SUPPORTING TEACHERS' PROFESSIONAL LEARNING THROUGH COLLABORATIVE INQUIRY: A CASE STUDY

by

Kimberley MacNeil

B.Ed., University of British Columbia, 2006
M.A., University of British Columbia, 2013

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The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, the dissertation entitled:

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submitted by Kimberley MacNeil in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Special Education

Examiner Committee:

Dr. Deborah Butler, Professor, Educational and Counselling Psychology and Special Education, UBC
Supervisor

Dr. Nancy Perry, Professor, Educational and Counselling Psychology and Special Education, UBC
Supervisory Committee Member

Dr. Leyton Schnellert, Associate Professor, Curriculum and Pedagogy, UBC
Supervisory Committee Member

Dr. Anthony Clarke, Professor, Curriculum and Pedagogy, UBC
University Examiner

Dr. Jillianne Code, Assistant Professor, Curriculum and Pedagogy, UBC
University Examiner

Dr. Christopher DeLuca, Professor, School of Graduate Studies, Queen's University
External Examiner
Abstract

Teachers' professional learning is important for optimizing students' learning opportunities in schools. Establishing professional learning that supports improvements in teaching and learning is difficult work, and is enhanced by attending to the experiences, learning needs, and agency of teachers. Collaborative, inquiry-based approaches are promising because, through them, teachers have opportunities to learn in sustained and situated ways which can support them in making connections between current practice, their contexts, and new learning. However, more understanding is needed about how to design and support collaborative inquiry in ways that balance teachers' needs for both agency and support.

With the goal of advancing understanding about designing and supporting teachers' professional learning through collaborative inquiry, this study sought to: document how one community of inquiry (CoI) was designed to foster teachers' learning; examine the process of teacher learning; and explore how teachers' learning and practice were impacted through their participation. Using a case study design, I co-facilitated a CoI with eleven educators interested in fostering students' self-regulated learning (SRL). Data collected for the study included: (1) artifacts documenting resources and supports offered through the CoI; (2) assignments educators submitted to represent their learning and practice outcomes; (3) field notes; and (4) interviews with educators.

Findings were that the CoI was deliberately structured with attention to key professional learning processes (e.g., collaborative, sustained, situated). Moreover, supports (e.g., resources; guiding tools for inquiry processes; individualized feedback from the facilitator) were offered to participants as they made choices about their learning. Participants engaged in multiple, continuous inquiry cycles. Teachers' monitoring (e.g., observing student responses to new
practices) was key for linking inquiry processes and when participants reflected on practice, identified tensions, and brought in new professional learning they most fully engaged in cycles of inquiry. Participants collaborated both within and beyond the CoI and exercised agency for their own learning. They also reported learning about SRL and SRL-promoting practices, benefits for their students, impacts to their process of professional learning, and influencing their colleagues' learning and practice beyond the CoI. Contributions, limitations, and implications are discussed.
Lay Summary

My study advanced understanding about how to support teacher professional learning using an approach called collaborative inquiry, where teachers learn by pursuing questions they have about students' learning. Through a supported process, teachers work together to build new understandings based on what they are trying in their classrooms and new ideas they access in the learning community.

Findings showed how an initiative can be built to offer educators choice about how they learn in a supported way. Results were that educators learned more about the topic they were interested in, saw benefits for their students, and made efforts to share their learning with others. Implications include the importance of offering professional development that is in line with teachers' priorities; invites teachers to collaborate and investigate questions they care about; and provides supports and ideas for educators to access along the way.
Preface

This dissertation is an original intellectual product of the author, Kimberley Ann MacNeil. The research reported herein was covered by UBC Behavioural Research Ethics Board certificate of approval number H15-01929.
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Dedication

For my parents.
Chapter One: Introduction

Supporting teachers’ professional learning is vitally important to optimize learning opportunities for students in schools. Effective professional learning not only benefits students but also helps educators to exercise agency and fulfill their sense of professional responsibility towards learners (MacNeil et al., 2021). However, attending to the complexity of improving teaching and learning in schools depends heavily on the quality of professional learning opportunities. Over the last few decades, researchers studying professional development have recounted the ways in which well-intentioned providers have struggled to design for, and support, actual improvements in teaching and learning (Guskey, 2014; Hargreaves, 2019; Lindvall, 2017). At the same time, research in this area has contributed to an understanding of the conditions that contribute to effectively-designed professional development opportunities (e.g., Brown, 2019; Brown et al., 2021; Butler & Schnellert, 2012, 2020; Ermeling, 2010). Nevertheless, outcomes of even promising initiatives continue to vary, justifying calls for continued research in this area (Ainscow et al., 2016; Webster-Wright, 2009).

