rich descriptive talk between group members helps make visible and accessible the different practices of teaching and understandings. Through rich dialogue, participants begin to uncover relationships between their cases of student needs and more general issues and assumptions of practice.

When one considers the factors of collaboration and inquiry, time becomes another obvious structural factor needed to establish effective PLCs. Marzano, Heflebower, Hoegh, Warrick and Grift (2016) stated, “…if a school values collaboration, allotted time is essential for putting that value into practice” (p. 19). This conclusion is reinforced by studies showing that countries achieving the greatest degree of educational impact from 1980 to 2010 allocated
between 15 and 25 hours per week to engagement in PLC-type work (Darling-Hammond et al., 2009). Structuring time for PLCs must be thought of in two ways, allowing for regular and consistent meetings times, and allowing a long-enough period for the PLC to work together.

Grossman et al. (2009) found that time was an essential factor in developing the types of relationships critical to the PLCs success. At first, the group was described as being wrought with disagreements centered on belief systems and different visions. However, with time, teachers were able to overcome some of those barriers to develop a more highly-functional group. A small Canadian study done by Clausen, Aquino, and Wideman (2009) found similar results with time considered critical for building a more collaborative and safe atmosphere where teachers began to discuss and reflect on their practice with each other. Time allows groups to build elements of trust, which in turn enables the exchange and negotiation of different perspectives essential to the learning process.

Finally, leadership has been studied extensively with regard to PLCs. Marzano et al.’s 2016 book, Transforming Schools, maintains that the single most important factor in transforming the learning culture of a school is the leadership. Leadership has a vast and complicated influence on teacher professional development. In Fulton and Britton’s (2010) review of the research, leadership plays three key roles in the development of successful PLCs. It sets the parameters of a PLC, facilitates knowledge acquisition, and monitors and encourages interactions among PLC members.

Hochburg and Desimone (2010) found that effective leadership makes decisions around teacher instructional programming, expectations, and schedules that support teacher participation in PD and encourages the application of new learning. King (2002) reported that administrators play an additional role in focusing schoolwide PD by buffering the outside demands made on teachers. By gatekeeping demands on teachers, participants can remain focused on their inquiry projects without being overburdened with outside work demands. Finally, in much of the literature, leadership contributes to building a school culture of improvement, teacher collaboration, and respectful and trusting relationships among staff members – all elements essential to successful PLCs (Cocannon-Gibney & Murphey, 2012; Fulton & Britton, 2011; Gallimore et. al., 2009; King, 2004).
**Site-based professional development, teacher change & learning outcomes.**

The movement towards site-based learning and professional learning communities has often been cited as a universal remedy for teacher PD and has been credited with the increase in effective teacher learning (Bryk, Camburn, & Louis, 1999; Louis & Marks, 1998). However, there has been little focus on the actual impact PLCs have on teacher practices and student learning (Vescio et al., 2008). Therefore, the impact of PLCs on student outcomes remains unclear.

Much of the literature notes positive impacts of PLCs on teachers’ knowledge (DuFour & Eaker, 1998; Eaker & Keating, 2012; Fulton & Britton, 2011; Hord, 1997). Fulton and Britton (2011) found that teachers engaged in collaborative inquiry teams reportedly understood their subject area better and felt more prepared. In addition, using PD time to examine classroom practice and reflect on student achievement has been found to increase teachers’ abilities to meet student needs. Schilling (2016) added that reflective PLC activities have a significant impact on middle school teacher methods and lesson planning. Finally, Vescio et. al.’s (2008) review of the literature found that all eleven of the selected studies reported teacher change resulting from involvement with PLCs. However, of these eleven studies, only five specified the types of changes that were observed. The changes observed included practices becoming more student-centered, social support for achievement, and higher levels of authentic pedagogy.

However, a closer look at a range of studies indicates that participation in a PLC does not always lead to gains in student achievement. Often student achievement determines the effectiveness of PLCs. In Vescio et. al.’s (2008) literature review, only eight of the eleven studies noted a change in student achievement. Furthermore, the authors noted that the results of the studies were inconclusive due to design and measurement limitations. As a result, the connection between teacher involvement in a PLC and student achievement is unclear.

Beyond linking involvement in PLCs and student achievement, it becomes important to understand why teacher learning effectively impacts student achievement. Gallimore et al. (2009) more closely examined the connection between PLCs and student achievement. Their study incorporated two phases. In phase 1, they observed collected data from loosely designed PLCs. In Phase 2, they implemented a scale-up over three years in nine of the original sixteen schools. In the scale-up model, clear parameters were set out for recursively identifying shared
student academic problems, developing and planning instruction, and analyzing student work. Phase 1 indicated no significant gains were made in the culture around staff learning or student achievement. The scale-up schools significantly outperformed comparison schools on the state achievement tests, surpassing the six comparison schools and even the district average by the end of the third and final year. Gallimore et al. suggested that PLCs must be effectively implemented if they are going to show positive effects on both teacher practice and student achievement. Imperative in this recommendation is understanding how different processes foster the change process for teachers.

Beyond implementing clear parameters around the scale-up PLCs, Gallimore et al. (2009) did not account for how different critical factors in the PLCs lead to teacher change and increased student achievement. A consistent gap in the literature regarding the impact of PLC models exists. A call exists to uncover the mechanisms through which new knowledge, beliefs, and attitudes translate to teacher practices, and which practices translate to achievement (Akerson, 2009; Suppovitz & Cristman, 2003; Vescio et. al., 2008). Many studies have demonstrated that it is difficult to determine the true efficacy of a PLC structure because there is such variety in their implementation (Sparks, Loucks, & Horsely, 1989; Vescio et al., 2008). The call remains for an examination of which critical factors are implemented in a PLC and how those factors effect teacher change and student achievement.

By investigating the processes within the Community of Practice and the impact of these processes on the individual teacher, I sought to provide a multi-layered understanding of how collaborative professional development affects teachers’ underlying assumptions and belief systems, becomes transformative to their practice, and in turn produces tangible impact on student learning outcomes. By identifying where the three factors of individual cognitive change, social learning, and site-based PD context intersect, I hoped to gain an awareness of how each element combines and influences the others in the transformative learning process. My purpose was to add to the existing research that explains the complexity of teacher professional development.

**Theoretical Framework**

The theoretical framework for my study is grounded in Mezirow’s Transformational Learning theory (1978; 1991). TLT is commonly used to provide a lens to explore how adults
examine, question, validate, or alter their underlying assumptions and belief systems. The choice of Mezirow’s TLT as a framework is rooted in the conviction that, to truly understand change in teacher practice, we must first understand the process of change in teachers’ assumptions and beliefs (Ertmer, 2005). Mezirow’s TLT provides a lens to study these changes in assumptions at the level of the individual (Mezirow, 1991). The three broad questions that frame my study resulted from Mezirow’s (1978) ten phases of transformative learning. Transformative learning is defined in my study as a change in the individual’s beliefs and assumptions that results in a change in teaching practice (Mezirow, 1991).

Transformative learning theory is a theory in progress. Several authors have suggested that TLT is too narrow in the way it conceives of the processes in transformational learning (Cranton & Kasl, 2012). In addition, the theory is criticized for its inability to address contextual and social factors in learning (Taylor & Cranton, 2012). To address the social learning factors influencing the teachers’ transformative experience, I needed to draw on some of the conceptual tools of Community of Practice theory (Lave & Wegner, 1991). Specifically, I examined how the processes emerging from teachers’ learning through participation in a CoP (Wenger, 1998) engaged teachers in examining their perspectives and influenced their movement through the transformative process. Although these two theories often conceive of learning differently – learning as acquisition versus learning as participation (Beckett & Hagar, 2002; Fuller 2007) – this study endeavored to outline how both types of learning combine and mutually reinforce the process of transformative learning. My study focused on the space where these theories intersect.

Contextual factors have also informed this study. Later work with TLT outlined critical environmental factors influencing the transformative experience (Cranton, 2008; Cranton & Taylor, 2012; Taylor 2009). The processes connecting individual and social learning can take place in a wide variety of contexts, and each context influences how the processes are engaged (Cranton & Kasl, 2012). The school-based context of this study necessitates the examination of how the school contextual factors influenced the processes used by the CoP, which in turn influence the individual transformative experience. Figure 2 presents an overview of the conceptual framework for this case study.
Figure 2  Theoretical Framework for this Case Study
Chapter 3 – Methodology

Introduction

The purpose of this study was to understand the phenomena of teacher transformative learning within a school based CoP. An in-depth descriptive single case study exploring the experiences of teachers’ transformational learning shed light on how different contextual factors in a CoP help establish spaces conducive to transformative PD. This study described and interpreted how transformative learning came about for four teachers engaged in a CoP and the factors they reported that contributed to their learning journey. The following exploratory questions were asked: What is the impetus that opens a teacher to a transformative learning experience? How do teachers come to question their critical assumptions within a Community of Practice? How do teachers move new knowledge and beliefs into practice through a CoP structure?

This chapter describes the study’s research methodology and design. I began with a review of the research questions underlying the study, followed by my methodological choice of case study and the use of generative coding to capture the emergent themes of the data. I then describe the research plan including case selection, data collection and ethics, data analysis and interpretation, trustworthiness, and limitations of the research. I conclude with a brief summary of the chapter.

Qualitative Research Rationale

Merriam (1988) stated, “Qualitative research assumes that there are multiple realities – that the world is not an objective thing out there but a function of personal interaction and perception” (p. 17). Merriam’s definition comes from a constructivist philosophy, where each person’s perception of reality is determined by many factors that play out differently depending on individuals’ experience. The focus of qualitative research design is on understanding and interpreting that experience (Merriam & Tisdell, 2016). Furthermore, qualitative research focuses on studying phenomena in natural settings. Thus, phenomena are connected to context. My study necessitates understanding the individual experiences of teachers who have gone through a transformative process within a specific context. Their journeys involved experiencing transformations in very different ways, shaped by individual experiences in joint activities. I believe the philosophical orientations and approaches of qualitative research suit the purpose and
methodology of my study well. The understanding I sought from this study was a holistic one, where the focus was not on cause and effect, but instead on understanding how the different pieces came together for each teacher.

**Qualitative Case Study Rationale**

The methodology chosen for this study was case study. Case study reasons that important understandings come from studying phenomena involving the complex interplay of different systems within a case situated in the real-world context (Merriam, 1988). The strength in case study methodology is that complexity cannot be parcelled out and studied out of context. The phenomenon studied is by nature context-bound. Unlike many methodologies, case study does not rely on a single set of characteristics. Instead, this methodology requires the researcher to make conscious choices about research design that support the understanding of the intrinsic case. The case, its context, and how it is bound become central to the researcher’s lens and the choices they make regarding the application of case study methodology (Simons, 2009).

The strongest commonality in case study definitions between the prominent methodologists, Yin (2014), Stake (1995), and Merriam (2009) is that case study focuses on describing, understanding, or explaining phenomena in its real-world context, where the case is a system, and the factors impacting the phenomena are intertwined. The intent of my study was to uncover the interaction between the social construction of knowledge through a Community of Practice and the individual cognitive movement through the phases of transformative learning, all of which take place in the context of site-based school professional development. In this case, it was impossible to isolate and attribute the effect of any one factor on the experience of the participants. Therefore, the focus of understanding how factors are interlinked in their relation to the phenomena, dependent on context, and bounded by a specific Community of Practice, made this research most suited to case study methodology.

Following with Stake’s (1995) socio-constructivist view, I entered into this study with the understanding of three key principles: (1) having understanding, versus explaining, as the key purpose of the inquiry; (2) the role of the researcher is personal, not impersonal; and, (3) knowledge is constructed, not discovered. With this in mind, the goal of this study was not to generalize the impact of CoP work to all professional development, instead it was to understand this particular case. My aim was to interpret the teachers’ stories, gaining an understanding of
how each of their experiences became transformative. This study fit Stake’s criteria for case study well because it sought to better understand how teachers experience transformative learning through their socially constructed understandings and experiences.

**The Research Sample**

**Bounding the case.**

Following case study methodology, the case was the central focus and case selection became critical. The bounding of this study is consistent with a descriptive case study, where my goal was to describe the phenomena of transformative learning within a specific Community of Practice (Merriam, 1988). The grade 2 CoP, focused on writing, in which I experienced and observed transformational learning over a period of three years presents an ideal case. My involvement in the case presented a unique opportunity to gain an in-depth understanding of the processes that led to transformative learning within the writing CoP.

Guba and Lincoln (1981) state, “It is the nature of the problem to be investigated that provides a major means for setting boundaries” (p. 89). Given that my research problem involved understanding transformative learning within a CoP, the writing CoP presented clear boundaries around an instance of transformative learning. The most important attribute to this case was how the participants experienced transformative learning; therefore, the case was bound first by the members of the Writing CoP. Using this criterion, four female teachers and one university faculty member were eligible. The small participant sample in this case was purposeful, allowing for a deep inquiry approach within the given time, rather than trying to understand a larger number of teacher experiences in a more superficial manner.

Given that all my participants were females with at least fifteen years in the profession of teaching, my case was also bound by gender and professional experience. Professional experience is an important boundary because this study reflects the role of experience on transformative learning. Interview questions inquired about the role of experienced teachers in the transformational journey. In addition, I explicitly bound the case to exclude other members of the school community who did not participate in the CoP directly. Therefore, I did not consider factors outside the CoP such as hierarchical power structures or dissemination of knowledge to other school staff.
Finally, the case was bound by time. CoP membership encompassed a three-year period from the creation of the group to the point when the group expanded to include other districts, September 2012 to June 2015. The selection of this time period resulted in a reflective study, because the participants had already experienced the process and were reflecting on their experiences.

The participants.

Given the boundaries of the case, the participants were selected through criterion sampling. The criteria for participation in this study was as follows:

- Participants were members in the Writing CoP from September 2012 to June 2015.
- Participants were active teachers during their membership in the CoP.

Using this criterion, four female teachers, ranging in experience from 15 to 20 years, were eligible.

The setting.

This case, the Writing Community of Practice, took place at a congregated charter school for gifted students in grades kindergarten through to grade four. The elementary campus is part of a larger school that hosts students from kindergarten to grade 12 on two campuses split by elementary and mid/high school grades. The elementary campus includes approximately 420 students who are selected for admission through psycho-educational testing. The school is located in a large city of approximately one million people in Western Canada.

Research Design

This section details the research design of the study. All the data collection methods focused on capturing the complex and varied experiences of the different participants. The following is a detailed discussion of each step in the research design.

Literature review.

A literature review was ongoing for the period of this study. To begin, I reviewed the literature in the three broad topic areas involved in this study, Mezirow’s Transformative Learning Theory (1978), Lave and Wenger’s Community of Practice Theory (1991), and site-based teacher professional development. This initial literature review helped me develop a research question, supporting questions, and the conceptual framework that guided the data
collection and analysis. Later, as themes began to emerge through data analysis, I completed a second more specific review of the literature to gain a better understanding of the emerging topic areas. These included understanding the role and conditions for transformational learning, critical dialogue, and phases of learning through professional communities.

**Ethics approval.**

Standard ethics procedures were followed throughout the study. I applied for approval from the Research Ethics Board to proceed with my proposed study through the application and review process. Once approval was granted, I reviewed the research procedures for this study with each participant, including what their participation would entail, and informed them of their right to refuse consent or withdraw from the study at any time. A third party subsequently met with each participant individually to review the consent process and to obtain voluntary consent. Participants were invited to perform member validations on the coding. An executive summary of the findings was presented to the members, feedback was encouraged, and participants were asked if the findings were representative of their transformative learning experiences.

**Data collection.**

Case study scholars, Yin, Merriam, and Stake all state the importance of collecting data from multiple sources to capture the complexity within a case (Yazan, 2015). As such, in my study, I collected data from the variety of sources outlined in Table 1. The multiple methods of data collection allowed me to obtain a detailed understanding of each teacher’s experience of in-depth transformation. To establish an audit trail, all data was systematically dated and logged according to its origin throughout the collection process.

I began with a pre-interview survey asking participants to rate their change in beliefs and assumptions that resulted from their participation in the Writing CoP. I then began the first round of semi-structured interviews with each participant. After the completion and coding of the survey and initial interviews, I began the process of examining the various field artifacts to help crystalize the emerging themes from the interviews. I tried to remain open to new themes that emerged from the field artifacts. Such artifacts included emails between the participants over the three-year period, field notes from meetings and presentations, and transcribed meeting minutes from CoP sessions. A discussion of each research instrument follows. Table 1 presents the research instruments used in this case study.
Table 1

**Instruments Used in Data Collection**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Measured Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pre-interview survey</td>
<td>Self-identified change</td>
</tr>
<tr>
<td>2. Initial interview</td>
<td>Factors influencing change within CoP</td>
</tr>
<tr>
<td>3. Collection of field artifacts</td>
<td>Crystallizing initial themes emerging from interviews</td>
</tr>
<tr>
<td>- teaching artifacts (lesson plans,</td>
<td></td>
</tr>
<tr>
<td>PowerPoints, etc.)</td>
<td></td>
</tr>
<tr>
<td>- emails</td>
<td></td>
</tr>
<tr>
<td>- meeting minutes</td>
<td></td>
</tr>
<tr>
<td>- field journals</td>
<td></td>
</tr>
<tr>
<td>4. Second Interview</td>
<td>Factors influencing specific stages of transformation experience</td>
</tr>
</tbody>
</table>

**Research Instruments**

**Pre-interview survey.**

I began with a pre-interview survey asking participants to rate their sense of changes in beliefs and assumptions that resulted from their participation in the Writing CoP. Personal, qualitative change is the essential nature of transformative learning (King, 2009). Therefore, the intent of the survey was twofold: to assess whether participants self-identified as experiencing a transformative experience through the CoP to assess and to gain a broad understanding of the impact of the CoP in changing teachers’ assumptions and literacy practices. The intent of the survey was to introduce the topic, encourage reflection, and gather participants’ perspectives while limiting the influence of the researcher.

**Survey design.**

The survey in this study was adapted from the Learning Activities Survey (LAS) (King, 1997, 2009) and included fourteen questions encouraging participant reflection on their
responses to their work in the CoP and their perceptions of the impact of the CoP on their beliefs and practice. The survey consisted of two closed response types: informational questions (yes or no responses) and Likert questions (a five-point continuum) as seen in Appendix A.

King’s (1997) original Learning Activities Survey consisted of four parts, the first of which identifies the stages of perspective transformation and asks participants for a brief description of their experience. Items 2 through 4 ask participants to identify learning experiences that promoted transformation and the type of activities they took part in. The final section of the LAS (items 5 through 14) collects demographic data (King, 2009).

For the purpose of this study, my survey drew on items 1 and 6 from the original, asking participants if they identified with Mezirow’s stages of transformative learning. Item 1 presents carefully paraphrased and tested statements aligning with Mezirow’s ten phases of transformative learning. I modified King’s original checklist to a Likert scale for each statement, identifying the degree to which the participant related to the statement. Item 6 in the LAS provides information about reflection among adult learners. According to the literature (Mezirow & Associates, 1991), critical reflection plays a central role in the transformative process. Participant responses to these questions provided further insight to the adult learner’s view of the relationship between critical reflection and transformation (King, 2009).

I shared the first draft of the survey with my supervisor and a test participant to assess validity, check for clarity, and gather input on the order and phrasing of the questions.

**Semi-structured interviews.**

**Interviews.**

Using interviews as one of the multiple methods of data collection in case study allows for a better understanding of the unique perspectives and interpretations of experience that each teacher had (Josselson, 2013). Interviewing becomes a way of investigating the complex, intricately laced factors that led to the different, yet connected experiences of transformational learning. An interview protocol using open-ended questions was the primary research instrument involving two rounds of interviews with different intentions. The first round of interviews was designed to gain a broader understanding of how the subjects’ work in the CoP might have impacted their journeys through Mezirow’s phases of transformative learning as seen in
Appendix B. The interview questions were derived from Mezirow’s Transformative Learning Framework and were based on the following foundational questions;

- What made you seek out involvement in this Community of Practice?
- Can you think of critical moments during the CoP work when you felt a shift in your assumptions or understandings regarding literacy?
- What led you to question your assumptions around your practice during your time in the COP?
- Can you describe the role that relationships played in your experience within the CoP?
- What role did the CoP activities play in changing your teaching practice?