Many challenges have been identified with prevalent approaches to professional development. For example, particularly problematic are professional development approaches that have individuals disseminating practices and theoretical rationales to teachers who lack the opportunity to engage in a process of knowledge construction that considers their experience, understanding, and contexts (Timperley & Alton Lee, 2008). In such approaches, teachers are positioned as recipients of information (Webster-Wright, 2009) with others taking on the role of abstracting and generalizing knowledge for their consumption (Cochran-Smith & Lytle, 1999b; Timperley & Alton-Lee, 2008). Similarly, decontextualized workshops fail to give teachers the opportunity to build from experiences and make connections between emerging understandings
and practice (Butler & Schnellert, 2012). Further, professional development that limits teachers’ opportunities to make decisions about teaching and learning in response to students’ needs leaves little room for teachers to exercise agency (Lasky, 2005) or “the capacity to exercise control over one’s own thought processes, motivation, and action” (Bandura, 1989, p. 1175). Constraining teachers’ agency may undermine their existing motivation to learn and test out new practices (Ketelaar et al., 2012).

As a response to disappointing results from many professional development initiatives, researchers have expressed a need to support teachers to build from their existing knowledge, experiences, values, and sense of responsibility to support teachers’ learning and changes in practice in ways that are sensitive to their agentic needs as professionals (Butler et al., 2015). Research also suggests that teachers’ learning is better supported when they can engage in a process of ongoing reflection on action and maintain a focus on their own students’ learning needs (Schnellert et al., 2008).

Along those lines, collaborative, inquiry-based professional learning approaches (Ciampa & Gallagher, 2016; Dana & Yendol-Hoppey, 2019; Timperley et al., 2014) have particular potential to better attend to teacher and student needs alike in ways that are sensitive to the complexity of improving teaching and learning (Avalos, 2011). Such approaches center collaborative inquiry (CI); CI involves educators working together to inquire into their practices over time as they deliberately engage in learning processes and make thoughtful changes to practice. CI addresses challenges outlined earlier in part by providing teachers with opportunities to learn in sustained ways and situated contexts that bolster opportunities for them to make connections between past experiences, current teaching contexts, and new learnings (Bruce et al., 2010; Butler & Schnellert, 2008; Schnellert & Butler, 2021). Further, CI can foster opportunities
for educators to consider their experiences from different perspectives as they engage in critical
dialogue about practice (Little, 2003; Nelson, 2009; Vriikki et al., 2017). And, in contrast with
professional development approaches that constrain teachers' sense of agency, through CI
teachers can establish questions and pursue learning they deem important for themselves and
learners in their contexts (Halbert & Kaser, 2022). Further, through their engagement in inquiry
processes, educators have the potential to build up their perceptions of self-efficacy, or "beliefs
about their capabilities to exercise control over events that effect their own lives" (Bandura,
1989, p. 1175), when they trace how their own efforts effect positive changes (e.g., for students,
colleagues; Butler et al., 2015). Finally, inquiry-based learning is intended to boost teachers’
ongoing inquiry-oriented approach to learning and practice, supporting their propensity to adapt
(Muijs et al., 2014), innovate, and engage in ongoing improvements (Meijer et al., 2017).

Despite encouraging research findings, we need to know more about how to best support
teacher learning in CI opportunities. To build on the emphasis on teachers’ role as knowledge
constructors, coupled with pushback against experts disseminating knowledge, attention needs to
focus on the inputs required to support educators’ shifts in thinking in concert with their agentic
learning. Thus, more understanding is needed about both supportive inputs (e.g., informational
resources, process protocols, prompts for self-reflection, facilitator actions) and how individuals
might benefit from them as they engage in CI processes for their learning (Butler & Schnellert,
2020; de Jong et al., 2019; Kager et al., 2022; Sjoer & Meirink, 2016). To address this need, in
the current study I examined the process of teacher learning in a collaborative, inquiry-based
professional learning initiative which was designed to balance teachers’ needs for both agency
and support.
To frame my study, I asked the following three research questions: (1) How was learning supported in a particular collaborative, inquiry-based professional development context? (2) How did educators take up opportunities for learning as constructed in the community of inquiry? (3) How was teachers’ learning and practice (separate or together) impacted through participating in a CI approach to professional development?
Chapter Two: Theoretical Framework

In this dissertation, I investigated how supportive inputs provided as educators engage in collaborative inquiry (CI) might support them in making meaningful and situated shifts in their practice. In this chapter, I review research that helped provide conceptual and empirical bases for this work. To that end, I start by reviewing literature that has contributed to understanding key features of professional development that supports professional learning. Next, I define a particular form of professional learning, CI. In the third section, I review evidence that informs understandings about how to foster effective CI. In the final section, I connect the literature on professional learning and CI, as discussed, to the community of inquiry which was the context for the present study.

Supporting Effective Professional Learning

To better understand the ways in which CI holds promise as an approach to professional learning, mutually constitutive key elements for supporting professional learning are outlined in this section. First, I outline research that examined the influence of teachers’ opportunities for collaboration. Second, I review literature related to the benefits of sustained opportunities that have educators learning in situated contexts. Next, I describe how teachers have a key role to play in (co-)constructing knowledge in professional learning initiatives. Finally, I highlight the ways in which these elements alone or together can influence teachers’ sense of agency.

Collaboration

The powerful role of collaboration is well-documented in research and is considered a key aspect of effective professional learning for educators (Butler & Schnellert, 2012; Cochran-Smith & Lytle, 2009b; Darling-Hammond et al., 2009; Durksen et al., 2017; Lefstein et al., 2020; Lysberg, 2022; Putnam & Borko, 2000; Rytivaara et al., 2019; Schnellert et al., 2008; Schnellert
Professional learning programs are more likely to support rich forms of learning when they provide the structural support necessary for teachers to learn with and from one another (Darling-Hammond et al., 2009; Horn & Little, 2010; Schnellert & Butler, 2021; Trabona et al., 2019). Indeed, advocates of collaborative learning emphasize its potential to support educators to spur one another to reflect on (Day, 1993; Vangrieken et al., 2015) and question existing assumptions about teaching and learning (Lefstein et al., 2020; Mockler & Groundwater-Smith, 2015; Putnam & Borko, 2000) in service of learning from one another and collaboratively generating new meaning (Cochran-Smith & Lytle, 2009b; Mockler & Groundwater-Smith, 2015; van Schaik et al., 2019). However, merely providing opportunities for collaboration can be inadequate for achieving desired outcomes (Charteris & Smardon, 2015; de Jong et al., 2019; Nelson, 2009; Rytivaara et al., 2019; Trabona et al., 2019; van Schaik et al., 2019; Vostal et al., 2019), in part, because of how teachers' collaborative interactions can both "open up and close off opportunities for teacher learning and consideration of practice" (Little, 2003, p. 939). As a result, more understanding is needed about how to foster opportunities for teachers to learn through CI.