Before each interview commenced, participants were reminded of their right to withdraw their consent or not answer questions at any time during the process. Participants were also asked for permission to record the interview. The semi-structured interviews were carried out on a one-on-one basis using open-ended questions. All four participants were asked the same questions in the same order.

However, in keeping with constructivist epistemology, and the belief that the participants would define their experience in different ways, I allowed for flexibility and exploration in the interview process with unscripted follow-up questions where I felt that additional questions would provide clarification or significant insight into the interviewee’s response. My hope was that the flexible, semi-structured format would help to increase the comparability of the responses and minimize interviewer bias (Hancock & Algozzine, 2006). The interview protocol was field tested by a volunteer teacher who did not take part in the Writing CoP, but was active in other professional development groups at the same site. After the field test, I solicited feedback regarding the wording and order of the interview questions.

I conducted a second, more specific interview, after initial coding of the first interview, field documents, and artifacts. This second interview was designed to clarify experiences at each stage of transformative learning that emerged from the initial interviews and coding of field data as seen in Appendix C. Archival data was used as a mnemonic device during second interviews, reminding participants of specific time periods in the CoP and specific activities the participants were engaged in. I presented this archival data using PowerPoint to show a diagram of the different activities we were engaged in and time notes on the main topics of discussion throughout the three years as seen in Appendix D. At the conclusion of the second interview, I
encouraged participants to email me with any further reflections they may have had. Again, I audio-recorded each interview and wrote reflective memos after each one.

**Meeting recordings.**

The CoP made audio recordings of meetings between January 2013 and June 2015, providing a rich source of data. These recordings served as snapshots throughout the history of the CoP and provided insight into the behaviour and relationships between the CoP participants. I dated and transcribed the recordings. During the transcription process, all participants were given pseudonyms, and references to individuals outside the parameters of this case study were removed. I open coded the meeting transcripts for words, phrases, or references to subjects related to the research question.

**Field journal & artifacts.**

I kept a researcher field journal from January 2013 to June 2015. I systematically collected, dated, and coded notes from the field journal, PowerPoint presentations, lesson plans, and emails exchanged between participants. These artifacts served as critical incident instruments that helped crystallize emergent themes from the participant interviews. In addition, I used the field journal as a reflexive tool to investigate possible research biases that might have influenced the study and to provide insight into the researcher’s journey as a participant in this CoP.

**Data Analysis**

I collected and analyzed data concurrently. Gathering data in an iterative cycle began with the pre-interview survey. I then conducted the first in-depth interviews with the participants. After completing and analyzing the first round of interviews, I sought further archival data related to the content from several sources such as field notes, meeting minutes, archived electronic documents such as emails, and photographic evidence. In effect, I used the archived electronic data to enhance and crystallize ideas emerging from the participant interviews. As I proceeded with analysis and new themes emerged from the data, I sought new data sources such as a second interview with the participants, to explore and clarify topics emerging in the data. I also revisited the previously coded data to look for evidence of the newly emerging themes.
**Coding.**

I analyzed the data using a cross comparative analysis approach, searching for themes that emerged from the data across participants and data sources. Given this study’s primary intent to understand teacher transformative learning and how a Community of Practice contributes to that process, understanding the teachers’ interpretation of the process was critical. I analyzed the data with a constant comparative approach. Working in iterative cycles across multiple data sources, I compared earlier coding with coding from later data sources, constantly refining the codes. My goal was to look for patterns in meanings or behaviours in the participant reports of what made the experience transformative at both the individual and the group levels.

I grouped factors that were repeated in one individual’s experience, or that emerged in multiple participants’ experiences, into categories. I sought evidence of these categories in other data forms. Where several categories could be collapsed, I created a core variable. A core variable had three features: It frequently reoccurred in the data; it linked multiple categories easily together; and, it encompassed several minor variations in the data (Glaser, 1978). In this way, core variables linked similarities between participant responses and responses from different phases of the transformational process, giving a sense of the overall experience for all the participants. “Coding is not just labelling; it is linking. It leads you from the data to the idea and from the idea to all the data pertaining to that idea” (Richards & Morse, 2007, p. 131).

With an inductive process, I began level 1 coding with *line-by-line analysis* (Strauss & Corbin, 1998), assigning *descriptive* or *en vivo* codes for chunks of text from the transcribed participant interviews. After assigning level 1 codes to the transcripts from the first round of interviews, I refined the assigned codes by eliminating repetition and assigning a description, rule for inclusion, and example for each of the remaining codes (Saldana, 2009, p. 9).

I then aligned the refined initial codes under structural codes that related directly to one of my specific research questions (MacQueen, McLellan-Lemal, Bartholow, & Milstein, 2008, p.124). The structural codes referred to the three phases of transformative learning that the interview was based around: *Impetus for Change, Questioning Assumptions and Beliefs,* and *Change in Practice.* Structural codes helped to gather the identified initial codes under one of the transformational phases enabling better understanding of how each of these actions contributed to a specific transformational phase as seen in Figure 3.
Upon aligning the initial codes under the structural codes, I began level II coding. I created level II codes, also called *categories*, by merging initial codes with conceptual similarity or shared characteristics into a single category. I then compared level II categories to ensure all the variations were covered with no redundancy. The result was a categorical thematic organization under each of the structural codes.

At this point, the level two coding included a reduced number of initial codes that had been tentatively grouped into categories under structural codes. For example, the first structural code of *Impetus for Change* included several categories, such as life experience, experientially intense activities, and teacher personality. Each of these categories retained the refined initial codes from the first cycle of coding.

At this point I began the next stage, *theoretical sampling* (Strauss & Corbin, 1998), expanding data collection and analysis to all data sources, including electronic documents, such as emails, meeting minutes, artifacts, and photographic data. With a more deductive process, I used the initial codes from the interview scripts, looking for more evidence for the codes that had emerged while simultaneously remaining open to new emerging codes and new inquiry leads that might not have been accounted for in the initial interview data set. To align with a constant comparative method, I continually revisited the initial codes and emerging data as I collected and interpreted additional data.

I established a third level of coding by triangulating and delineating relationships between categories, thus raising the data from topic to concept and from concrete to abstract. Level III codes (core variables) helped me establish how individual components began to weave together across the data, as I looked for answers to questions of why, how, where, and when to help establish the relationships between categories (Strauss & Corbin, 1998).

I coded recurrent themes emerging from all the data sources as core variables, consistently refining individual codes, categories, and variables by merging codes until there were no additional or new instances found. I found several levels of comparisons using the constant comparative method. Individual factors, categories within and across data sources, and the interaction of theoretical constructs emerged from both within participant-reported experience and across participants and activities. In this final level of coding, different aspects of the participants’ experience began to create a type of story.
As a narrative storyline emerged, my final data analysis task was to return to the data, asking questions and looking for evidence that supported my interpretation of the sequence of events and interactions, in turn helping to validate the emerging theory. At this point, I returned to the original teacher interview transcripts and recoded the text using only the core variables to ensure that all identified units of meaning could be related to at least one core variable.

Once I constructed an emergent theory, I needed a new literature review to find support for the emergent theory or to differentiate it from previous research findings. Finally, I invited member checks, asking participants to read the findings and comment on if they reflected their true meaning.

Framing the study from the participants’ perspectives was key, and the language of the participants was central to the coding process. Wherever possible, I retained labels for codes and categories that emerged from the participants to best represent the participants’ experience. Figure 3 illustrates the steps followed for the coding used in this case study.
Instrumentation for Analysis

Software.

I used the computer assisted qualitative data analysis software, NVivo, as a data management tool throughout the data analysis process. I chose NVivo because of its accessibility, reasonable cost, and because it worked on the Windows system where the interviews were already transcribed. I used NVivo in several ways to support the methods of this study. First, I used it to auto-code sections of the transcribed interviews into three related categories informed by Mezirow’s Transformational Learning Theory (1991): Impetus for Change, Questioning Assumptions and Beliefs, and Change in Practice. I then used NVivo to code the text within each of these categories by ascribing descriptive nodes to each segment of
transcribed text and eventually to collapse specific coding into parent and child nodes as thematic categories began to emerge. Finally, I used the software to retrieve and analyze examples of data that had been coded in similar ways. Throughout the data analysis process, I made memos in the NVivo program that directly linked to specific parts of text or linked ideas between documents or participants. After the level II rounds of coding, I used the software to examine possible links between codes and any interrelationships between categories.

**Memos.**

I used memos in a research journal along with the NVivo software to document my thinking and reflect on the theory generation throughout the process. The memos included everything from code definitions, noting further questions that needed to be explored and potential links between emerging themes. The memos helped shape my interpretations, because they showed the trajectory of descriptive data into theoretical constructs. I drew heavily on my research journal throughout the process to enhance my reflexivity. I often found that reviewing my own interview transcripts, memos, and recorded thoughts helped me gain insight into how I was interpreting my participants’ data.

**Ethical Considerations**

Ethics practices were essential in all stages of this case study. Accordingly, my conduct throughout this case study complied with the ethics procedures as stated in the Tri-Council Policy Statement 2 (2014). Ensuring participants were informed and protected throughout the research process was my first and foremost concern. Once approval was gained from the research Ethics Board (REB 16-069), I proceeded to inform my participants of the full intent of the study and their rights within the process.

**Informed consent.**

My relationship with the participants as one of the four group members also raised several ethical considerations. In an initial meeting, I ensured that participants were fully-informed of the research purpose and duration of the project. In addition, I informed them of what their participation required, as well as the foreseeable risks and benefits of the project. To ensure that free, knowledgeable consent was given and to avoid undue influence, a third party was used to thoroughly review the consent process and answer questions. Throughout the study,
participants were reminded of their right not to participate or to withdraw their consent at any time.

**Confidentiality.**

Given that my study was an investigation into a specific Community of Practice, the participants for my study were predetermined to be four teachers. The fact that the sample size was so small also created ethical considerations that needed attention. Because the sample size was limited, participants needed to be aware of the risk of identification. To maximize confidentiality, I alphanumerically coded all data. In addition, participants were provided an opportunity to review sections of the paper that contained any quotations ascribed to them and remove any statements they felt did not represent their intent or that they did not want released in the final paper. Participants were notified up front of the plan to share a shorter summary report with the CoP host school.

A large part of the data collection involved analyzing recorded CoP meetings. These recordings provided tremendous insight into the historical context for participants’ growth and learning experiences over several years and were a rich data source. The close working relationship with CoP members allowed for genuine, and intimate conversations and can be heard in these recordings. As one might expect, controversial discussions took place, names of third parties were mentioned, and other unrelated topics were discussed during these meetings. Therefore, my use of these recordings required that I pay close attention to maintaining the primacy of relationships and highlighted considerations around “unintentionally misusing this information and exploit a person’s openness or vulnerability” (Simons, 2009, p. 97). Despite my participants’ official consent to use these recordings, I employed a filter as I transcribed them, making critical decisions as to what to include in my data documentation. I did my best to ensure that anything that could possibly reflect poorly on my research participants or negatively impact their employment was removed. To minimize potential oversights, participants were provided an opportunity to approve or remove any material credited to them in the final research report.

**Issues of Trustworthiness**

In case study, trustworthiness derives from the researcher, her interpretations and perceptions, her interactions with the participants, and her ability to capture the participants’
reality in the case (Merriam, 2009). Several strategies were built into this study to establish trustworthiness.

**Credibility.**

The issue of credibility is related to how well the research matches reality (Merriam, 2009). In my study, it was important that participants’ experiences be understood and truthfully represented. I viewed the data collected through interviews, both as a means to an end and as a way to construct knowledge in an inductive and emergent way that tries to honor the participant as an equal in the research process. Simons (2009) called this a *democratic model* and states that, through a ‘conversational interview,’ we establish a more equitable relationship between the participants and the researcher, allowing for co-constructed dialogue and collaborative learning. Although I established a line of questioning determined by my research frame in the interviews, the focus was on understanding my participants’ experiences. I built flexibility into the interview process to allow for the different stories each individual would tell. By asking open-ended questions and providing space and time, I allowed each participant to lead the direction of the response, encouraging a conversation. This conversation reflected my ultimate goal of understanding rather than comparing for validity, while at the same time, building credibility.

Triangulation allows for data to crystalize (Richardson & St. Pierre, 2005) by utilizing both multiple data sources (participants) and multiple data types. As Patton (2015) explained, “Triangulation, in whatever form, increases credibility and quality by countering the concern (or accusation) that a study’s findings are simply an artifact of a single method, a single source, or a single investigator’s blinders” (p. 674). For example, participants’ interview comments were checked against recordings of meetings and documents from the field. In addition, the use of data from four different participants helped to establish a variety of differences and similarities in themes across categories. Finally, by using the NVivo software, I increased the rigor of the study (Merriam & Tisdell, 2016). The software encouraged a close examination of the data and illuminated possible relationships by cross-referencing codes to investigate patterns across participants and data types.

Respondent validation becomes an important way of ruling out the misinterpretation of the meaning of participants (Merriam, 2009). All participants were asked to review a final draft of the findings sections. Participants were explicitly asked to review the quotes taken from
transcripts to ensure the results communicated the most accurate possible interpretations of the members’ meanings.

**Consistency.**

In case study, the evidence displayed should be sufficient to justify the conclusions or the implications drawn (Simons, 2009). To ensure that my conclusions remained true to the teachers’ experiences, I consistently linked my conclusions to the original data by including substantial, in-depth quotations from the participants.

In this study, I kept an audit trail of my decision-making process and emerging theory generation, to help confirm outcomes of the research. To limit researcher bias, I asked a third party to review the coding of the transcribed interviews. Any questions regarding parts of the coded transcripts were discussed and ultimately recoded if the coding choices were not clear. Finally, I asked participants to perform member checks on the final draft of the findings. I also asked them to confirm that the evidence cited was correctly related to the themes identified and the storyline they intended.

The reflective process was also critical in this study to try to limit bias. Although multiple in-depth interviews over time revealed a wealth of information, they also create issues, such as researcher influence, particularly in the follow-up interviews. Consequently, I used a foreshadowed issues process (Simons, 2009) to document some of my own bias before entering into the research process. Because I was one of the CoP members, I journaled my own responses to the interview questions before beginning interviews. Throughout the data collection and analysis, I reflected on my journal writings with an openness to how my own preconceptions might have influenced the participants in the reflective process.

Given that I collected and interpreted the data alone, it was important to consider alternative interpretations of the data. I used peer debriefing with my colleagues, supervisor, and committee members to enhance my analysis and interpretations of the data. These conversations helped broaden my understandings and introduce alternative perspectives for consideration, helping limit the researcher bias (Mertens, 2015). In other ways, being a singular researcher helped establish consistency. Because I was the only researcher, I was able to establish several consistent procedures around collection of data, particularly with interviews, limiting a researcher effect (Mertens, 2015).
Transferability.

The intent of this case study was not to generalize to outside the case, but instead, to understand the unique experiences of these teachers. As Stake (2015) commented, “We are interested in it, not because by studying it we learn about other cases or about some general problem, but because we need to learn about that particular case” (p. 3). With that said, transferability is a goal within case study (Lincoln & Guba, 1985; Merriam & Tisdell, 2016). It is important that the reader be able to determine whether the knowledge found in a particular case study can be transferred to the reader’s context. This study used rich thick description of the case. I used extensive narratives and quotes from participants to establish a highly-detailed picture of the context of the case. In addition, I included vignettes that summarized actual events to help create a vicarious experience for readers as they came to know the participants and their experiences in our CoP. I hope that the description helps readers apply the findings to similar situations or find relevance to the broader context of this study.

Researcher Biases

In qualitative research, the researcher is the primary instrument though which data collection and analysis are done. In this respect, I worked hard to practice reflexivity throughout the research process and be upfront with my own biases that might have influenced the outcomes of the study. I realize I have biases that might have influenced my findings. First, I believe that holding an insider perspective as a member of this CoP was an asset. This emic perspective allowed me visibility into the unique context-specific history and culture of this group.

However, with this insider status came biases that might have influenced my data collection and interpretations of the data. I entered into the study with the belief that all participants experienced transformative learning. Accordingly, my pre-interview survey asked participants to indicate the level of changes in beliefs and assumptions as a result of their participation in the Writing CoP. This survey may have unduly influenced participants suggesting a transformative learning experience, which may not have reflected their reality. My presumption of a transformative experience might have also led the participants to embellish or alter their responses during the interview process. My research design of using different data sources – for example, interviews, emails, and meeting recordings – might have helped mitigate any influence my survey and interview questions could have unwittingly created.
Another area of bias that may have influenced the results of the study was my belief that the role of leadership did not play a large role in the CoP. The Writing CoP included four teachers and a university research mentor without formal involvement from school administration. As such, from the onset, I worked under the assumption that formal leadership was not an important factor in our CoP. The boundaries of this case study excluded any formal leadership, as they were not participants in the CoP. However, after thoroughly examining the data from both interviews, email documents, and meeting recordings, leadership did emerge as a key factor. In the findings, the key factor of supportive leadership emerged as mentorship and shared leadership among the members, without much discussion of power relationships within the CoP. In hindsight, I might have inadvertently diminished the role that formal leadership can play in a school CoP.

Limitations

Sample size.

Considering that this case is only one sample of teachers learning within a community of practice, the generalizability may be limited. However, the intent of a case study was not to generalize, but to establish transferability (Bloomberg & Volpe, 2016). I chose this case because of my close involvement with it over a period of three years and my insider’s view of it. Ultimately, this helped me establish a vivid holistic picture of the teachers’ experiences. Perhaps what the study lacks in breadth, due to the limited number of participants. It will make up for this in depth, giving readers a deep understanding of the experiences of each of the teachers.

A reflective study.

Given that the Writing CoP took place from January 2012 to June 2015, the experiences recorded in my interviews are historical data. This had both positive and negative implications. There were limits to teachers’ abilities to recall their attitudes, beliefs, and practices several years in the past. Use of archival data as a memory device was a substantial aid to the participants in the reflective process. It is also important to note that the intent of this case study was not to accurately recount events but rather to understand what was most valuable to these teachers’ experiences. Hence, an advantage of relying on their memories was that memories tended to reflect the experiences that are most significant to us.
Proximity.

Another limitation in this study was the involvement of myself as a researcher, since I was a member of the writing CoP, as well. This close proximity to the case was both a limitation and an advantage. Given that the goal of a descriptive case study is to become an insider to gain an intimate understanding of the case, being part of the experience helps to achieve this goal (Simons, 2009). However, the close connection between myself and the other members of the CoP could also influence the other members, which requires specific measures to minimize any unintentional persuasion. Leveraging an uninvolved third party to deliver and review consent forms helps ensure that free consent is given without undue influence. Using a reflexive method when analyzing the data and continually filtering the data through the initial research question, as well as across data sources, will also help to limit researcher bias.

Summary

This chapter provided a detailed description of the methodology used for this study. The chapter began by outlining why a single qualitative case study was the best-suited design for research questions regarding teachers’ experiences with transformative professional development. The chapter detailed the data collection and analysis methods used and ended with a discussion of ethical issues and the trustworthiness of the study. In the next chapter, I present the findings from the data collection.
Chapter 4 – Findings

The purpose of this case study was to explore how four teachers experienced transformative learning within a Community of Practice. I believe, by understanding key factors that led to the teachers’ transformative experiences, we could achieve a better understanding of how professional development becomes transformative for practitioners. This chapter presents the findings obtained from in-depth interviews and analysis of meeting recordings and email correspondence between the participants. I begin with a brief description of the participants, then discuss the pre-interview survey results, and finally enter into a detailed discussion of the three major findings of the study:

1. The only shared factor that served as an impetus for change among these four teachers was a general feeling of frustration regarding their students writing production. Each teacher was motivated by different individual reasons for becoming involved with the Writing CoP.
2. Three factors led the teachers to begin to question the assumptions and beliefs that drove their practice: working with student artifacts, exposure to research and expertise, and gaining new perspectives.
3. Three factors led the teachers to move new knowledge and beliefs into practice: evaluating new practices, feedback and affirmation, and ongoing reflection.
4. Five additional factors present throughout the entire time of the CoP were identified as critical to the teachers’ transformative learning experiences: leadership, site-based work, time, supportive relationships and dialogue.

Meeting the Participants

The intent of case study is to present a case with thick, rich description, giving readers a sense of the people and context involved (Merriam, 1998). Case studies can include vignettes and cameos of people in the case, allowing audiences to vicariously experience the case and utilize their tacit knowledge to gain a better understanding of the phenomena described (Simons, 2009). In this case, therefore, becoming familiar with the participants and their backgrounds becomes critical to understanding how they experienced transformative learning.
Pearl.

Pearl is a female teacher who was in the last years of her career when her involvement in the CoP began. At the time of the CoP, she had over 25 years of teaching experience in a variety of elementary school roles, including a division 1 generalist, a literacy resource teacher, and a Student Services Specialist. Pearl had worked in a variety of schools including urban and rural schools that served both regular and gifted populations. She came to the congregated gifted site, her first foray into formal gifted education, in 2001, eleven years prior to the start of the CoP. Just before the CoP began, Pearl moved into a shared Student Services position at both the elementary and mid-school campuses. This move was tremendously beneficial to the CoP because it brought a new dimension to the group’s perspectives. During the last year of the CoP, Pearl retired from the school, but she continued her involvement with the CoP and did limited consulting work with the mid-school.

Pearl is extremely well respected by her peers and viewed as a master teacher. Many teachers frequently seek Pearl’s advice around literacy practices. Many years of experience as a resource teacher contributed to Pearl’s extremely robust understanding of scope and sequence of literacy development and the complexity of problems related to literacy acquisition. This solid foundation enabled Pearl to become a strong advocate for her students. She is very confident in her beliefs and has an excellent ability to communicate her literacy knowledge when working one-on-one or with small groups of teachers.

Ava.

Ava is a female teacher in her early fifties who brought a wealth of experience to the CoP. Ava had been teaching at the school for twelve years when she joined the CoP. Before her work with this school, Ava worked in a variety of early childhood classrooms with other boards. With a specialty in early childhood education, she has an excellent understanding of the development of early literacy skills. Ava is considered a highly-skilled teacher who is often requested by parents. Ava is described as fun, energetic, and humorous by her team teachers. Given her wealth of experience and background, she is confident in her ability to teach reading skills, but she often expressed feelings of inadequacy when it came to teaching writing development prior to the CoP. Before beginning the CoP, Ava had attended dozens of writing workshops but felt that nothing had really changed in students’ success with early literacy.
Barbara.

Barbara is a female teacher who has been at the school since its inception in 1996, fifteen years before the CoP began. She has worked as a grade one and two teacher throughout her time at this school. Before Barbara joined the school, she took a long hiatus to raise her children and then completed her Master’s in Education, specializing in literacy. Barbara has an excellent tacit knowledge of both gifted pedagogy and early literacy instruction. She is well known by her colleagues as an exceptionally dedicated and hardworking professional, working long hours to continually improve her practice. Colleagues often ask advice from Barbara about working with parents or professional ethics. Barbara has also served as a teacher mentor for many years. She had been involved previously with a research group at the school involving early gifted reading practices and later began researching early writing practices.

Madeline.

Madeline is the researcher in this case study. She also was a teacher participant on the Writing CoP. Madeline is a female teacher in her early forties who had worked at the school for thirteen years when the CoP started. She has spent her entire teaching career at this school. Madeline has a background in both gifted education and early literacy training. Prior to the inception of the Writing CoP, she led a research group, including several teachers at the school, that focused on early gifted reading practices. She is well known on staff for her hard work and dedication to teaching. Madeline is also known for her passion for research and continuously looking for new teaching methods to improve her practice. She has presented her research on gifted reading strategies at multiple conferences prior to and during the CoP.

Results

This chapter reports the findings of this study, examining the transformative experiences of four teachers in the Writing Community of Practice. The results are organized around the three guiding questions adapted from Mezirow’s phases of Transformative Learning Theory (1975). The questions sought to reveal the initial impetus for change, how teachers came to question their assumptions and beliefs around teaching literacy, and how they moved new knowledge and beliefs into practice.
Next is a discussion of the findings of the pre-interview surveys. These surveys were intended to provide the participant the opportunity to reflect on their experience and self-report aspects of their transformative experience.

**Pre-interview survey: Reports of a transformative experience.**

The intent of the pre-interview survey was to gain a broad understanding of how the participants experienced the phases of transformative learning. The results were overwhelmingly clear that all four participants self-reported transformative experience as defined by Mezirow (1975). Except for two questions on the survey, all responses fell within the *agree* or *strongly agree* category, indicating that the participants experienced transformative learning. Two participants had an answer on the survey that did not conform to the predicted answers reflecting a transformative experience. These questions included Ava’s response to question 2d and Pearl’s related response to questions 2c and 2d. Table 2 presents an overview of the participant responses to the Transformative Learning Pre-Interview Survey.
Table 2
Summary of Participant Responses on Transformative Learning Pre-Interview Survey

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a. I had an experience that caused me to question my teaching practices. <strong>Disorienting Dilemma</strong></td>
<td>A,P</td>
<td>B,M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2b. I had an experience that caused me to question my ideas about what a teacher should do or how a student should act. <strong>Disorienting Dilemma</strong></td>
<td>A,B</td>
<td>P,M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2c. As I critically revised my ideas, I realized I no longer completely agreed with my previous teaching values, beliefs, or assumptions. <strong>Critical Assessment of Assumptions/ Self examination</strong></td>
<td>P</td>
<td>A,M,B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2d. Or instead, as I critically revised my ideas, I realized I still agreed with my teaching values, beliefs, and assumptions. <strong>Critical Assessment of Assumptions</strong></td>
<td>B,M, P,A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2e. I realized that other teachers also questioned their teaching values, beliefs, or assumptions. <strong>Recognizing Discontent</strong></td>
<td>A,B, P,M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2f. As I participated in the Writing CoP I thought about acting in a different way from my usual teaching values, beliefs, or assumptions. <strong>Self Examination</strong></td>
<td>A,P,B, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2g. Over the period of the CoP I began to feel uncomfortable with some traditional teaching expectations in my school environment. <strong>Exploring New Roles</strong></td>
<td>A,P,B, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2h. Over the period of the CoP I tried out new pedagogy/techniques so that I would be more comfortable with my revised teaching values, beliefs, or assumptions. <strong>Trying on New Roles</strong></td>
<td>A,P,B, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2i. I tried to figure out ways to adopt these new teaching practices. <strong>Planning Course of Action</strong></td>
<td>A,P,B, M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2j. I gathered information/resources I needed to adopt these new ways in my teaching practices. <strong>Acquiring Knowledge</strong></td>
<td>B</td>
<td>A,P,M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2k. I began to think about the reactions and feedback from my new teaching. <strong>Building Competence</strong></td>
<td>A,B</td>
<td>P,M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2l. I took action and adopted these new ways in my teaching practices in a consistent way. <strong>Reintegrating within new Beliefs</strong></td>
<td>A,B,M</td>
<td>P</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Upon reflection, I believe question 2d was poorly worded and required careful reading to understand. Question 2d is a direct contradiction of the preceding questions asking participants to rate their level of disagreement with their previous beliefs. Ava’s response to question 2d appeared to be a result of her misunderstanding the question because her response directly contradicted her answer to the previous question. For clarification purposes, I revisited this question with her during the interview process, and she confirmed that she had misunderstood the question the first time.

Pearl also gave an answer that deviated from the group’s responses. On question 2c, Pearl’s response indicates that she disagreed and did not change her previous beliefs or assumptions around literacy instruction. Again, during interviews, I revisited this question and she clarified why she chose that response. Pearl explained that she did not feel that her beliefs around teaching writing had changed over the course of the project. Instead, what had changed were her understandings of the complexity of writing and how the development of key components impacted the students’ ability to engage in the creative writing process.

Except for the two noted questions, all participants clearly indicated that they underwent a transformative experience, including a questioning of and change in assumptions, beliefs, or values, as well as a change in practice reflective of their change in beliefs. The participants were extremely consistent as a group, indicating that although each teacher experienced the process differently, it was possible to make some generalizations among the participants about their overall transformational experience.

In this section, I discuss the findings regarding the three central questions of the study. Phase I discusses factors that led to the teachers’ readiness to change, or what Mezirow (1978) calls a disorientating dilemma. In phase II, I discuss findings related to how teachers came to critically reflect on their assumptions and beliefs. Finally, I discuss the factors participants reported as central to their experience of moving their new beliefs into practice in Phase III. Wanting to present a clear picture of the participants’ experience, I draw heavily on the participants’ own words, using extensive quotations throughout the findings chapter. I hope that the reader will gain a sense of the participants, their reality, and their transformative experiences through their voice.
Phase I: Factors Influencing Readiness for Transformative Learning

Mezirow’s (1991) phases of transformational learning begin with a disorientating dilemma, which may be *epochal* (sudden, dramatic and disturbing) or more *incremental* by small exposure over time. Critical to understanding how these teachers experienced transformation is understanding how they came to recognize there was a problem with writing and what motivated them to pursue a solution. Next, I present the findings of the factors that led the participants in this case study to begin the transformative process.

The data reflects distinct individual motivations for the teachers to change their practice. Although some reasons were shared by all four participants – for example, *being dissatisfied with student results* and *recognizing a system need* – all teachers described additional individual reasons for joining the Community of Practice. I turn now to a description of each participant’s motivation to change.

**Ava.**

For Ava, the impetus for change seemed to emanate from her frustration with feeling inadequate as a writing teacher. Ava identified as a competent teacher who was highly-skilled in teaching reading, yet she struggled to teach writing. What seemed to make the biggest impact on her motivation to change was Ava’s struggle with the incongruence of her identity as an extremely effective reading teacher but an ineffective writing teacher.

I was always a capable teacher of reading; however, when it came to teaching writing I never felt competent. I was confident and I knew I was capable, but when it came to writing, it was a hit or miss. I knew what I was doing with reading. I could take these children and whoosh, parents thought that I was a genius. It is easy to teach reading, but no one had figured out how to teach writing at that point in time.

Ava’s frustration had been further aggravated by the fact that she had tried a variety of different methods to improve her writing instruction and yet nothing seemed to make a difference.

I tried everything because by 2012 it was actually my 12th year at the school with prior teaching at other schools. Yet, in terms of writing I never knew what I was doing. I didn’t know what the key pieces were. I was floundering, and I was treading water. I was trying new things, I was always trying to improve my practice, but I couldn’t figure out what I was doing wrong.
Although it seemed that the impetus for change was incremental, she also speaks about an epochal type experience that gave her the push forward to commit to the CoP.

I remember that I had tried just about everything and was getting really frustrated. Sort of as a last attempt, I signed up for this Mariconda workshop on writing. I had no idea who this person was, but I thought why not – I have tried everything else. …

Mariconda came out and started the presentation. She started to tell the story of how she became interested in writing instruction for her young students. As she started talking I thought, “This woman is talking to me, she is telling my story!” I remember for the first time, I had a bit of hope…

I bought a book of hers and took it back to class the very next day and began trying some of her techniques. Deep down I am not sure that I thought it would work. Some of the stuff that she had recommended, I thought, “really”? However, she had really connected with me, and I thought if she can make it work, maybe I can – so I figured I could give it a try for a couple of weeks. Well, when my students finished this section of the pirate stories, I could hardly believe my eyes and ears! They had written these incredible pieces. When they read their stories out for the first time, I saw this amazing pride in themselves. I could see they were thinking, “my writing really sounds like an author wrote this”.

Ava’s frustration with her writing practice was centered in her classroom experience. Her frustration was prompted by her own students’ lack of success and her feelings of incompetence as a writing teacher. Her epochal experience at Barbara Mariconda’s *Empowering Writers* workshop gave her the motivation to continue to try new methods and the hope that she might find a solution.

**Pearl.**

Pearl discusses different motivations for joining the Writing CoP. Of all the participants, Pearl conveys the greatest sense of confidence around her prior writing practice. She comments that she had a good sense of what she thought was important in literacy instruction and how to teach writing to her young students. Long before the CoP, Pearl had noticed writing difficulties with her students. Using her background as a resource teacher, she thought that she had isolated the problems and had implemented several techniques into her teaching practice.

I was always searching for new ideas if something wasn’t working; then I would be looking for new things to do. So, I was fairly confident in my practice. I had worked as a resource teacher and literacy had always been sort of my focus. So, I felt that I had kept up with the research. I felt like I had changed my practice in response to what students were exhibiting in the classroom.
Instead of frustration with her individual practice, Pearl spoke about frustration with the system. She was frustrated with a lack of a system-wide intervention. Pearl’s role as resource teacher and her work with students and teachers from a variety of grades gave her a unique insight into the lack of writing instruction at all levels. Pearl engendered a strong desire to change the approach to writing on a school-wide level.

So, something that I took to be common practice, which is why I was confident in my writing instruction, I just assumed that others were keeping up with current practice, reading the literature, reading books on teaching writing I thought you should know all of this stuff. But it just didn’t seem to be happening.

Then there was the experience in Junior High. When I went up to mid-high originally, I went into a situation where a number of grade eights were failing and we started to investigate what was going on, why were they not handing in work. We thought, “let’s do an interview with them, let’s take them individually and interview them about how they felt about writing”. It started to come out that they really just didn’t think that they could write or they didn’t know how to get started. It turned out that it wasn’t a problem with their writing so much as a problem with getting started. Consistently it was the getting started piece. They just didn’t have the organizational structures in place to figure out how to do it, so they just chose not to do it.

Pearl noted another reason that motivated her involvement in the CoP was her dawning awareness of the detrimental impact of the students’ sub-standard writing skills over time.

I think the other thing that I noticed because I saw the grade twos and the grade eights. It was not like those problems didn’t exist in grade two, but they seemed smaller. But because not much attention was paid to the organizational writing in the other grades, by the time they got to grade eight, because it wasn’t part of our regular practice to make sure that those structures were obvious and explicit and there wasn’t that explicit teaching around it, it had become this huge issue for our students. It had immobilized them basically because they did not have the tools to get started.

So, this AHA moment was connected to why I came to the COP. When I realized that I had actually taught some of these children in grade two, so I knew that they had some of the beginnings of writing (although my teaching practice might have been different, I may have been structuring things differently six years earlier) but it was when I saw how severely it impacted and manifested in the grade eights then I got really interested in what was going on in the writing COP.

It was trying to pinpoint, why is this happening, can we change it? What needs to be in place to ensure that this is happening in a K-12 system and how do we act like it? We needed to be looking at some type of continuum or scope and sequence that would get these structures in place for these students. And keep them moving forward so that they
didn’t hit this road block in grade eight. I wanted to keep them moving forward. This is what I wanted to see.

Rather than being rooted in her own classroom practice, Pearl was motivated to look for an effective way to change the system, as she saw the impact of a lack of continuity with writing instruction across the grades.

**Barbara.**

Barbara’s impetus to become involved in the writing group appears to be more incremental. She had been involved in a research group around reading instruction years earlier and enjoyed the challenge of connecting research to practice. After completing her reading research, she was motivated to continue growing her personal practice through researching writing in the CoP.

I have always been interested in learning about literacy. After our research into reading we identified writing and I thought that is going to be a piece of cake and then realized all the things that had to do with writing. I really wanted to learn more so I was eager to join the writing COP to help improve my practice and my teaching.

As she started to attend more closely to the writing of her students, Barbara realized that they were not making the progress she thought they should be making. She had several questions about writing and was strongly motivated to understand why her students were struggling and to improve her own practice in writing instruction.

I used to give my LA [Language Arts] and my homeroom students a ten-minute writing sample once a month. I had a vast collection of pictures that were glued onto foolscap paper and I would give them 10 minutes to write about it. I found a lot of the samples in June were quite similar to the previous samples in September. So, I felt that I was not a really good teacher of writing. I would ask myself, “Why were these children who were gifted not better writers?”

**Madeline.**

Madeline’s motivation for creating the CoP was twofold. First, she expressed an ongoing frustration with her students as writers. Madeline’s involvement in researching a reading framework had provided her with many new practices that had an immediate impact on students’ success with reading. However, she did not see the same change in students’ writing despite having taken many writing workshops. She reflected the following in her journal:
Despite attending lots of workshops and modelling and modelling, my gifted kids’ output was just not up to what I expected from them. I would hear these amazing story ideas from their talk, they were super motivated and had awesome vocabulary, but when it came time to write, it either didn’t come out on the page, or these kids would be paralyzed by either fear or frustration around writing.

Madeline found the frustration and anxiety her students displayed around writing disconcerting. Although she observed anxiety related to student writing over the years, two specific moments in her practice propelled her to do something different. Madeline recalled a conversation she overheard in the staff room regarding a mid-school student whom she had taught in grades 1 and 2.

The two mid-school teachers were discussing this former student of mine and commenting on what a poor writer this student was. The teachers were questioning what was going wrong in elementary school that was putting them in such a bad position for middle school. After hearing this conversation, I felt terrible and believed that I was really missing something with my writing instruction.

After this incident, Madeline focused more closely on her writing practice. She was convinced that if she could engage her students, the writing would come easily. This led to another epochal moment.

I remember vividly one day in class we had worked on this big inquiry project and my kids were very excited about it. They had been working for months on creating and designing their own creepy crawly and had really thought about every aspect of their project. Knowing that they were motivated and had tons of ideas about each of their projects, I thought it would be a great opportunity to incorporate a writing task. I thought all of their knowledge and excitement for their projects would easily transfer to the written page. However, I knew as soon as I mentioned the word “writing” that I had a problem. Despite all my work and setup in this unit, many students became extremely frustrated with their writing. In the end, most of the students only put a fraction of their ideas onto paper. However, one student in particular had a terrible reaction. One of my best students, who had phenomenal ideas and had loved the project up to this point, broke down in tears when he was asked to write. He told me he couldn’t get his ideas down on paper. I remember picking up his tear soaked paged and feeling his frustration and dejection so strongly.

Madeline felt a sense of failure and that it was her fault her students were not better writers. It was those feelings of failure and the frustration of not meeting the needs of her students that
provided the motivation to begin the Writing Community of Practice and search for a different way of teaching writing.

It is evident that each teacher had different experiences that became the impetus for joining the CoP. Furthermore, each individual had different goals and feelings that, in broad ways, motivated them to search for change in how they delivered writing instruction. Overall, it was difficult to find any commonality among the participants in their motivation to change, beyond the fact that each teacher was tremendously dissatisfied with the way things were, and for this reason, was open to change. Figure 4 presents the identified factors contributing to readiness for change and teachers joining a CoP.

**Figure 4**  Identified Factors in Readiness for Change
Phase 2: How Teachers Question Their Critical Assumptions Within a CoP

Perspective transformation is the process of becoming aware of how and why our assumptions negatively impact the way we perceive, understand, and feel about our world. To make sustainable changes in our behaviours, we first must identify these distorted perspectives and challenge them, making it possible to create more inclusive integrative perspectives (Mezirow, 1991). These steps roughly correspond to phases 3 through 5 of Mezirow’s (1991) Transformative Learning Theory. Because the perspectives and assumptions that drive our practice are often hidden from our own view, it becomes critical to understand how we can foster the process of identifying and questioning these perspectives if we are ultimately going to change them.

Reports of perspective change.

During the interviews, teachers reported moving through a process similar to Mezirow’s stages of first identifying underlying assumptions, then questioning, and finally transforming them. It turns out that many of these assumptions formed the basis of their teaching practice. Therefore, identification of underlying assumptions was a major factor in changing each teacher’s practice. An excerpt from a meeting in June 2014 shows that the teachers realized that some false assumptions had negatively impacted their practice.

**CoP Meeting June 24, 2014:** The discussion revolves around a Yates and Berninger article showing that gifted students have the same writing weaknesses as regular students, but these writing weaknesses are seldom picked up because they are masked by the gifted child’s other ways of showing what they know. Madeline

This was the mistake that we used to make. We used to say, well, we can show what you are thinking in a different way, you don’t have to write about it. We assumed that they (the students) would eventually use writing but never needed to demonstrate their ability with writing. So, we never taught the tools of writing. Ava

That is an important point because we and so many others just assume that the gifted are so smart and they will just pick it (writing skills) up. We need to get the message out that we know they (the students) don’t know (how to write). This is an important point. We just need a way to present this information. Pearl

In this meeting, the teachers were reflecting on their own growth in understanding, connecting their old teaching practices, or missing practices, to assumptions that they had made
about teaching gifted children to write. The teachers then saw how those old assumptions had impacted both their practice and student writing outcomes.

In the interviews, the participants identified three factors that helped them to begin the identification and questioning of their beliefs and assumptions. The teachers reported that by exploring their practice with artifacts, they began to better understand the writing problem and to connect that problem to their classroom practice. Through exposure to research literature and outside experts, the teachers developed a further awareness of the problem and gained new knowledge, allowing them to better examine problematic areas of beliefs around their practice. Finally, the teachers emphasized the importance of gaining alternative perspectives, allowing the teachers to compare their own perspectives and inspire them to think deeply about the validity of their own beliefs and practices. In the following section, I discuss the key factors teachers reported that led each of them to critically reflect on their practices and the beliefs and assumptions that drove these actions.

What follows is a list of factors the teachers identified as vital to developing this critical questioning and reflection.

**Identified key factors in questioning beliefs and assumptions.**

*Exploring personal practice and working with artifacts.*

Much of the critical reflection and questioning that the teachers experienced came through a process of working with their own students’ artifacts and reflecting on their experiences in the classroom. All the teachers remarked in some way that the opportunity to work with student artifacts and practice-based problems allowed them to better contextualize the problem, develop a common language and understanding, and connect their problems of practice to assumptions and values. In a way, the artifacts made visible their underlying or unconscious assumptions.

When we first started looking at handwriting and printing skills, I thought it was a bunch of baloney, but then I started to see the connection when we looked at the classroom artifacts. Those kids who couldn’t get the letters on the page were definitely the worst writers. As well, the kids who had the best writing had the most words on the page and seemed to be the most fluent printers. That combined with the classroom observations of these complete breakdowns with kids, over the kids printing and it started to all make sense. *Madeline*
Building a stronger understanding of the problem began with teachers being able to link it to their experience. When the four teachers began this Writing CoP, they all mentioned frustration with their students’ writing; however, none of the teachers had a solid understanding of what the problem was or how to fix it. At that point, the teachers did not understand how their teaching practice was connected to the problem. In the interviews, the teachers noted the importance of identifying the problem first, before they could begin to connect their own assumptions to their experiences in their classrooms.

This awareness (of how our practice relates to the problem) took a while because we had to get through the data first and looking at pieces of writing. We had to get through that whole exploration piece first and figure out what did we think was going on and then challenge our assumptions about that and try out different things. Pearl

Even our understanding of what the problem was, it wasn’t that any of us were wrong, but we didn’t have that common background in the beginning. Madeline

The participants explained that working with classroom artifacts, such as student writing samples, helped them build a better understanding of the problem. The group began by creating a rubric to mark gifted writing, enabling them to more consistently evaluate their students’ written work.

Making up the rubrics was a very important part. It really made us think about how to word the ideas. We would quibble over a specific word and decide which one would be more meaningful or most meaningful to more people and the qualities a piece of writing needs and how successful they (our students) were. Barbara

The creation of this rubric and marking the student work became key to the teachers’ developing common expectations for writing and identifying what the writing problem really was.

Really looking and analyzing the writing artifacts also helped us to see the bigger picture in our students’ outcomes. This also really helped to make things visible. Creating a large database of all the marked written samples further illuminated the problem. The database helped us see patterns in student work. Identifying these patterns not only clarified the problem, but we were also able to link these deficit patterns back to our practice. Madeline

Email: Heidi to CoP Members 14/04/2014: Here are the typed writing samples for Cohort 2 (2013-2014) Time 1. I have profiled and entered class 1 into the data base … we could work on the others if you like on Monday. I think that not everyone is familiar with the process of profiling, and this would be a good learning experience. We could
enter data into the data base as well, and then have a look at the various indices of lexical diversity that we have been focusing on.

By examining large quantities of student writing from all their classes, the teachers gained a much wider perspective on the depth of the writing problem. They were no longer viewing the problem from their narrow classroom lens. Instead, the teachers could see that the problem was persistent, and they could identify common patterns between all the students.

Our mentor helped us to understand the importance of looking at our student artifacts and data. Only once we were analyzing our data, did we start to see some patterns. Ultimately, it was looking at the data that convinced me that we had a problem and that it was partly connected to printing. Madeline

The student artifacts and rubric also became critical in establishing a common language and expectations to talk about the writing problem. Building these common understandings through practice-based artifacts was essential to building a common vocabulary that would be critical for later discussions, when members would expose and challenge others’ different perspectives and beliefs.

Meeting Minutes excerpt May 2015, (Discussion about what made the group successful)
The first year was about establishing a common language, common understanding and common knowledge base and then we began to put it (the problem) back together. Without that time invested it does not work, because you are just talking at different levels. I see that in the other groups I work with. It doesn’t work because we are not all on the same page and it is very frustrating because there is not that common understanding. Madeline

That is why so many of these groups fall apart, I see the same thing in other schools in that first year. Pearl

It takes so much time to develop that, but that time is worth it because it creates the foundation that everything comes out of. Ava

Only then can you have the conversations and have those insights where we started to understand each other. Madeline

Because we all came with different backgrounds, experiences and different ideas of what it might be. Pearl
For some members, developing that common language and understanding was essential. To build this common understanding, members had to work hard to understand others’ viewpoints and begin to explore the basis for their own understandings and feelings. The members then began to explore the assumptions under which they were working.

We could make all the assumptions that we wanted about writing and what our kids were doing with writing, but until you started looking at it against a standard of some sort, you all may not have been thinking about writing in the same way. *Pearl*

We went through writing samples and tried to put them into piles as to the level of advancement of the writer and to decide how they fit into the rubrics. So, I might read a writing sample and think that this is a number 3 and you might say it is a number 2 and then we would talk about it, and say it had this but it doesn’t have that. It helped us to examine writing with a very close attention to what will make it successful and what didn’t make it successful. This really unified us. We realized that you felt this was important and I felt that this was more important but we could really share our ideas and come to a consensus or understanding that this was at this level on the rubric. It increased my understanding and made me become more specific in saying why it was a good piece of writing. *Barbara*

In all cases, centering the teachers’ work on artifacts and practice gave them a concrete way to examine the problem and connect their practice to the assumptions and beliefs they held. Finally, it enabled them to test practice based on their old assumptions and then new practices based on their changing beliefs. The process of examining their own practice proved critical to making the teachers’ assumptions visible and beginning the critical questioning process.

*Working with research and experts.*

All the participants mentioned the importance of exposure to new ideas and perspectives – most often by accessing research or other expertise – in helping them to view their experiences through new lenses. Gaining access to research or the valuable knowledge of experts, helped the teachers build a better awareness of the problem, develop tools that would later allow them to assess and evaluate the validity of their own beliefs, and answer their questions of “Why?”

All participants noted that obtaining additional knowledge and perspectives from an expert in the subject area was an invaluable first step in gaining a better awareness of the problem. In the initial months of the group, a research mentor and university professor, Heidi, provided invaluable knowledge about children’s writing, including reasonable expectations for our students and writing skill progressions regarding Kindergarten through to grade 3.
Email Nov. 11, 2012 From Heidi to CoP members: I can help with the grade 4 writing samples and would be able to give you some ideas of the baseline ideas for many of those kids from the kindergarten study I did.

Heidi was invaluable in giving us her take on writing and what she had learned from studying vast quantities of samples that we had no experience with. We weren’t able to access that many writing samples. Nor did we have the time or energy to pull them apart and figure out what was happening in these little people’s minds. Barbara

As the teachers began to gain a better sense of the depth and breadth of the writing problem, they began to explore ideas as to why their students had this problem. Reading research and talking to experts helped the teachers become much more knowledgeable about writing, which in turn helped them to explore the problem. Our mentor had access to a great deal of research, so once we started to see patterns in the data, and then wanted to look deeper into specific problem, our mentor had easy access to research and sent it to us. Then we could do some follow-up reading that helped us understand that problem even better. There is no way that we would have been able to do all of that on our own. We would not even know where to look or what to look at, let alone analyze the data! Madeline

Heidi would give us research studies to read. She did the groundwork to seek out valuable reading materials for us to help improve our knowledge, bringing outside information and experience to the group. Barbara

Having a research mentor also provided access to articles on best practice and current research about writing. This research exposure not only helped the participants build an awareness of different factors impacting students’ writing, but it often provided a new lens through which to view the problem. New understandings provided through the research and experts, allowed the teachers to consider the problem in different ways. Sometimes, research articles had the same effect as student writing samples. We would read an interesting article and talk about the ideas as a group. How the ideas in the article might relate to our students or maybe didn’t fit into our school dynamic. Often these articles were a way of shedding some new light on an old problem and then the discussion and differing viewpoints really allowed us to think deeply on the new ideas. Madeline
Another step towards teachers asking themselves critical questions was connecting research to the ideas and beliefs that drove their practice, thus, connecting the theory to practice.

I started to question my ideas through the research, the stuff I was given to read – that was my first AHA moment. That is how it got started. They made me think. It was looking at research, proven stuff that was out there. This is what we know, now let’s look at this and where are we going to go with this. What can we do with this knowledge? Ava

The participants also suggested that exposure to research and expertise gave teachers the tools to begin to analyze their own beliefs and decide on the appropriateness and effectiveness of these beliefs.

Bringing in the research was really important. I always knew that bringing in a spelling list of words and testing at the end of the week was not doing much good, in the way of making students better spellers, but when people could show me research that also said this and that gave reasons why and alternatives – that was a big factor in my professional development. Barbara

Recognizing that both printing and spelling are foundational skills was a huge AHA for me…. I always thought they were important, but the research proved it to me. I realized that what I assumed and other teachers believed teaching the gifted such ‘lower level’ skills was a waste of their time, we needed to change the assumptions and our practice around that. Ava

At other times, the research and new information from experts confirmed their beliefs or enabled the teachers to better judge the validity of their own perspectives. This step was often a beginning to teachers questioning their understanding and interpretation of students’ writing performance.

What the COP helped me to understand was that there is actually research behind my assumptions and how foundational skills led to more success with writing. So there was actually some research behind it, where before it was my own assumption that it was important and I could give you my reasons why it was important, but I had no research behind it. I couldn’t. I didn’t have anything pedagogically to say when colleagues questioned me on it and I could just say, “Well, I think that this is really important, and I think that you should do it, too.” I didn’t have that research to back me up or the understanding to back me up. Pearl

The new information from experts and research articles helped teachers to build their knowledge around writing. Increasing their knowledge level often meant the teachers uncovered
the why behind elements of their practice. These deeper understandings helped teachers assess whether their beliefs about practice resolved or added to their problems of practice.

**Gaining alternative perspectives.**

Beyond formal research and experts, the teachers themselves provided new perspectives for each other and perhaps played the greatest role in connecting new understandings to their underlying beliefs about practice and learning. Participants saw discussions of theory and practice as opportunities to find new ways of viewing their own experiences. For all the participants, considering others’ perspectives inspired them to think deeply on how they felt about others’ ideas and to examine their own beliefs more closely.

The forum for discussing practice also allowed teachers to bring forward new ideas and discuss practices that were or were not working, exposing the other group members to new practices and perspectives.

It was through the conversation of the COP, while you are listening to other people’s experiences, what they tried, and the effect it made on the students. To me that was the big thing. That coming together, and talking again, and meeting regularly to share your experiences. Then you were able to look at other people’s experience and put them into your context and it helped you to understand your context better. *Pearl*

Madeline also echoed this view:

> I would not have had the insights that I had without the help of the other teachers in the COP. The exposure to others’ ideas, and viewpoints, and outside opinions and research all helped me to ask some hard questions and to look at my student’s writing through a different lens. A lens that I would not have even considered without my work in the COP. I think that if I had not been involved in this COP I would still be frustrated today and looking at the same problems that I was having three years ago. *Madeline*

Discussion of student work and practice created an opportunity to draw out members’ thoughts on the value of different classroom practices. This discussion served to challenge teachers’ old ways of doing things and pushed them to question why they had certain practices. Teachers often found themselves having to defend their pedagogical choices and justify their ideas, which tested the assumptions they had been working under.
Just listening to discussions and participating in activities made me examine what I was doing and what the assumptions I had held were and whether they were still valid. *Barbara*

It helped having so many different “eyes” in the room and then to talk over and consider what each different teacher had to say. One person would throw out an idea and then another would clarify and build on it. It went around and around like this, but each time we got a little closer to our understandings and it made us think more deeply. Those meetings really helped solidify our understandings. You need something or someone to show you how to look at something with different coloured glasses, otherwise you just end up repeating what you have always done and you are no further ahead. *Madeline*

All the teachers agreed that a common way they tested their assumptions was to try out different practices in their classrooms. They would then bring their experiences back to the group to further discuss and analyze how these new practices worked and where they fit into their belief system.

It was once we got into that phase where we started to try out things. We were thinking o.k., here are some of our assumptions, and this is what we think is going on, then we can try out different things. So, if we think that printing is important and they get it under control, then we they should be able to write better in terms of writing content. We think these two things are related. But we had to go out and test it and start a new pilot and then come back and look at the results.

To me the most valuable part was doing those pilots and then coming back and looking at the results and saying what is going on because then it gave you a way to move forward or change course and it addressed those assumptions about gifted that we had because that was always in the back of our mind, we were working with those underlying assumptions with gifted kids. This really allowed us to understand some of the assumptions that we were making about gifted were a little off base. *Pearl*

The opportunity to view experiences through someone else’s lens fostered growth and knowledge that teachers might not otherwise have had. For example, only Pearl taught upper grades and worked supporting other teachers during the span of the CoP. The CoP discussions allowed the other teachers to benefit from her specific insights and experiences that they would not have had themselves.

Because I had the advantage of having worked in multiple grades as a resource teacher and also in that position in elementary and mid-school, I had the advantage of seeing those things over time. More importantly, the effect of not doing things over time. I can’t begin to tell you sitting in meetings at the mid-school thinking we have had this same conversation about this student or about this problem or subject in terms of writing or
reluctance. It was the same conversation in grade two; why are we still having this conversation? *Pearl*

These results suggest that reflecting on their practice through multiple lenses, including student artifacts, research literature, different expertise, and teacher’s own experiences helped the members to first identify and later question and evaluate their underlying beliefs and assumptions. The next question examined in the study involved how teachers moved their new understandings into practice. The teachers’ perspectives on this question are examined in the following section. Figure 5 presents the identified factors contributing to teachers questioning assumptions and beliefs.

![Figure 5: Factors Identified in Questioning Beliefs and Assumptions](image)
Phase 3: How Teachers Move New Beliefs into Practice

Once the teachers shifted their perspectives, they entered the next phase of transformation, beginning to align their actions with their new perspectives and adopting teaching practices that better reflected their new understandings. Moving new knowledge and beliefs into practice reflects Mezirow’s transformative learning phases six through nine, where individuals plan a course of action, acquire the knowledge and skills to support those plans, try out the new actions, and build competence in them. As the teachers engaged in trying new practices that more closely aligned with their new perspectives, they engaged in reflective action (Mezirow, 1991).

Identified key factors in moving new knowledge and beliefs to practice.

The teachers mentioned several factors that helped them move through this reflective action process. First, teachers found that evaluating the methods they were trying to be critically important. Looking at both data driven results and impact on the students’ writing helped drive the teachers’ decision-making about which practices they would continue. Affirmation of new practices from a variety of sources was also extremely important, motivating the teachers to continue to do the hard work of moving new knowledge and beliefs to practice. Finally, ongoing reflection became critical, assuring that the teachers continued to make effective decisions about persisting with or abandoning new practices. Teachers spoke about these processes moving in an iterative cycle. As the teachers began to form new understandings, they tested ideas with ongoing reflection, helping to solidify their new perspectives and learning.

Evaluating new practices.

Moving the teachers’ new learning into practice involved evaluation of their new alternative approaches. The teachers remarked that it was critical to continue to monitor and evaluate the efficacy of their new methods. Evaluating new methods often involved continuing to examine data collected from student artifacts and looking for confirmation that the teachers were moving in the right direction. When the data revealed positive results, the teachers were further motivated to continue to refine teaching approaches that would support their new ideas.

Email from Madeline to CoP members, April 21, 2014: I think that the Leprechaun writing may give us some informal data (evidence) to push forward with the programs (printing, spelling, text structure) that we have initiated this year. I would like to give
administration some evidence that we are on the right track. I have to say that I was floored by some student’s writing today. Even the other samples from Ava’s class seem to reflect better use of sentence starters and "dramatic elements" as well as better sentence structure compared to previous samples. Even just the length of the pieces I feel were an improvement. I think that something is working! In the very least, the use of a picture as a prewriting activity really engaged the students’ imaginations and helped to mobilize the students' vocabularies. Any way we look at it, (on gut level at least) I think that this activity supports what we have been theorizing. When given the right foundational elements, our kids can write and write pretty well.

Recorded minutes from CoP meeting February 11, 2014: Discussion of Printing Survey

Here is S…..’s new printing samples from grade three. Barbara

Wow look at this – this is S…..’s writing? I can’t believe it. Anything that she wrote in grade two you couldn’t read and now look at it. This is amazing. She did the pilot summer project over the summer with HWT and now look at the progress that she has made. Also, she had so much trouble writing in grade one. Whenever we had to write she would just burst into tears! Ava

Wow, you can see all of our participants have vastly improved. All these samples are amazing. Pearl

Can we order these program books for the pilot for next year? Ava

Evaluation also occurred with teachers viewing the impact of their new practice on individual students. The teachers commented that this tool was a powerful aid to their persisting with new practice. Once they saw new practices were having a positive impact, they maintained those practices and were inspired to look for additional changes that they could make.

I knew that I had changed and that I was on the right track that first pilot year. It was when those grade two kids sat in the author chair and the kids read their writing – it was the kids- they had “aha” moments. That was the first time that I had ever seen it and you could see it in their eyes. The kid that was reading was wowed. They were really impressed with themselves. But also, the other kids in the audience, they were wowed as well. They thought that it really good writing, too! They knew it was good. Ava

I got really excited when I read the specific student’s work. I thought, oh wow, this is amazing. Then there would be the frustrations of children who didn’t seem to get it, but I felt that I was more successful than previously because obviously this one student and several others really got it. They were excited with their own writing. Barbara
Feedback and affirmation.

Direct feedback served as important affirmation for the teachers. The teachers explicitly referred to positive feedback from students, parents and other teachers as affirming the new practices they were trying. The participants explained that these affirmations strongly impacted the decisions that the group members were making regarding the writing problems that they were working on.

I realized that we really did seem to be on the right track. Such a positive, positive response from the kids and the other teachers! It was also great to verify and confirm that all that I had been studying and saying was not just fluff, but it actually worked and there was tremendous impact. Madeline

Another really big moment was the Musical and Museum night. It was the bulletin boards. That year I had a minimum of two bulletin boards with writing on them up in the school. And that night I had the main bulletin board up across from the gym. Tons of teachers read the writing on them, and then kids and the parents. I vividly recall one dad came to discuss the writing with me after the night and he was wowed. I remember it, he was thoroughly impressed that second-grade kids could write that well. He said something like, “Wow, I don’t know what you do, but that is amazing!” That was when I thought, oh my god does this work, and work extraordinarily well, because these were 7-year old’s doing fantastic writing. That was when I knew we were onto something. Ava

Most feedback came in verbal form from students and parents. From the feedback received from some teachers in the school who also began to adopt some of these new practices, it was apparent that others also found them to be effective.

The feedback from the teachers saying, “Oh, I hadn’t thought of it that way, or had never thought of that”. A science teacher saying, “I am not very good at literacy, so this is helping me to understand what I can do in terms of literacy in science class.” Those sorts of things, just that feedback from teachers, oral feedback and conversation, but also feedback from seeing them change their practice and adopting things that I had been modeling and using them because they clearly found them valuable for their students. Pearl

Discussions continued to play an important role in the adoption of new practice and even grew in importance and impact. Once teachers began to test and evaluate new practices, these discussions moved beyond the security of the group to a wider audience, who began to ask important questions about the intent behind the members’ new practices. The CoP members’
ability to explain the intent behind the new practices that they chose further solidified the
members’ new perspectives.

I found that often when I had to defend my new practice or was explaining what was
going on to parents, the more I understood that I had fundamentally changed my own
thoughts and beliefs and my new practice supported this. It gave us a huge confidence to
talk about and promote what we had learned to others. I think that we changed from
some teachers just playing around with different ideas, and not really feeling like we
know what we were doing – to very confident teacher researchers, who could explain
what we had done, why it worked and how we came to our conclusions. Madeline

For me in the situation that I was in, I had to convince the teachers that there were solid
reasons for what I wanted to do, but also, I had to rely on their willingness to open
themselves up and allow me to come into their classrooms. For the students, I can talk to
them more about why it works. Especially when you are working with older students that
is huge, if they can understand how it is going to help them and why it is going to help
them, they can start to see the effects of that and take some chances, then you get them
writing. Pearl

_Ongoing reflection._

By this point in the process, all the teachers spoke about how different forms of
affirmation and evaluation helped them know that the practices they chose were the right ones.
As the teachers moved new knowledge and beliefs to their practice, they engaged in ongoing
reflection. This active reflecting was a way for each of the teacher to ensure that the new
practices they were putting into place were indeed representative of their new ideas, and in turn,
that the new ideas produced the outcomes they were seeking. When the teachers did not get the
expected outcomes, they immediately began to re-examine what they thought the problem was
and refined their practice to better meet their students’ needs. After moving through this
reflective cycle a few times, all the members spoke of a significant change in how they felt about
their ability to examine problems, determine new goals and make effective changes.

I am now looking at the final product for specific things, but I am also looking at the
process along the way. I now know what I am looking for. Ava

I started to see connections between discrete skills that I never saw before. Another big
part of it is that I had the power to understand what was going on with that student,
analyze the problem and come up with a solution. Madeline
Underlying the teachers’ abilities to respond to new problems of practice was a new sense of competency. The teachers felt more able to deal with problems that would come up and were more confident that the choices they made in practice better supported their students.

I felt totally empowered and a sense of agency that I could look at a problem, or a student and figure out what was going on, what to do about it and make a change and ultimately make a difference. That is a big part of the feeling of empowerment I think. I feel like I know what I am doing – not all the time…I still get frustrated, but now when I get frustrated I can analyze the situation and look at the problem, come up with different approaches. *Madeline*

You get reinforced because you keep getting better and better. You try that approach and it works it makes all the difference, and then you just keep looking at it and it works. It is iterative. I know that I have mastered it because look at my results, you see the transference, you see the writing and you know. *Ava*

Together, the teachers’ statements pointed to several important activities that promoted evaluation and affirmation of new practices that they were implementing. In addition, they attributed the sustained success of their new practices to a new type of ongoing reflection. Their ability to reflect stemmed from a feeling of competency that came from knowing what to look for in student work and their own practice. Figure 6 presents the key factors identified by participants facilitating the movement of new knowledge and beliefs to practice.

![Figure 6](image.png)

**Figure 6**  Key Factors Identified for Moving New Knowledge and Beliefs to Practice
Factors Present Throughout All Phases

One of the most interesting findings were five additional factors that consistently emerged as impacting the teachers’ transformational process. The teachers spoke about how leadership, site-base problems, time, relationships, and dialogue were critical, not just in individual phases of their transformation journey, but also throughout their time in the CoP. In many ways, it appears that these factors were critical to creating a context that fostered the processes through which transformative learning took place.

Leadership.

Leadership shown both by a research mentor and by group members was extremely important in the transformation process. At times, the direction of the group was the responsibility of the research mentor, and sometimes the leadership role was fulfilled by different group members. Heidi, the group’s research mentor, provided knowledge of how a CoP might progress and the different types of activities that helped the group begin to deconstruct the problem.

I think that having a professor/mentor come in and work with us each session was invaluable. As I mentioned, when we started and were trying to do this inquiry alone. We had no idea where to start or what to do. Having a different set of eyes really helped. Madeline

Heidi also provided a vision, giving the group a supportive push to take their learning to the next level, whether it was creating a database, suggesting research literature to read, or encouraging the group members to submit abstracts to conferences. She provided a greater vision for the members that often inspired them to see beyond their current circumstances.

Having Heidi as our mentor made all the difference in the world. With her expertise and guidance and constant encouragement, we were able to formulate ‘next steps’ along the way. Ava

The leadership role was also shared by group members in more informal ways. A sense of purpose, setting a plan, and ensuring that the group moved forward during meetings were critical to the forward momentum of the group. Members acting in internal leadership roles would set the agenda, make suggestions for future meetings, follow up with suggestions after meetings, and ensure that the necessary materials were always prepared. This internal leadership
ensured that the group made maximum use of their meeting time and held them accountable for making progress.

I think having a leader who is able to pull things together and give some direction, so that we didn’t come to meetings just chat but we had a focus. You need a leader officially or unofficially, someone to pull things together. Not a leader who is going to tell you what to do, or take over the experience or guide you in a certain direction but to facilitate the learning so that it can move forward. A leader who gathers info for the group, asking what do we need to do next, how do we move forward? One who takes in information and says ok. Here is the agenda or here is what we are doing today. “Our next meeting, we are agreeing to talk about this.” Someone who can help keep track of those sorts of things and help the group move forward that way. Pearl

Finally, the group relied heavily on their mentor for research knowledge. Having a leader who could share her in-depth knowledge of the research process, different ways to collect and analyze data, and help the group create questions for their inquiry was critical. The group members commented that they felt they lacked the knowledge to design an effective inquiry project. The knowledge their mentor provided became invaluable in helping the teachers to understand the problem, ask critical questions and evaluate whether the new practices were effective.

It was really important to have Heidi as a mentor so that you have that professional research and highly educated person who has ideas for you and who can help you to frame things. Someone who can help you understand how to build a research base and design the project so that the research that you are doing is going to answer the questions that you want it to answer. Pearl

Site-based.

A common view among the participants was that inquiry problems needed to be specific to the site to create relevance to the teachers’ practice. The grassroots nature of the project was critical to their transformative experience. In this CoP, the teachers had chosen to work on specific problems emanating from their classroom experiences, consequently the inquiry had a personal relevance to them. Not only did the teachers connect to the site-based problem better, but they were also extremely motivated to solve the problem. The shared energy around this common and tangible problem inspired passion, solidarity, and a deep understanding of each other’s practice.
The discussion regarding successful CoPs in one of the last CoP meetings reflects the teachers’ feelings about the importance of a grassroots model.

**Meeting recordings, June 6, 2014**

It also has to be grassroots. You cannot just assign a group. There has to be investment and that investment has to come from the teachers themselves. *Madeline*

I think when people really don’t want to be there, they won’t engage in that type of work or discussion because it is not their choice. *Barbara*

You have to let them pick and it has to be grassroots and must come from within, otherwise it is not time well spent. It was fabulous people around the table and we were all sitting there for the same reason. *Ava*

Three of the four of the participants spoke about past professional development where they had no choice regarding inquiry topics or were faced with top-down PD models, where administration chose the problems, and teachers were mandated to participate. Throughout their interviews, the teachers often commented on the difference in motivation, investment, and relevance in this CoP compared to their past PD experiences.

Other COPs were always formed by administration and you were told what group you were to be a part of. It does not give you the same vested interest. You sit around the table because you are forced to sit around the table…there was zero passion. It was like an assignment. An assignment that you must do is a whole lot different than wanting to learn and impact change. *Ava*

The teachers felt strongly that having a choice about the topic of the inquiry increased their motivation to participate and the likelihood that they would connect personally to the problem. In the Writing CoP, the problem was closely related to teacher practices that motivated them to participate and find solutions to the problem. The fact that each of the teachers had chosen to be a part this CoP as part of a grassroots movement was reflected in their level of commitment to the group.

We were there because we had a legitimate problem that we wanted a real answer to and we didn’t have any ideas as to what to do about it. You need to want to inquire into something, or have a problem to solve. You can’t just be told to solve a problem that you are not interested in. *Madeline*
Another factor the members spoke about was the importance of each member being passionate about both the topic and finding answers to the problem. The site-based writing problem was immediate and real to the teachers, lending itself to a high level of passion. For the teachers, the group became self-motivating as the group’s energy was inspiring to the participants and motivated each member to carry out the hard work that had to be done. The importance of a grassroots problem is evidenced by an email from Madeline to the other group members shortly after the group began working together,

**Email between Madeline & CoP members 1-18-13:** I really wanted to thank all of you for your work today. I was very inspired and feel a little rejuvenated. Lately, I have been feeling disheartened about how we would ever make an impact with this. As well, I felt that what we were doing wasn't all that applicable to our own daily practice. I feel like we have a possible direction now. It is so good to be surrounded by people who have the same passion for literacy as I do. I pick up on your energy and believe that we can effect change. I am determined that we will make a difference, even if it is in our little circle!

The participants also reported a solidarity that developed out of this mutual passion. By sharing a similar passion, the members were attuned to each other, showing a high degree of connection and understanding. The teachers understood the magnitude of each other’s struggles and provided reassurance to each other as they experienced similar struggles.

I thought that there are other people out there that are grappling with how to become a good writing teacher and who are passionate to give up their time. I felt that everyone on the CoP was passionate about improving their ability to teach writing or to look at writing and evaluate it and come up with ideas to improve practice from a research point of view. *Barbara*

A site-based problem fostered a strong passion and a motivation to work on a real and immediate problem for the teachers. It provided a place to start their inquiry, and later helped them connect and focus their discussions. Their passion ultimately helped them persist through the difficult work of challenging their beliefs and assumptions. It also helped bridge differences between them and see the similarities in their approaches.

**Dialogue.**

What is striking through all the interviews is the important role discussions played for the teachers. Having the opportunity to sit and discuss practice, challenge ideas, and troubleshoot
problems that they were encountering were all part of a critical process in transforming the teachers’ practice.

It was all those conversations that we had sitting around the table. Ava

First, teachers used dialogue as a major support as they managed their changes in practice. Whether it was an inability to figure out the problem or a difficulty in implementing a new practice, the teachers relied heavily on the support that they received from each other when they brought their experiences and inquiries to the group.

The discussions helped us to trouble shoot lots of times. Sometimes, we would be trying something new and it would totally flop, then we would come into a meeting and discuss it and everyone would have a different approach or a way to go back and tweak it and try again. Madeline

Discussions provided a medium for deconstructing what teachers were experiencing. Much of the process was investigating what was happening with the students in response to the teachers’ practice. Dialogue served as a way for the teachers to safely question, challenge, and make suggestions regarding the problem and their practice. The teachers then felt that they could move forward to work on their problems.

Dialogue is key – you have to have the opportunity for repeated conversations. That is how you start to find patterns. Everyone comes to the table with a different perspective and different backgrounds so they are going to view the things that are done in a different way. If you can have a group where you are feeling comfortable and share what is going on whether it is a success or a failure then you have all of those other minds saying well did you think about it from this perspective, or did you see this, or maybe this is what is happening. Pearl

More than all the other factors, dialogue was mentioned as the most consistent activity which the members took part in throughout the transformative process. Dialogue was the medium through which members challenged the status quo, worked around barriers to implementing new practice, and through which they confirmed that changes in practice were working.

Time.

Time was also mentioned as an essential factor to all phases of the transformative process. Time appeared strongly connected to other factors, as well. Time was intricately linked
to relationships and dialogue. As time passed, relationships became deeper, and discussions became more authentic and began to reflect the critical questions needed for each teacher to question her underlying belief system. The teachers mentioned the importance of time in two specific ways. First, time was required to establish critical, safe, and trusting relationships among the group members. These teachers had the luxury of knowing each other and working together for several years before they started this CoP, yet it still took time for each to become comfortable enough to challenge and question each other.

Because the members of the COP had worked together for a long time it probably made the process easier from the beginning I don’t think long-term relationships from the beginning is necessary but I think that it made it easier. You have to have the time to explain to teachers who may not have been so accepting, explain the research, and explain why you were doing what you were doing and to get them on board. *Pearl*

The teachers also spoke about the necessity allowing the process to develop naturally, which takes time. They commented that it was critical to allow enough time for to develop a common understanding and for discussions to evolve, which in turn helped to build deeper relationships.

Teachers are so busy, you need to have the time to really get into discussions. You need time to build up a base of knowledge and you need to be working from the same basic knowledge foundation. If you don’t have time to build this or try to short cut it by one teacher or leader telling others what to do – it doesn’t work, I think that builds resentment or mistrust. *Madeline*

Recognizing that your beliefs and practice need to change is a difficult process, and it takes time. The second way that time was key was having enough time to implement the entire process of transformational learning, from uncovering the problem, to solidifying and expanding out new effective practices. Teachers needed time to consider what they were being exposed to, to take ideas back to their classes to explore them, and then to relate their observations to their own practice beliefs.

Our experience was ongoing. In a lot of professional development experiences, you go for a short period of time, maybe an hour or a day. And you don’t have the depth that you did in our experience. You tend to be given a lot of information at once, and you think that this is wonderful but you don’t get around to applying what you have learned. Whereas in our COP we had the advantage of time, really sifting through the information and improving our practice and comparing experiences and our feeling of success. *Barbara*
It should be noted that in this case study, the majority of the inquiry was done on each teacher’s personal time. However, each teacher suggested that time was a barrier to further progress and recommended that administration set aside time for teachers to collaborate. These teachers all recognized the critical role that time played in their case of transformational learning.

**Relationships.**

Relationships between members set the environment for transformation to begin. Without the safety and trust between the members, participants would not have shown their authentic selves, voiced their diverse opinions, or felt secure enough to engage in the critical discussions that were needed for the transformational process to take place. Realizing that each teacher brought their authentic selves to each meeting empowered each group member to honestly address their problems of practice and take the risks needed to examine long-held but ineffective practices.

If you don’t feel safe, you don’t bring your authentic self. And there were 5 authentic selves around the table. *Ava*

A safe environment was also critical for teachers to honestly discuss their struggles and not feel judged.

I didn’t feel that I had to prove anything to the other teachers. It was a safe place to openly talk about my teaching struggles and question my own practice without feeling ashamed about it. I felt that I could be honest and tell them about all my problems and failures as a teacher without judgement. I have sat on other learning communities where I felt as though I had to constantly defend my practice, and as a result I never really got a chance to talk about and consider my true problems. *Madeline*

Another outcome of safe, trusting relationships is openness to new ways of looking at practice and problems. All teachers commented that they did not feel pressure to prove themselves to each other and hence were open to and even looking for alternative suggestions.

You also need to be honest with yourself, just because you have done something for years and years and years, does not mean that it is the right thing for your students. You need to be able to say, “oh I was doing that, but now I realize that it doesn’t work, this is way better so I am going to change. *Pearl*
Finally, the well-established relationships served as a tremendous support network for the teachers as they discussed their struggles. This support not only normalized the teachers’ feelings about their problems, but also encouraged supportive suggestions from the group. With a network of support, the teachers were more willing to share problems, explore different viewpoints and assumptions, and openly accept alternative suggestions. Figure 7 presents identified factors present through all phases that contributed to teachers experiencing transformative learning.

Figure 7  Identified Factors Present Through All Phases.
Summary

The results of the pre-interview survey clearly indicated that all four teachers had undergone a transformative experience. Even Pearl, who reported that she did not change her beliefs about writing instruction, identified changes in her understanding around writing instruction that significantly impacted her approach to writing. Although each teacher had different reasons for becoming involved in the Writing CoP, they had one reason in common—a deep dissatisfaction with what was happening with their students’ writing.

Regarding the questions of what fostered the transformative experience within the CoP, the teachers’ responses are strikingly consistent. The teachers gained an understanding of how to design an inquiry to fully understand their problem by grounding their inquiry in student artifacts and exposure to expertise. With exposure to alternative perspectives, they began to see how their practice connected to the problem and the influences of their underlying assumptions. Finally, through evaluation of new practices, feedback and affirmation, and ongoing reflection, they had ways of reviewing new practices, ensuring that they were acting consistently with their transformed beliefs. These factors helped the teachers begin to question and alter their ineffective practices. An additional set of factors, present throughout the entire process rather than linked to any specific transformational phase, were also identified. Without a connection to a site-based problem, the right type of leadership, a sustained period of time, safe relationships, and a critical dialogue, the teachers were adamant that transformation would not have happened. Figure 8 presents all the identified factors contributing to teachers’ transformative learning experience.
Figure 8 The Identified Factors Contributing to Teachers’ Transformative Learning Experience.

This chapter presented the findings addressing the three questions of this study. Data from the participant interviews, email correspondence, and meeting transcripts revealed the CoP members’ perceptions regarding the critical factors that led to their transformative learning experience. By using extensive excerpts from the interviews with the participants and excerpts from meeting discussions, I hoped to give the reader a view into the experience of the participants, helping to convey the importance each identified factor and the role it played in the teachers’ transformative experience.
Chapter 5 – Analysis and Discussion

The purpose of this study was to understand the phenomenon of teacher transformative learning within a school-based Community of Practice. By exploring a single, in-depth descriptive case study of teachers’ transformational learning experience, I aimed to gain a better understanding of how different factors foster transformative professional development. In addition, by better understanding the connection between group learning and individual transformative learning, I gained insight into how to enhance teacher professional development.

This study relied on qualitative data collection, including in-depth interviews with the members of the CoP and analysis of emails and meeting audio recordings, to establish factors that the teachers felt accounted for their transformative experience. The study was based on the following research questions:

1. What factors influence a teacher’s level of readiness for change?
2. How do teachers come to question their critical beliefs and assumptions within a CoP?
3. How can teachers move new beliefs into practice through a CoP structure?

First, I sorted the data from all sources by structural codes that aligned with the theoretical framework depicted in Chapter 2. I coded segments from each data source with en vivo and/or descriptive coding, which I then amalgamated into major categories. Next, I created themes from a search for connections and comparisons in the data using constant comparative method. This thematic analysis resulted in eleven critical factors that fostered the teachers’ transformative experience. Finally, I performed a holistic analysis of those critical factors, the relevant theories, and research as I examined the bigger question of how a CoP fosters transformative learning, and the interplay of the different critical factors on both social learning and individual perspective change.

In Chapter Four, I presented the critical factors as they aligned with the three questions outlined in the study: readiness for change, questioning of assumptions, and change in practice. However, in this discussion, I present a more complicated picture of interdependent factors that do not always align with a specific phase of transformation. This discussion considers how identified factors can be further synthesized into two groups, factors that provoke questions around the status quo and foundational factors of a safe learning space. Equally important is the role these factors played through the different stages in CoP development: the forming, storming and performing stages (Laiken, 1994; Tuckman, 1965). Next, I discuss how the characteristics of
a CoP structure support the development of the eleven identified factors and ultimately fostered the movement of social learning to an individual level. Finally, I discuss the importance of the dialogue factor.

Section 1: The Role of Critical Factors

Through a constant comparative analysis method, the following eleven critical factors emerged as significant factors in the teachers’ transformative learning experiences:

- exploring practice with student artifacts,
- exposure to research and expertise,
- gaining alternative perspectives,
- evaluation of new practices,
- feedback and affirmation,
- ongoing reflective practice,
- site-based work,
- supportive leadership,
- safe relationships,
- sustained periods time with consistency, and
- dialogue.

As I returned again and again to the transcripts of my interviews with the teachers, I was presented with a conundrum. The participants identified clear, concrete processes, such as research, connecting artifacts to practice, and exposure to new perspectives, that supported their transformation. However, at the same time, they would mention contextual factors, such as relationships and leadership, as having the greatest influence on their ability to engage in actions of the CoP.

Hence, I returned to the data and coding of factors, looking for ways these processes and contextual factors may have been related to the teachers’ experience of transformative learning. Upon reflection, I surmised that the identified factors could be divided into two further groups. The first group can be considered factors that became processes that provoked questioning the status quo. The second group of factors was more global in nature and seemed to be foundational factors that created a type of learning space critical to transformational learning. Figure 9 presents how the key factors identified by the teachers could be grouped into two categories.
Figure 9  Grouped Key Factors Identified by Teachers in the Transformative Learning Experience

Provoking processes.

The first group of factors included the following: exploring practice and artifacts, exposure to research and expertise, gaining different perspectives through discussions, evaluating new practices, and receiving affirmation of new practices as provoking processes. All these factors became processes that aided the teachers in asking important questions around the current state of their practice. These factors could be considered part of the inquiry cycle. Past research has shown that the inquiry process is critical to teachers’ learning and making changes to their practice (Cochran-Smyth, 1999; Gallimore et al., 2009; King, 2002; Snow-Gereno, 2005). Most people, including teachers, tend to dislike change. When confronted with a challenge in practice, the common response is to avoid the problem and continue the current practice, or to choose easy, novel solutions that can be implemented quickly without tremendous investment (Katz & Dack, 2013). Research often finds that these easy changes in practice are unsustainable and do not result in better student outcomes (Hochberg et. al., 2010; Supovitz & Christman, 2005).
Research regarding ineffective PD suggests that the challenge in making sustainable improvements to practice lies in changing teachers’ beliefs around their practice (Avalos, 2011; Timperley et al., 2008). To accomplish such change requires that teachers understand the limitations of their current practice and the impact of practice on the problem (Timperley et al., 2008). This type of learning involves not only addressing the symptoms of the problem but also getting to the root cause. In this CoP, the factors that acted as provoking processes enabled the members to think deeply about what they were doing and why. The key ingredient to all these factors identified was that they all provoked questions around the teachers’ current practice. These provocations led the teachers to investigate what the problem was as well as how their practice was connected to that problem. Once teachers began to examine the underlying reasons for their choices in practice, they could then examine how adopting different practices might lead to different student outcomes.

I turn now to a summary of the results reported in Chapter 4. I discuss how each factor provoked questions around the current state of writing instruction in the school ultimately helping the teachers to develop a better understanding of the assumptions that drove their practice and make subsequent decisions that resulted in better student outcomes.

**Exploring practice and artifacts.**

One of the most difficult tasks in the inquiry process is deciding what problem to address. Professional learning groups often identify broad problems and tend to focus on the symptoms rather than the root cause of the problem (Katz & Dack, 2013). What is needed is a group that works in a structured and purposeful way on a clearly identified problem that can be connected to student outcomes. Such a focus requires teachers to understand the links between specific teaching activities and the ways different groups of students respond (Timperley et al., 2008).

In this CoP, these connections were made through exploring student artifacts for evidence of problems. By exploring and questioning the impact of different teaching practices on student work, teachers linked their practice more closely to the problem. This exploration highlighted the connection between student writing problems and teacher practices, which in turn linked to their belief systems. In the CoP, teachers first uncovered the link between poor printing and poor overall writing quality by examining writing samples on the *Healthy Schools* prompt. This
discovery provoked the teachers’ examination of what their students knew and could do and what further learning would help their students to become better writers.

**Research and experts.**

Before the CoP, all teachers reported trying a variety of different methods individually to address the writing problem with little success. It was not until they worked within the CoP that they began to make progress in addressing the students’ writing deficiencies. This finding is consistent with reports that teachers often have a lack of domain knowledge that leaves them unable to select and implement more effective strategies, drawing teachers into an ineffective cycle of erratically applying solutions that result in frustration for both the teachers and the students (Timperley et al., 2008). Expertise external to the group of teachers is necessary to challenge existing assumptions and to develop new knowledge and skills the teachers need (Timperley et al., 2008; Willemse et al., 2016).

Simply adopting new practices wholesale, however, often fails because these practices are not implemented in a way that meets students’ needs or the new practices do not address the actual problem (Earl & Katz, 2006). Therefore, the key to finding effective solutions is connecting new knowledge to the site-specific needs of the students and linking the theoretical with the practical knowledge of teachers on site (Cochran-Smith & Lytle, 1999; Timperley et al., 2008). Teachers must consider new information from experts considering what they know about their own students and classroom situation. In this way, the exposure to new knowledge provokes consideration of the new and old practices in relation to what the students need.

Consistent with the literature, the Writing CoP found that exposure to new perspectives fostered that theory-to-practice link. Before the CoP, the teachers consistently implemented new strategies with no effect. Exposure to new research and experts enhanced the teachers’ understanding of the writing problem. With this additional information, teachers were better able to consider the problem in the context of the practices that would be most effective for their students. For example, in the CoP, an OT specialist with the Alberta Children’s Hospital presented information regarding fine motor limitations in grade one. Consequently, the teachers began to question their own expectations and how their lack of programming contributed to the printing problems that their students were experiencing. Once they understood the problem
better, the teachers then looked to the research and experts for teaching strategies that would better meet their students’ needs.

**Gaining alternative perspectives.**

Exposure to new perspectives is essential to teacher professional development. Without challenging ideas, teachers easily slip into a pattern of reifying old and ineffective practices (Christie et al., 2015; Timperley et al., 2008; Wenger, 1998). Previous research has found that when teachers are confronted with poor student outcomes, their tendency is to blame student deficiencies rather than examine their own practice (McLaughlin & Talbert, 1993). The key to avoiding these unproductive responses is providing teachers with ways to challenge their current understandings of practice and to examine alternative methods that would provide a better fit for their purpose and students (Timperley and Phillips, 2003; Timperley et al., 2008).

An additional problem is the tendency for humans to be cognitive misers (Stanovich, 2009), where teachers are quick to pick up the first and easiest solution they discover rather than performing a more critical analysis and considering all the possibilities (Katz & Dack, 2013). Exposure to new perspectives promotes questioning the effectiveness of current practice and increases the consideration of alternatives to a problem as well as a deeper analysis of the best solution.

In the Writing CoP, exposure to new perspectives became one of the most significant ways to encourage teachers to question both their old and new practices. While reflecting on lessons during CoP meetings, the different perspectives offered by members of the CoP often exposed new ways of viewing situations and approaching problems. In this way, the teachers questioned their practice and began to make visible their own beliefs about practice. Finally, exposure to different teachers’ perspectives during pedagogical discussions kept the teachers focused on the goal of better student outcomes (Timperley et al., 2008). Different perspectives held the teachers accountable to finding the most suitable practice, examining the practices’ appropriateness for the students.

**Evaluating new practices.**

In effective professional development, new theories and understanding of problems must be developed in conjunction with their application to practice (Timperley et al., 2008). Given the tendency towards confirmation bias – the inclination is to confirm rather than to challenge a
hypothesis – it is critical for teachers to test their theories and new practices to ensure their appropriateness for both students and context (Evans & Feeney, 2004; Katz & Dack, 2013). Furthermore, linking professional development to practice through evaluating student outcomes helps teachers understand which practices are the most effective and helps establish continued motivation for teacher learning (Fishman, Marx, Best, & Tal, 2003).

As Ava began to pilot a new printing program, all the teachers wanted to see evidence that this new direct and explicit way of teaching was improving both the students’ printing and more importantly the overall writing quality of student writing. Often when two teachers tried a new practice, they would report back to the group with evaluations of how things went. When two radically different experiences were described, the group used this as an opportunity to analyze the experiences, determining what made some successful and others not. In this way, the teachers gained a further understanding of the problem and how it related to their practice. This questioning and evaluating new practices relates closely with phase six of Mezirow’s transformative learning (1978). Mezirow (1991) stated that, as individuals try on new practices, they must evaluate whether these new practices work within their meaning perspectives or the perspective modifications they have made.

**Feedback & affirmation.**

The group members relied heavily on affirmation from each other and later from a wider audience, including other teachers and parents outside the CoP, for encouragement to continue with the hard work and risk of trying new practices. The process of changing one’s beliefs and then altering practice based on those changes requires teachers to take risks and adopt new practices that they would have previously found challenging (Timperley et al., 2008). Without positive support, the teachers would have likely abandoned their new practices. Mezirow (1991) stated that, “Perspective transformation is a social process: others precipitate the disorienting dilemma, provide us with alternative perspectives, provide support for change, participate in validating changed perspectives through rational discourse” (p.194).

For the members of this CoP, the social process was crucial in providing commentary on the changes that they had made. Beside affirmation, feedback that challenged the new practices they had adopted was important. Research has found that critical questioning of practices and beliefs is important for changing teacher practice (Earl & Katz, 2006; Lipman, 1997). In this
CoP, the feedback was balanced with critical questions and evaluations of the new teaching practices. If the teachers had only received affirmation, they would have questioned the authenticity and value of the feedback. The structure of the CoP created a forum that enabled both critical feedback and positive affirmation.

**Ongoing reflection.**

To truly commit to the new practices, the teachers entered a cycle of constant reflection. They reflected on which new practices to enact, the results they wanted, and how these changes fit with their teaching purpose. This case study confirms Timperley et al.’s (2008) findings regarding effective professional development in that it allows teachers the opportunity to use their theoretical understandings as the basis for making ongoing, principled decisions about practice. A clear example was in Ava’s reformation of her spelling program. Before the CoP, Ava taught spelling through word lists given to students on Monday and tested on Friday. Through the Cop and exposure to experts, she began to adjust her understanding of what *learning to spell* meant. She changed her perspective of spelling involving simple repetition to students understanding the patterns and strategies of the English language. As she began to commit to an entirely new spelling approach, she had to identify the important aspects of the program, what to emphasize in her classroom instruction, and when and how to allocate time for this new program. These decisions involved an ongoing examination of what she wanted her practice to look like.

In addition, an important part of the inquiry process is to maintain the focus on meeting students’ needs and building teacher capacity by learning how to continually question and connect teachers’ practice to their students’ learning requirements in an ongoing way (Cochran-Smith, 2005; Snow-Gereno, 2005). Timperley et al. (2008) referred to a type of capacity building where teachers can take greater responsibility for all their students’ learning needs after the PD. As teachers’ sense of self-efficacy increases, they are more likely to attend to the impact of their practice on students and to take greater responsibility for the outcomes (Timperley & Phillips, 2003). Throughout the interviews, the Writing CoP members alluded to the fact that the greatest change within the CoP was a growing sense of self-efficacy. They viewed themselves as becoming more in control of their practice, and better able to understand their students’ needs and to adapt their practice to successfully meet these students’ needs.
Each factor identified as provoking processes involved the teachers engaging in actions that triggered them to question current practices, hone in on student needs and ultimately examine their belief systems around teaching. They involved teachers connecting what they were seeing, hearing or experiencing directly to their own practice, and then understanding what drove their choices in practice. Another way of looking at these factors would be to view them as the essential steps of an inquiry cycle. Gallimore et al. (2009) discussed the essential piece that inquiry provided in teacher professional development, allowing teachers to connect their practice to the needs of students. Likewise, Conchran-Smith’s (2005) research outlined features of inquiry that share many similar traits as factors identified by the teachers in this case study. She found teachers becoming researchers investigating site-based problems using artifacts and connecting problems to practice through dialogue to be important aspects in changing teacher practice through PD. Therefore, it might be that each factor identified in this case study drove the inquiry process, enabling teachers to identify critical student needs, see causal connections to their own practice, and focus and direct teacher learning. However, in this case, it could be argued that one additional process action took place: making visible of beliefs and assumptions that initially led to the problem of practice.

The teacher professional development literature is filled with teacher PD programs that suggest engagement with processes, such as discussions, exposure to best practices, and the use of student data to drive practice (Kruse, Louis & Bryk, 1995; Hochberg et al, 2010; Owen, 2014). Yet little of this literature shows significant gains in changing teacher beliefs or student achievement outcomes (Avalos, 2011; Gallimore et al., 2009; Supovitz & Christman, 2005). Therefore, engaging in just these provoking processes does not seem to be enough to lead to sustained teacher change. Additional factors might be required to push these processes to a deeper level. What might be needed is a second set of factors that can create a learning space conducive to fostering a deeper type of engagement.

**Factors leading to a safe learning space.**

In this case, the participants were clear about a second set of factors that influenced their transformative learning. These factors were foundational to the creation of a learning space for deeper engagement. The participants all spoke about site-based (grassroots) problems,
supportive leadership, safe relationships and a sustained time periods as critical to fostering a transformative learning environment.

**Safe relationships.**

A large body of research spanning more than twenty-five years demonstrates the significance of teachers’ collegial relationships as a factor in school improvement (Bryk, 2010; Horn & Little, 2010; Louis, Marks, & Kruse, 1996; McLaughlin & Talbert, 2001). In fact, respect and trust may be more important factors to school improvement than many other structural conditions (Bryk & Schneider, 2003) because change in teacher practice is as contingent on emotions as it is on knowledge and skills, since practice and belief systems are so closely linked (Timperley et al., 2008). In this case study, the teachers overwhelmingly identified relationships as key to their transformational journey.

Teachers were adamant that their participation in open, honest and safe relationships allowed them to engage in the other necessary processes to change their practice. The safe, non-judgmental atmosphere allowed them to share experiences and opinions with one another. These safe relationships provided the space to entertain difficult discussions where the teachers exposed each other to new ways of seeing the problem. Through these often-tense conversations, respect and trust grew between each of the members, creating stronger relationships, thus making it more likely for group members to bring future problems to the group for discussion. In this way, there is an apparent connection between the factors that provoked questions of the status quo and the factors that created the learning space.

**Site-based connections.**

A site-based group, focused on problems specific to the school, was essential to the transformative process. Findings from this case study seem to be consistent with much of the research on effective professional development with a site-based focus (Concannon-Gibney & McCarthy, 2012; Parsons, McRae, & Taylor, 2006; Schilling, 2016). Site-based PD is more likely to produce teacher learning that is directly linked to the student learning needs in each school, which is more likely to transform teacher PD into increased student achievement (Concannon-Gibney & McCarthy, 2012; Supovitz & Christman, 2005). Due to the fact that our CoP was centered at our school, our focus on our students’ needs and our unique context became front and center. These findings also reflect the need for school improvement programs to be part
of the teacher’s daily school life (Sparks, Loucks-Horsely; 1989). In this way, the teachers might have found it easier to translate the new knowledge they gained to practice as they were so closely linked to the site.

Not only did a focus on site-based problems bring together teachers who shared a similar passion, enabling them to develop a common language and aiding in the translation of knowledge to practice, but it also directly linked to the five provoking factors. The student artifacts were by nature site-based and thus clearly reflected each student’s needs. The research and experts consulted also met the specific needs of the site. Exposure to new perspectives happened through dialogue with other practitioners at the site working with similar students, in similar contexts. Finally, the evaluation and ongoing reflective practice was based in teachers’ work at the site. In this way, all the factors that became processes of provocation were grounded in and connected to learning that met the site-based needs.

Supported leadership.

The role of leadership in teacher PD is critical. Often leadership can be the difference between a staff that approaches change with resentment or resistance and a fully committed team of teachers (Bolam et al., 2005; Marzano et al., 2016). In addition, research demonstrates that leadership also directly impacts how instructional reforms are implemented (Hochburg, 2010). Perhaps most importantly, supported leadership needs to be delivered in a timely and focused fashion. Katz and Dack (2013) labeled this just in time leadership. This type of leadership is tasked with everything from choosing a focus and empowering teachers to investigate new practices, to providing ongoing monitoring of student progress. The surprising finding in this case was that, rather than having one designated leader, every member took on critical leadership roles. For this reason, leadership often varied in terms of who delivered it or how it was delivered. Each team member was dependent on the others to demonstrate leadership in the areas they excelled at.

Effective models of teacher professional learning often require participants to take on different leadership roles to help achieve the group’s goals (Parsons et al, 2006). Heidi was at first regarded as a research mentor and leader, providing much needed information around research design and writing expertise; however, Ava and Barbara later took on an essential leadership role in designing and delivering new pilot programs. Madeline fulfilled the role of
organizer, while Pearl introduced and researched new practices that she had become aware of through her teaching roles at different sites. The openness to shared leadership might have been influenced by the teachers’ growing feelings of ownership and agency as the research progressed (Timperley et al., 2008). Predominantly sharing the role of leadership and promoting teachers’ individual talents allowed the teachers to experience just the right amount and the most appropriate type of leadership, just when they needed it.

Supported leadership was also connected to the five processes of provocation. Leadership provided direction when needed and helped drive and define these processes. For example, Heidi’s leadership provided important guidance to the teachers, encouraging and guiding the teachers as they created a database from student writing (exploring student artifacts). At the beginning of the CoP, the teachers were unsure what type of data they should be collecting or how to collect it and examine it in a meaningful way. As a research mentor, Heidi provided the insight needed to collect meaningful data and examine it for patterns. The database enabled the teachers to better understand the problem. Subsequently, the teachers then relied on leadership to help implement new practices that would test their hypotheses. In this step, leadership was provided within as different teachers in the group stepped up to pilot new programs. The leadership in the CoP was critical to the functioning of the learning space and enabling the provoking processes.

**Sustained time with consistency.**

Finally, time was identified as foundational factor underlying the development of both the learning space and in the processes of provocation. The participants mentioned that having a sufficient length of time for the inquiry project, as well as meeting frequently, helped support the learning space. Having regular meetings spaced two or three weeks apart allowed a familiarity and routine to develop in the group. These regular meetings helped develop a safe space for participants to discuss current problems of practice and gain support from their peers. Moreover, frequent meetings kept the topics familiar, yet provided enough time to reflect on and try out new practices and then relay experiences back to the group (Darling-Hammond et al., 2009).

The ability to work and develop the CoP over a period of years was also important as teachers need an extended period in which to learn and change and then see the impact of those changes (Timperley et al., 2008). Time was also needed to develop relationships, creating a safe
space where participants could disagree without feeling personally attacked. The literature reflects the need for time to develop relationships that tend to start out as self-focused and antagonistic into more supportive, helpful relationships over time in PLCs (Clausen, Aquino, & Wideman, 2009).

Tuckman’s (1965) work with group development also reflects the need for time to move through the forming, storming, and performing periods. In this CoP, it was noted that the multi-year duration of the CoP also allowed each teacher to try on, develop, and hone the different leadership roles that group needed. As teachers became more secure and confident, they began to offer to research different programs, volunteer to pilot new programs, while other members began to present at staff meetings disseminating important information and gathering critical feedback.

Time was also connected to the provoking processes. Long periods of time were needed to deeply engage each of the processes. Reflection time was critical in giving each teacher time to question, reflect on new understandings, and make decisions around practice. The deeper that teachers engaged with the processes, the more time they required. Research has found that change in practice occurred only after 80 hours of professional development and changes in teaching culture and ways in which teachers examine their own practice came after 160 hours of professional development (Supovitz & Turner, 2000). Hence, both the duration of the CoP and the frequency of meetings played a role in the engagement with the provoking processes and creating an effective learning space.

**Two groups reciprocal in nature.**

In this case study, finding solutions to an old problem required looking at it through new perspectives, altering teacher beliefs, and creating innovative strategies. This is a difficult type of learning, also referred to as Double Loop Learning or Second Order Change (Argyris & Schon, 1974). To foster this type of learning requires much more rigorous engagement with many critical processes (Marzano, Waters, & McNulty, 2005). In this CoP, the resulting transformative learning likely resulted because both themes of provoking processes and a safe learning space were present within the community.

The present case study raises the possibility that for professional development to foster deeper types of learning, such as transformative learning, both themes of engaging in processes
that provoke the status quo and processes that create a safe learning space are required. Observing the connectedness and essential presence of both these groups of factors may help us to understand why much of teacher professional development is considered ineffective in terms of altering teacher beliefs and changing teacher practice (Akerson 2009; Supovitz & Christman, 2005; Vescio et al., 2008). A professional community with only one of these groups of factors in its professional development practices will likely not foster the deep learning necessary to change practice. For example, teachers may have plenty of time to talk in a safe supported environment; however, without engaging in processes that force them to question the current state of their practice, they will not change (Marzano et al., 2016). Instead, they often reify the old practices that created the problem in the first place (Timperley et al., 2008; Wenger, 1998). Likewise, if teachers without a safe, supportive environment are told to engage in a series of actions that provoke questions about their practice, they may not engage deeply enough or be open to the process, which also results in a lack of change, and possibly worse, resistance to change (Schlager et al., 2003). Also, without specific guidelines around discussion and actions within the group, or a site-based student focus, teacher investment and commitment in the group becomes limited, resulting in little change in practice (Mindich & Leiberman, 2012; McLaughlin & Talbert, 2001). These findings might help us to strategically design teacher PD to maximize its effect for transformative learning.

Section 2: CoP Structure Impact on Transformative Learning

It is important to return to the original question of this study: How is transformative learning fostered in a Community to Practice? To understand the connection between this CoP and the teachers’ experience of transformative learning, I return to the eleven critical factors that the participants identified and examine how the CoP structure relates to each of them, in turn. Wagner (1998) theorized that there are three essential dimensions to a CoP: joint enterprise, mutual engagement and shared repertoire. Each of these dimensions plays a critical role creating the Community and how they shape characteristics of practice (Wenger, 1998, p.73). Joint enterprise, mutual engagement, and shared repertoire help establish the environment where participants can engage with the provoking processes challenging the status quo in a safe learning environment. In other words, these specific characteristics of a CoP can foster the use of each of the eleven identified factors in the transformative learning experience.
Joint enterprise.

Wenger (1998) argued that the two main purposes of joint enterprise are for the participants to negotiate the enterprise and commit to a mutual accountability to the task. In this CoP, negotiating the enterprise and mutual accountability helped develop and reinforce the multiple processes the teachers engaged in during the CoP. Figure 10 presents how the dimension of joint enterprise within a CoP helps to foster the key factors of teacher transformational learning.

![Diagram](image)

Figure 10  Connecting Joint Enterprise to Key Factors in Transformational Learning

In the first part of the CoP, negotiation of the enterprise supported the development of relationships, connected participants to unique site-based problems, and required the use of site-specific artifacts. To establish a joint enterprise, the teachers in our CoP first had to agree on what the problem was. This agreement involved long discussions working to create a rubric that encompassed agreed-upon critical aspects of gifted writing and then using these criteria to mark student writing. The need to reach consensus on the rubric and marking forced all the participants to work to understand each other’s perspectives. In the end, this process of negotiation developed stronger relationships. Not only did we understand others’ perspectives
better, but we also felt bound by a strong sense of communal purpose. As Wenger (1991) stated, “They must find a way to do that (establish a joint enterprise) together, and even living with their differences and coordinating their respective aspirations is part of the process” (p. 79).

Further solidifying the feelings of a communal purpose was the consideration of our unique site-based context as a gifted school. Although we knew that our population was not the only elementary school with a writing problem, we understood that our unique context of a school for young gifted children meant there was not a cookie-cutter solution. We needed to consider our students’ unique qualities, combined with our own specific expertise, to create workable solutions for our site.

In negotiating the enterprise, we were also forced to use our students’ artifacts, our own lesson plans, and consider resources that captured our school’s teaching culture as we began to contextualize and consider the problem. In this way, the conditions, resources, and demands of our own students shaped the enterprise we were undertaking, giving us the unique sense that it belonged to us and reinforcing for us the importance of our investigation being grounded in our school’s context and with our own artifacts. The negotiated enterprise supported the development of authentic relationships built on common understandings, as well as the use of unique artifacts and context of our site.

The second function of joint enterprise is to create a mutual accountability where each member feels a sense of responsibility to the group, and participants hold all members responsible for the roles they play. In our CoP, a variety of roles needed to be filled: for example, finding relevant research, entering marks into a database, and piloting new programs. The need for each group member to take on different roles created a push for each member to reflect on her own practice and decide what her part in the group was. Each teacher felt a sense of ownership for her part and personal reflection was fostered. The consideration of each member’s unique talents also helped fill the different leadership roles within the group.

Mutual engagement.

Wenger (1991) traced the development of mutual engagement to the practice of each member participating in whatever manner they can to support the group. “What it takes for a community of practice to cohere enough to function can be very subtle and delicate” (Wenger, 1998, p.74). Mutual engagement commits participants to the group. In our Community of
Practice, this meant building those supportive relationships. Members would bring food to create a warm and safe atmosphere. At times, when teachers were relaying disappointing stories or results, members offered up supportive advice or commiserated with each other. In these ways, supportive relationships were fostered as each teacher contributed to community maintenance. Figure 11 presents how the dimension of mutual engagement within a CoP helps to foster the key factors of teacher transformational learning.

![Figure 11: Connecting Mutual Engagement to Key Factors in Transformational Learning](image)

In a CoP, a need emerges to fill different roles creating opportunities for leadership. Mutual engagement prompts members to step into these different leadership roles. In our CoP, each member used her strengths to fill a need in the Community. For example, Ava became the first teacher to pilot many of the new programs and brought her classroom experiences back to the group. Barbara also piloted programs but also acted as a meticulous collector of artifacts, creating small case studies. As Pearl worked as a literacy strategist, she began to introduce new methods to the group that might be a good fit. Madeline, with her passion for research, began to
find articles that might shed new light on the topics the group was discussing. These roles were not set in stone, nor were they singular, but each teacher found a niche in the group that matched her strengths. In Wenger’s (1998) words, “each participant in the community of practice finds a unique place and gains a unique identity, which is both further integrated and further defined in the course of engagement in practice” (p.76). These roles helped build the internal leadership of the group, driving the learning forward on both an individual and a group level.

Part of mutual engagement is each member’s understanding that she needs other members’ new perspectives and expertise. Often in our CoP, there were points where the members would openly admit that they did not have the answers to questions. As such, the members had to rely on other teachers’ perspectives to examine the problem through a different set of lenses, or alternatively they would turn to outside experts. In this way, the reliance on the contributions and knowledge of others pushed for the exposure of new perspectives among the teachers, encouraging them to seek out expertise – factors critical in moving the learning to a transformational level.

**Shared repertoire.**

A shared repertoire is critical to a community because, over time, creating an enterprise relies on site-based resources for negotiating meaning (Wenger, 1991). Resources, such as student artifacts, beliefs about teaching gifted students, stories of unique classes and students all reflected a history of shared repertoire. This repertoire required unspoken understandings between the members of our CoP, highlighting the need for a shared repertoire to be site-based. The unique context and culture of the school created the mutual understandings needed for discussions to happen. That shared history and culture also created the common threads to support relationships and help members make sense of the new perspectives to which they were exposed. Figure 12 presents how the dimension of shared repertoire in a CoP helps to foster the key factors of teacher transformational learning.
Shared repertoire continually evolves in response to newly negotiated meanings and understandings between the members. Consequently, shared repertoire forces reflection on and evaluation of student artifacts. Creating new repertoire creates new expertise as the teachers gain knowledge and learn how to look at artifacts through more informed lenses. In essence, shared repertoire leads the reflection on the teacher’s practices. As teachers’ repertoire expands, they must return to their practices and artifacts to confirm that the new repertoire supports the new understandings.

To illustrate, at the beginning of the CoP, the teachers examined students’ writing to try to determine what the underlying problem was. Using what they knew about typical writing, and gifted students’ vocabulary and idea generation, they determined that the writing problem was connected in some way to printing and spelling. The teachers then sought out research and expertise that could help them better understand the role printing and spelling played in writing development. As they began to understand the importance of printing and spelling instruction, the teachers changed their practices around these topics. Finally, the teachers returned to student artifacts to evaluate their new practices to determine if their new understandings were correct.

In this case, the teachers used shared repertoires to both begin their investigation of the problem and then to determine what expertise they needed to gain to solve the problem. As the
teachers’ shared repertoire evolved, they continually evaluated and reflected on their practice. Each of Wenger’s characteristics of community – joint enterprise, mutual engagement, and shared repertoire – reinforce the engagement with the different processes identified as critical to the teachers’ transformative learning journey.

Moving from group to individual learning: A reciprocal process.

The characteristics of a Community of Practice – joint enterprise, mutual engagement, and shared repertoire – are characteristics associated with social learning. A surprising finding is that these characteristics also influenced individual learning. Engaging in all three characteristics of a CoP encouraged the participants to negotiate with other group members the meanings of several aspects, including the problem, best practice, and real student needs. However, these negotiations did not stop at the group level, but instead, pushed each teacher to consider and question her own understandings at a more personal level. Often, these questions led teachers to alter their own perspectives. As each teacher developed new understandings about her own beliefs and perspectives, she then brought related questions back to the group. In this way, the group learning caused individuals to think about their own contexts, connecting the group learning with individual transformative learning. Individuals then brought new questions back to the group, pushing the group learning forward. Figure 13 presents a view of the cyclical nature of learning as it moves between the group and the individual.
Another interesting finding from this case study was the development of the group over time. Prior studies have noted the importance of phases of growth in professional development groups. Tuckman’s (1965) work on phases of group development shows that an effective group goes through four major phases of development:

1. *forming*, in which the group develops ground rules for a positive working environment;
2. *storming*, where the group works through issues of control and power;
3. *norming/performing*, where ground rules for conflict are established and different perspectives are reconciled towards problem solving and then the group adjourns; and
4. *adjournment*, individuals from the group move on and the formal group dissolves.

These same phases were observed in this Community of Practice.
Key factors and the phases of group development.

Interestingly, there was a connection between the group development phases (Tuckman, 1965) and the provoking processes the group engaged in. Although the teachers tended to report engaging with certain processes during specific phases, at closer inspection of the transcripts, it appears that the teachers engaged with all five provoking processes with in each group development phase.

Stated another way, the five provoking processes could be viewed as comprising a type of circular inquiry cycle. However, in this case, the inquiry cycle was iterative. As one complete revolution of the cycle finished, the group moved to another phase of development, engaging with the provoking processes again, but in a slightly different way. For example, the process of examining artifacts and exploring practice was engaged through each phase of the group’s development. During the forming phase, the group examined artifacts to identify and contextualize the problem. In the storming phase, the teachers turned to student artifacts to look for evidence that either supported or contradicted the teachers’ theories. By the performing phase, the artifacts were used to test whether the new practices were helping to resolve the problem. In this way, exploring the artifacts and connecting them to the teachers’ practices were critical to each phase of the group’s development and were also critical to each teacher connecting practice to student outcomes and subsequently questioning their own practice. This cycle fostered movement not only through the inquiry cycle but also along the phases of transformative learning. Table 3 presents a list of how each factor from the provoking processes group relates to Tuckman’s (1965) phases of group development.
### Table 3

#### Key Factors as they Relate to Phases of Group Development

<table>
<thead>
<tr>
<th>Provoking Processes (Identified Key Factors)</th>
<th>Phases of Group Development (Tuckman, 1965)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Forming</td>
</tr>
<tr>
<td>Exploring Artifacts &amp; Practice</td>
<td>Using artifacts to focus the problem specific to context.</td>
</tr>
<tr>
<td></td>
<td>Ex. Marking student essay responses to determine connections to writing quality.</td>
</tr>
<tr>
<td>Exposure to Research &amp; Experts</td>
<td>Receiving advice on research design and what data to collect.</td>
</tr>
<tr>
<td>Gaining Alternative Perspectives</td>
<td>Listening to colleagues’ experiences of writing problems in their classrooms.</td>
</tr>
<tr>
<td>Evaluation of New Practice</td>
<td>Understanding the depth of the writing problem by examining artifacts and old practices in place.</td>
</tr>
<tr>
<td>Feedback &amp; Affirmation</td>
<td>Opinions are gathered regarding what student artifacts reflect.</td>
</tr>
<tr>
<td>Ongoing Reflection</td>
<td>Beginning to reflect on practice and note when examples of writing problems occur.</td>
</tr>
</tbody>
</table>
**Teacher agency and knowledge dissemination phase.**

Another interesting observation from this case was evidence of an additional phase that has been reported in the literature – a dissemination phase. All the participants in this CoP reported the desire to share their new-found knowledge and practices beyond the immediate group. In examining the CoP timeline as seen in Appendix D, in the third year of the Community, the activities of the CoP took a marked turn to dissemination of new practice and findings. The teachers’ desire to share in their new understandings are reflected in Ava’s comments,

> I believe in what I know and am confident that there are five elements of writing work. After three years of implementing/introducing (grade one) it is obvious that we are on to something! After the pilot year, I thought, ‘oh my god does this work, and works extraordinarily well’. Because these were seven-year old’s doing fantastic writing. That was when I knew, wow this is amazing. Before that year I didn’t think it was possible, I had to see my own results. My buttons were bursting to think that I was the educator that got that out of those kids. I was really proud of that. I put writing up all over because I thought wow people, you need to look at this and I hoped others could make changes too.

_Ava_

By the end of the CoP, the members all reflected an overwhelming desire to see new knowledge move beyond the CoP group. The teachers spoke of gaining a strong sense of self-efficacy, which inspired them to want to make a difference across the school and outside the school walls. As a result, the teachers began asking to share their work with other staff and at conferences. I evidenced this sharing by the number of presentations and related work with outside schools that the members engaged in during the 2014-2015 year.

The fourth phase in this case study is different from Tuckman’s 1965 model, which lists _Adjournment_ as the fourth and final phase, where the group simply dissipates. Instead, in this study, a new sense of empowerment appears to have sparked a deeper passion for the teachers’ discoveries and a deep need to share their new knowledge. This fourth phase of the Writing CoP would appear similar to Mezirow’s (1978) tenth phase of transformative learning, *taking action beyond oneself in line with one’s new perspectives*. It appears that, teachers gain a sense of
agency when they learn how to change their practice to better meet their students’ needs through effective professional development.

**Moving from practice to praxis.**

Engaging with all eleven factors throughout the development of the Community of Practice may have been what allowed this group to grow from a model where they were examining their practice to a state of praxis. Teacher professional development groups are often criticized for focusing only on teacher’s skills and practices rather than addressing critical questions pertaining to social context, power dynamics, and belief systems that influence their practice (Henderson, 2015; Servage, 2008; Somekh & Zeichner, 2009). The closed culture and history of the community can reify pre-existing beliefs and maladaptive practices (Argyris, 2004; Wenger, 1998). In essence, teachers in learning groups often get stuck in a cycle of endlessly making small modifications to their practice without critically examining the reasons for these changes. This often results in no change in outcomes and a sense of frustration for the participants. Thus, the groups often do not experience an opportunity to investigate deeper issues that underlie their practice.

In the Writing CoP in this study, the teachers moved beyond simply implementing different practices; instead, they examined the why behind their pedagogical decisions and then considered the contextual needs of their students to construct a new, more appropriate practice. This process is defined as praxis — a way for practitioners to move beyond the limitations of their current practice and develop their own way of seeing and understanding the learner’s context (Freire, 1970).

The findings suggest that, as the group engaged with factors provoking questions regarding their current practice, the teachers moved beyond their enculturated way of seeing things and instead examined questions about meaning, assumptions, perspectives, and application (Cranton & King, 2003). It may take these broader and more challenging types of activities for teachers to break out of their limited focus on the effectiveness of their practice (see Figure 14). Eventually, this type of examination can lead to change in the assumptions that drive behaviours and lead to teacher praxis (Christie et al., 2015).

By the end phases of this Community of Practice, this group showed a clear ownership and sense of agency over the knowledge that they had acquired. The group went a step further as
they engaged in mobilizing their new understandings outside their own learning circle. Furthermore, findings suggest that teachers in this CoP moved beyond re-enacting practices they had learned to co-constructing new practices based on their experience, new knowledge, and a heightened understanding of their students. The opportunity to engage with provoking factors within a safe learning environment might have been the catalyst that moved these teachers beyond the typical CoP learning experience to teachers who acted with true praxis. Figure 14 presents an overview of tiers of the Writing CoP’s professional development groups as they moved from practice to praxis.

Figure 14  Tiers of Professional Development in the Writing Community of Practice

Section 4: Role of Dialogue

Dialogue was the eleventh theme that the teachers identified as critical to their transformative experience. Given that rational discourse and communicative learning are referenced as important parts of both Mezirow’s and Wenger’s respective theories, it is not an unexpected finding. Bohm (1996) referred to dialogue as “a stream of meaning” flowing among and through us and between us” (p.6). Bohm noted that the focus of dialogue is to understand the other, from which new understandings can be created. Furthermore, in much of the literature on professional development, dialogue has been noted for the key roles that it plays. Dialogue is
credited for developing feelings of support among group members and for being used to normalize situations and to brainstorm alternatives (Dufour 2004; Hadar & Brody, 2010; Horn & Little, 2010; Huffman & Hipp, 2003). Through discussion, group members create a sense of belonging as they establish a common language and a common frame of reference. Reflective dialogue can also be used to make assumptions visible, identify the beliefs that underscore practice, and examine them with new perspectives (DuFour & Eaker, 1998; Horn & Little 2010; Kruse & Louis, 1993). Wenger (1991) argued that negotiation of meaning is at the root of a CoP. He referred to dialogue as a resource that can be used to negotiate, increasing members’ understandings and membership in the CoP. How dialogue helped the teachers negotiate and construct new understandings in the group can be seen in Ava’s interview comments:

It was our conversations that we had sitting around the table and all that knowledge that was coming at us. They were in-depth conversations between five very diverse people. It was those Tuesdays where we would come and talk about that knowledge and you begin to think, ah… Ava

The dialogue in this case study appeared to play a much more critical role than just being a resource for the members. In this CoP, dialogue served as a medium through which all the factors were enacted. The processes of exploring practice, gaining expertise, developing alternative perspectives, creating new practices and encouraging reflection all occurred through the medium of dialogue. Each process had the potential to call into question beliefs and understandings, but dialogue forced the connection between the group negotiations and the individual members’ deeply held perspectives. Barbara’s comments on the impact of the conversations and her own perspectives reflect this,

Just listening to discussions and participating in activities made me examine what I was doing more. And what the assumptions I had held were and whether they were still valid. Barbara

Interestingly, this finding is broadly supported by Mezirow’s conclusions about communicative learning with respect to transformational theory. Mezirow (1991) stated that the focus of communicative learning is to increase insight and attain common ground with the identification and validation of explanatory constructs (p.80). In the CoP, as the group engaged in each process, we used dialogue as the means to better understand the problem and viewing it
through different perspectives. Thus, individuals had to determine how their own perspective fit with the different viewpoints being discussed. Individual members then evaluated whether these new viewpoints meshed with their respective individual meaning perspectives. Mezirow (1991) stated:

We confront the unknown by making associations with what we know (metaphors)…We compare incidents, key concepts, or words and relate them to our meaning schemes.

Often understanding comes from finding the right metaphors to fit the experience analogically into our meaning schemes, theories, belief systems, or self-concept. (p. 80)

In the case of our CoP, engaging in dialogue forced us to check the metaphors that emerged after engaging these group processes with our own meaning schemes. If the metaphors did not fit with our previous understandings, we were forced to examine them more closely and subsequently decide whether we would need to alter our individual perspectives.

Furthermore, dialogue connected all the factors together. For example, dialogue around site-based problems guided us to explore certain site-based artifacts. Discussion around site-based artifacts led us to decide as a group which areas we would need to gain further expertise in. As we discussed our new understandings from experts, we then negotiated new roles within the group, taking on different leadership opportunities. At each step within the process, negotiation through dialogue propelled us to the next step. At the same time, dialogue reinforced the connections of a safe learning space. As we explored different perspectives from teachers sharing their classroom experiences, dialogue provided a way of supporting one another through normalizing statements and affective support, enhancing relationships, and creating a safe space for learning.

It appears as if dialogue played a central role to the transformative process in two ways. First, dialogue was the central medium through which all the factors were realized. It was the primary mechanism through which meaning was negotiated, leading to group learning. Dialogue also played a second role: constructing personal meaning for each member. Dialogue between the members both challenged the teachers and supported them in examining how they made sense of all that they had learned. This directly led to a critical reflection about their own meaning perspectives, practice, and ongoing actions. Dialogue was the critical factor that enabled the learning to move from the group to the individual level, thus facilitating
transformative learning. Figure 15 presents an overview of the role of dialogue in the teachers' transformative learning experience.

![Figure 15: Role of Dialogue in the Teachers’ Transformative Learning Experience](image)

**Summary**

In this chapter, I presented four findings regarding how the participants of my study experienced transformative learning. Using data from individual interviews, emails, and recorded CoP meetings, I surmised that the following eleven factors contributed to fostering the teachers’ transformative experience:

- exploring student artifacts and practice,
- exposure to research and expertise,
- gaining alternative perspectives,
- evaluation of new practices,
- feedback and affirmation,
- ongoing reflective practice,
- site-based work,
- supported leadership,
- safe relationships,
- sustained periods time with consistency, and
- dialogue.
The primary finding of this study is that a relationship exists between these factors. Patterns in the data revealed that the eleven factors could be clustered into two broad groups: those that acted to provoke questions about the status quo and those that fostered a safe learning space for the participants. Most interesting was the finding that these two broad groups were interdependent on each other. In other words, the provoking factors were not engaged without a safe learning space, and the critical questioning of the status quo drove how the safe learning space factors, such as site-based focus and expertise, were used. This relationship implies the need for both types of factors to foster a transformative learning experience.

The second finding addressed the larger question of how a CoP structure facilitates a transformative experience. This discussion chapter considered how the main dimensions of a Community of Practice – joint enterprise, mutual engagement, and shared repertoire – helped to foster the development and use of each of the factors that the teachers identified. I found that the process of negotiating a joint enterprise facilitates supportive relationships and shared leadership. Establishing a joint enterprise also fosters the use of a common site, student artifacts, and an exploration of personal practice. The second dimension of a CoP, mutual engagement, requires members to seek out different forms of expertise and new perspectives to better meet the demands of the group. At the same time, mutual engagement reinforces the value of relationships within the group and promotes leadership from within. Finally, the shared repertoire central to a CoP is contingent on the culture of a particular site and the use of school-specific artifacts and practice. The constant evolution of shared repertoire throughout the CoP helped to promote evaluation and reflection on the teachers’ practice. The nature and the structure of the Community of Practice reinforced each factor the teachers identified as critical to their individual transformation.

The third finding was that the members of the CoP moved through the predictable group development stages of forming, storming, and performing (Tuckman, 1965), with the unusual addition of an extra stage. In the third year of this CoP, the activities of the group members took a marked turn as the teachers started to actively disseminate their new knowledge outside the group. I referred to this stage as Mobilizing. At this stage, with a new sense of agency and empowerment, each teacher felt a deep need to share their new knowledge within the grade, throughout the school, and beyond the school walls.
The fourth finding, and perhaps the most surprising, was the role of dialogue in the transformational process. Initially dialogue was identified as one of eleven transformational factors by the teachers. However, it appeared to play a pivotal role in connecting the other ten factors. More importantly, through dialogue the learning moved from a group level to an individual level and through this process teachers came to question their individual beliefs and assumptions, which defined the transformational process.

Although each teacher had individual reasons for joining the Writing CoP, their interviews highlighted a remarkable similarity in the factors that they felt influenced their transformative experience. The findings from the teachers’ interviews were also reflected in the emails and meeting recordings that I analyzed. All four teachers stated the criticality of safe relationships, effective leadership, a grassroots problem, and time to their engagement with the CoP. In addition, they reported that significant learning came from considering student artifacts, expert input, new perspectives, and evaluating their practice in relation to the problem. Most of all, the members reported that the dialogue surrounding these processes had the most significant impact on their personal understandings.
Chapter 6 – Conclusions and Recommendations

The purpose of this study was to explore the transformative professional development experiences undergone by four teachers as they participated in a CoP. The conclusions made in this study address two broad research questions: 1) What are the key factors that facilitate the transformative learning process for teachers? and 2) How did a Community of Practice model facilitate transformative professional development? The study also highlights two additional findings concerning: 1) the importance of dialogue as a medium through which learning moves from a social construct to an individual construct and 2) how teachers’ social learning occurs in a series of phases in professional development groups. The findings and conclusions from each area are summarized below. Last, I present several recommendations for implementing professional development for teachers and suggestions for future research that might further enhance our understanding of effective teacher PD.

Eleven Key Reciprocal Factors in Teacher Transformative Learning

The first major finding of this case study is that four critical factors helped to develop a safe learning space for teachers to engage in professional development. A site-based problem, supportive leadership, safe relationships, and time all contributed to creating a safe environment that allowed the teachers to divulge struggles with their specific practices and openly admit where they needed more knowledge. The safe space also created an environment that valued diversity and encouraged the teachers to represent different opinions, allowing them to respectfully challenge each other’s ideas and practice, ultimately leading them to question and alter their underlying meaning perspectives.

I identified a second group of five factors that were key to driving teacher learning experiences: the use of artifacts, contact with experts, exposure to new perspectives, evaluation and affirmation of new practice, and ongoing reflection. Each factor in this group acted as a catalyst to spur the teachers to examine and question their practice and challenge the status quo. The eleventh factor, dialogue, was critical in the transformative learning experience. The unique role of dialogue became a separate finding in this study.

The most important finding from this case is the need for both types of factors to be present in teacher professional development – those creating a safe learning environment and those serving as catalysts causing teachers to question their practice and beliefs. In this case
study, if the teachers had engaged in a safe learning environment but did not have catalysts to cause them to question their practice, they would not have identified the maladaptive assumptions and beliefs driving their practice, and consequently would not have experienced substantial change. Likewise, if the teachers had engaged with factors that challenged their practice without a safe learning space, they would not have shown the diversity and authenticity required to challenge each other and themselves. Thus, an interdependence exists between the two groups of factors identified. Both a safe learning environment and catalysts for inquiring into practice must be present for teachers to gain the full benefit of teacher professional development.

**Characteristics of a CoP Facilitate the Engagement with the Key Factors**

The second major finding of this case study was that the structure of the Community of Practice model helps to facilitate the development of the key factors identified above. The CoP characteristics of joint enterprise, mutual engagement, and shared repertoire (Wenger, 1998) reinforce and develop the factors identified as key to the teachers’ transformational experience. In the process of negotiating a joint enterprise, members must consider the unique artifacts and context of the site where they teach. In many ways, this draws out commonalities between the members, strengthening the relationships of the group. The joint enterprise also creates a need for ongoing reflection on each member’s practice as they consider their part in the enterprise. Negotiation of the CoP’s joint enterprise requires the members to use their knowledge of the site and the artifacts produced there, reflect on the individual strengths and practice of each member and build and rely on the relationships within the group.

A CoP model depends on mutual engagement of the members, which involves a reliance on the competence of others with no one member providing all the skills to meet the group’s needs. Each member is relied upon to fulfil different leadership roles. This means that members must seek expertise in areas where they lack competence. They also show a type of supportive leadership as they use their individual expertise to help meet the needs of the group. As members are reliant on each other to fill different roles in the group, diversity is valued, meaning that different members are reinforced for bringing different skills and new perspectives to the group. The nature of the CoP and mutual engagement demand that members seek out expertise, expose each other to new perspectives, and take on leadership roles.
Finally, a CoP is dependent on a shared repertoire that is continually evolving as members seek out new ways to answer questions from their inquiry. Members’ knowledge of repertoire grows from exposure to expertise, examining artifacts, and evaluating new practices. As members consider shared practices, understandings, and experiences from their shared repertoire, they begin to see a connection between each other and the site where they practice. This reinforces the feelings of safety, support and group motivation. Hence, building shared repertoire requires internal and external expertise, evaluation of new practices and artifacts. As shared repertoire is built, so is a sense of a common purpose, strengthening the engagement in the project.

The CoP structure reinforces the impact of the key factors, helping teachers engage with the transformative learning process. Traditional PD that is delivered in a top-down fashion does not demand the same type of involvement from teachers. As such, they do not engage in these critical factors, which often means there is no change in the beliefs or assumptions that drive practice and no resulting change in practice.

The Role of Dialogue as a Key Factor

The final key factor identified by participants as significant to their learning experiences was dialogue. Dialogue was the medium through which participants enacted many of the factors essential to transformative learning. Dialogue facilitated factors, such as exploring artifacts, exposing different perspectives, and evaluating new practices through the CoP structure. Dialogue involving the catalyst factors pressed members to negotiate current practices and outcomes. In this way, learning began with discussions in the group but then moved to an individual level where teachers considered the validity of their own assumptions around their practice. Without the deep, sustained discussions in the group, the teachers might not have had the means to make visible and question the beliefs and assumptions that drove their practice. In this case study, for teachers to experience transformative learning, they needed exposure to sustained, targeted and meaningful dialogue in which they could question and construct their understandings of practice.

Teacher Empowerment, Agency, and Emancipatory Action

One of the most intriguing findings of this case study were the changes teachers reported in their sense of efficacy and agency throughout the professional development process. In this
case study, it became clear that the CoP’s development closely followed Tuckman’s group development model (1965) with one exception. After moving through the forming, storming, norming, and performing phases, the teachers appeared to move through an additional phase that might be called emancipatory. These teachers began the CoP as frustrated professionals who, despite years of trying, where unable to solve a significant problem in their practice. This frustration led teachers to feel as though they were ineffective and incompetent in areas of their practice, or alternatively, the teachers believed that the students were just not capable of the expectations set for them. By the end of the CoP cycle, these teachers spoke about a developing sense of agency. They showed a strong sense of efficacy in their abilities as professionals to address problems in their classroom, find appropriate solutions, and implement strategies that best supported their students. The transformation in the way teachers regarded their ability to meet their students’ needs was a clear case of teachers demonstrating praxis.

Most notable was the change in their actions during their final year in the CoP, where they progressed from mostly researching and trying new strategies to disseminating their knowledge in multiple ways and at multiple sites. The change in their actions was consistent with the teachers’ reported desire to share their knowledge, influence other teachers struggling with writing problems, and make a difference in the lives of students beyond the borders of their own schools. At its best, the change in the teachers’ self perception and agency could be called emancipatory action and reflects the powerful results that can come from effective professional development.

**Recommendations**

Given the findings of this case study, I offer several recommendations for teacher professional development programs. These recommendations are addressed to administrators, facilitators of PD, and teachers who design and engage in professional development with a goal of changing teacher practice.

Provided that multiple key factors contributed to these teachers’ experience of transformative development, it becomes important to carefully consider the design and implementation of teacher professional development programs. At the least, it is critical that factors that help to support a safe learning environment and factors that act as catalysts are included in the design.
Designers of teacher professional development should:

1. Ensure that the inquiry is linked to site-based problems. This includes a consideration of the unique school/student culture and how the problem manifests itself in that specific context.

2. Professional development should be implemented through a CoP-like structure that allows for shared leadership. Leadership needs to be an active part of the learning process, and a shared leadership model allows for members to fill positions determined by their talents, level of engagement, and necessity. Part of this leadership is the eventual dissemination of the learning beyond the CoP borders, fostering teacher investment, empowerment, and agency. Allowing for opportunities for shared leadership requires flexibility and a release of control from formal leadership. Mentorship from outside sources should be strongly encouraged.

3. Engage in catalyst activities that drive CoP members to question the current state of teacher practice as it relates to challenges that they are dealing with. These activities might include:
   a. thoroughly examining student artifacts, with close examination of data collected from student artifacts, is critical to illuminate problem patterns;
   b. rigorously tracking and evaluating new strategies and programs that are implemented; and
   c. bringing in outside expertise to expose alternative views of the problem and solutions helps to eliminate the cognitive biases the staff may hold.

4. Create significant time and space for in-depth discussions between members through all stages of the inquiry process.

Recommendations for Future Research

A case study examines unique individuals in a specific context. As such, many of the limitations of this study highlight important questions that further research would help to answer.

1. Given the four teachers’ well-established, supportive relationships prior to joining the Community of Practice, future research investigating the experiences of different teachers within a CoP should be conducted. Research focusing on different types of pre-existing relationships between CoP members may provide insight into the important roles that
safety, support, and camaraderie play in an adult learning environment. Furthermore, investigating teachers with different levels of teaching experience would provide useful information into how teacher experience features in group formation for teacher PD.

2. A similar study should be undertaken examining the function of leadership within a CoP structure. This case presented a unique anomaly of having no formal leadership involved with the group, yet having an effective outside mentor. This is atypical of school professional development structures. Investigating whether the same level of learning and internal leadership would emerge with a more traditional school leadership structure would be beneficial.

3. Finally, research investigating the use of these key factors with alternative group structures would provide insight into the potential transfer of these key factors to different professional development structures. Can these key factors be embedded in larger teacher driven professional learning communities? Would they transfer if the learning goal were predetermined by administration, and are they as effective in remote learning settings, such as internet-based professional development groups?

After years of participating as a teacher in mostly ineffective professional development, my experience as a participant in the Writing CoP struck me as remarkable. Not only did I see dramatic change in my practice and my students’ writing outcomes, but I also observed the incredible change in my colleagues, from frustrated and disheartened to empowered, confident teachers who knew they could make an impact on their students’ learning. The research shows that too often well-intentioned, expensive teacher PD does not make a long-term change in teacher practice or student outcomes (Avalos, 2011; Campbell et al., 2017; Vescio, 2008). This case study demonstrates that, under the right conditions, teacher professional development can be not only effective, but transformational for teachers. Although the insights gained from this case may not be directly transferable to all teacher professional development, this case study increases our understanding of the type of conditions that lead to effective PD for teachers. The findings suggest that teachers can engage in learning that helps them become better teachers and ultimately fulfill their goal of creating the best learning environment for their students.
Epilogue

The four teachers stand across the stage surveying the packed room. Ava draws in a deep breath and begins to deliver the last lines for the final slide of their presentation. On the screen behind her is a picture of a beaming child in the author’s chair preparing to share her writing.

Ava looks into the audience and summarizes, “After four years, this is what I know for sure…when you give a gifted child the proper tools and show them how to use them, they feel a deep sense of pride and accomplishment. When they sit in the author’s chair and read the words that they wrote, they see themselves not as students but as true authors. Their buttons are bursting as they realize their words on the page not only show the ideas in their heads, but they sound like the words from their favourite writers. It is in these moments that my own buttons, as a teacher, are bursting, too.”

With that, the room is filled with enthusiastic applause. The teachers on stage take this moment to steal a glance at each other as they consider just how far they have come. Each one of the audience members has come to this international conference and chosen to hear them speak about teaching writing. Having come full circle, these four teachers, who a few short years ago were the knowledge seekers, are now the knowledge provokers.

The teachers don’t have long to relish the moment though. Soon enough the lines of audience members begin. Everyone has questions. With a smile and a new air of confidence the four teachers start answering questions that spark the inquiry process to begin anew.
References


Appendix A: Pre-Interview Survey

Pre – Interview Perspective Transformation Survey
This survey asks you to reflect on your teacher professional development experiences from the Writing Community of Practice that you took part in from September 2012 to June 2015.

The survey takes no more than 20 minutes to complete and your responses will remain confidential. Thank you for being part of this project; your cooperation is greatly appreciated.

1. Would you characterize yourself as one who usually thinks back over previous decisions or past behavior? Yes____ No____

Would you say that you frequently reflect upon the meaning of your Writing COP professional development for yourself, personally? Yes____ No____

2. Thinking about your professional development experiences with the Writing COP, check off any statements that may apply to your teaching practices.
Please answer the following questions by circling the descriptors that best represents your response,

   a. I had an experience that caused me to question my teaching practices.

   b. I had an experience that caused me to question my ideas about what a teacher should do or how a student should act.

   c. As I critically revised my ideas, I realized I no longer completely agreed with my previous teaching values, beliefs or assumptions.

   d. Or instead, as I critically revised my ideas, I realized I still agreed with my teaching values, beliefs or assumptions.

   e. I realized that other teachers also questioned their teaching values, beliefs or assumptions.

f. Over the period of the COP I began to feel uncomfortable with some traditional teaching expectations in my school environment.

Strongly disagree  Disagree  Agree  Strongly agree

g. As I participated in the Writing COP I thought about acting in a different way from my usual teaching values, beliefs or assumptions.

Strongly disagree  Disagree  Agree  Strongly agree

h. Over the period of the COP I tried out new pedagogy/techniques so that I would be more comfortable with my revised teaching values, beliefs or assumptions.

Strongly disagree  Disagree  Agree  Strongly agree

i. I tried to figure out ways to adopt these new teaching practices.

Strongly disagree  Disagree  Agree  Strongly agree

j. I gathered the information/resources I needed to adopt these new ways in my teaching practices.

Strongly disagree  Disagree  Agree  Strongly agree

k. I began to think about the reactions and feedback from my new teaching practices.

Strongly disagree  Disagree  Agree  Strongly agree

l. I took action and adopted these new ways in my teaching practices in a consistent way.

Strongly disagree  Disagree  Agree  Strongly agree
Appendix B: Interview Questions Round 1

Interview Questions Round 1:
These interview questions are designed to gather information about your experience on the Westmount Writing Community of Practice. The questions will reflect the entire time that you were part of the CoP and a period of time just before you joined the CoP. Remember that the CoP began in September 2012 and if possible I would like you to reflect on your time in the CoP from September 2012 to June 2015.

First, I would like you to think back to the tie before you joined the CoP. Specifically, I would like you to think about your writing practices. How did you feel about yourself as a teacher of literacy? The next section of questions will deal with how you were feeling and the experiences you had before you began your work on the Writing CoP.

Can you describe how you felt about your writing practice before the CoP? What type of beliefs around teaching literacy did you have? Can you think of any specific experiences that you had inside or outside the classroom that were related to teaching writing?

What made you seek out involvement in this CoP? Can you remember any significant events that brought you to the writing CoP specifically or sparked your desire to understand more about teaching writing?

Now I would like you to think about yourself as a writing/literacy teacher today; How do you feel about your writing/ literacy instruction now? How do you feel about yourself as a writing teacher? Can you think of any recent experiences around writing in the classroom or with students? Can you describe them and how you felt about them?

Has there been a change in how your feel about yourself as a teacher of writing? If so, can you describe the change?

Next, I would like to talk to you about what happened after you joined the Writing Community of Practice. Specifically, I would like you to think about how your ideas about writing instruction began to change, and what may have influenced this change.

Can you describe some of the changes in your beliefs or assumptions about literacy?

Can you think of when you began to realize that your assumptions were changing, was it immediately, mid-change or once you had changed entirely? What made you aware that you had changed?

Can you think of critical moments, or topics when you felt a shift in your understandings? What were these critical moments?

Now, I would like you to think of what your involvement with the CoP looked like. What would a typical meeting look like? What types of activities were involved and who did what. Think about what might have helped you examine and change your assumptions/beliefs and how those changes came about. (ie. Persons, specific actions or experiences)

What activities were most meaningful to you and why?
Can you describe the relationships within the COP and the role they may have played in your experience? What you do think was important about those relationships to your professional development?

Can you think of factors outside the CoP (outside the CoP environment) that had an impact on your change in beliefs/assumptions (this could be other individuals outside the CoP or other experiences?) Can you explain how these helped in changing your beliefs or assumptions? Can you explain how involvement with the CoP helped you to change your assumptions? Finally, I would like to think about how your literacy practices have changed over the last 3 years. I would like you to think about the connection between your beliefs and the changes in your literacy practices. Think about the process of changing your literacy practices in your classroom. What helped you to complete that process as well as barriers that may have impeded making changes to your practice?

Can you think of any major events or happenings within the COP that influenced your change in literacy practice?

What helped you to feel confident that the changes you were making in your practice were “good” changes?

Where the changes you made sudden changes or were they developed over time? Why and why not?

Did the role of action research (implementing, evaluating, reflecting cycle) help you in making effective changes in your practice? If so, why?

What role did feedback play in changing your assumptions or your practice? What types of feedback was most meaningful to you? (ie teacher discussion or evidence from student writing samples)?

Finally, think about your experience over the last 3 years on the CoP. I would like you to reflect on your overall experience of change.

Can you think of 2 or 3 factors that had the biggest impact on your professional development and making change in your teaching practice?

If you think of other professional development experiences and compare it to this COP experience, can you highlight any differences?

What were your favourite parts of this COP and why?

If you were going to design professional development experiences for teachers, what would be essential parts of the experience and why?

Is there anything that would have made your professional development experience more effective, or more meaningful?

What has been most meaningful about your COP experience?

Do you have any questions?

Can I request a follow up interview with you, if I would like to gain more information regarding your answers?
Appendix C: Interview Questions Round 2

Interview Round 2 - Identify major turning points in the transformative process

Can you identify the major turning points in this three-year process and why they were turning points for you?

What enabled the transformative process to happen? The first cycle was learning and implementing a new practice and the second cycle was, “why is this working and how is this changing what I believe”. What kind of things enabled our group to get to this second phase?
Appendix D: CoP Timeline

Power Point slides used as a memory device for round 2 interviews
Appendix D Continued

- Article on explicit instruction of letter learning
  - Jan 13

- Mid-term evaluation of pilot program
  - Jan 21

- Article on handwriting automaticity
  - Feb 15

- Attend handwriting session
  - Mar 9

- RAGC abstract submission
  - Feb 10

- Article on handwriting automaticity
  - Feb 15

- Shape hand article on printing importance
  - Feb 10

- June Goodall writing prompt
  - Jun 8

- Snagit for RAGC presentation
  - Jun 15

- MLA proposal submission
  - Jun 17

- Invitation to present at Bitter Hill School
  - May 13

- Invitation to present at Bitter Hill School
  - Jul 9

- Ongoing evaluation of p. 2 Pilot Program
  - Apr 1 - May 29

- Identify and collect specific students as case studies
  - Apr 1 - May 29

- June Goodall prompt
  - May 15 - Jun 14

- Create Writing Scope and Sequence R: 5
  - Mar 18

- B creates secret formula for writing stories
  - May 14

- N & P present at Northern Charter Schools
  - May 20

- Meet with grade 3 and 4 teachers to discuss school writing expectations
  - Apr 15

- M & P present writing workshop through E.S.C.
  - Apr 19

- B creates peer editing tool for editing writing
  - Mar 18

- Invitation to present at Charter School Conference
  - Mar 10

- A & B present at TAAPCS to principals and superintendents
  - Jan 16