**Sustained and Situated**

A second facet of powerful professional learning lies in creating opportunities for teachers to learn in a sustained way as linked to a situated context (Admiraal et al., 2021; Bruce et al., 2010; Butler & Schnellert, 2008, 2020; Darling-Hammond, 1997; Halbert & Kaser, 2022; Kaser & Halbert, 2017; Opfer & Pedder, 2011; Webster-Wright, 2009). In contrast with single, de-contextualized workshops, sustained and situated approaches support teachers to build from what they know about their practical contexts while giving them the chance to reflect on action over time and make connections with new learning (Bruce et al., 2010; Butler & Schnellert,
Arguments for situated professional learning are based on assumptions that learning is situated in practice; however, learning need not occur in practice alone but can extend to other professional learning contexts using practice-based experiences and artifacts (Ball & Cohen, 1999). Opportunities for learning in a situated way are often embedded in inquiry communities, which provide educators the opportunity to sustain their focus on student learning (Halbert & Kaser, 2022; Kaser & Halbert, 2017) and make productive links between learning, practice and information about how one’s own, or one’s colleagues’, students are responding to new approaches to teaching (Butler & Schnellert, 2008, 2012, 2020; Schnellert et al., 2008). However, more understanding is needed about how to provide opportunities for longitudinal and situated approaches to professional learning especially given that doing so within, and outside of, a teacher’s already busy day can be logistically challenging. Further, the ways in which partnerships between teachers, educational leaders, and/or university-based educator-researchers have the potential to support such professional learning approaches requires closer exploration.

**Knowledge Construction**

A third powerful approach to fostering effective professional learning is to create opportunities for educators' engagement in active knowledge construction. Unfortunately, forms of professional development that recruit experts to transmit knowledge to teachers fail to take into account the vitally important role that teachers’ experiences, understandings, and contexts play in their knowledge construction (Timperley & Alton-Lee, 2008; Webster-Wright, 2009). Such approaches cast experts as developers of teachers rather than as supportive resources to teachers’ active learning (Webster-Wright, 2009). They also position formal, expert knowledge as foundational to improving practice (Cochran-Smith & Lytle, 1999b).
In contrast, proponents of collaborative, sustained, and situated professional learning approaches conceive of educators as having a stake in (co-) constructing knowledge that is relevant to their contexts. When teachers learn together their individual knowledge, skills, and experiences become resources to a collaborative group (Horn & Little, 2010; Perry et al., 2015; Schnellert & Butler, 2021) enabling them to individually or together develop new meanings and possibly transform practice (Ball, 2009; Cochran-Smith & Lytle, 2009b; van Schaik et al., 2019). Such approaches contrast with the conception of teachers as technical implementers of new information and demonstrate benefits for teachers who have access to supports that help them focus on student need and make responsive instructional decisions (Butler & Schnellert, 2020; Schnellert & Butler, 2021; Schnellert et al., 2008). Extending understanding about how knowledge construction can be shared, resourced, and enacted among educators is necessary to effectively design powerful learning opportunities.

**Agency**

Finally, but not least significantly, professional learning opportunities that recognize teachers as key agents of change (Cochran-Smith & Lytle, 2009a; Spillane, 1999) are needed to foster meaningful improvement in teaching and learning (Harris et al., 2017). Indeed, recent calls are to support teachers to come together as agentic meaning makers (Philpott & Oates, 2017) to investigate practice in relation to the goals they have (Krille, 2020) that are in line with their values and beliefs (Korthagen, 2017). Approaches that support teachers’ agency assume that individuals bring leverageable expertise, knowledge, and experience to a learning community. Providing teachers with the space and support required to make decisions about their learning is also key for supporting them to build on their motivation to learn and experiment with new practices (Ketelaar et al., 2012). However, simply providing educators with opportunities to
make decisions about their learning and practice development are not enough to support them in making the changes they might hope for. Because educators’ opportunities to exercise agency for their own, and students’, learning are mediated by the sociocultural contexts in which they are based (Eteläpelto et al., 2013), building understanding about how educators exercise agency as they take up opportunities for learning through collaborative inquiry processes and as they interact with knowledge-building resources and other supports is needed.

In sum, research has identified four key elements for supporting effective professional learning, identifying the importance of nurturing professional development that is collaborative, situated and sustained, supportive of knowledge construction, and respects teachers' agency. In the next section, these elements are further interrogated with an eye to understanding how collaborative inquiry as a framework for designing professional learning experiences might provide rich opportunities for teachers to learn with and from one another, engage in fuller forms of practice- and learning-focused inquiry cycles, and act with agency as they take up resources and supports for their learning.

**Professional Learning through Collaborative Inquiry**

Collaborative inquiry (CI) is a promising approach to fostering learning opportunities for teachers given that, through CI, teachers are likely to have sustained opportunities to learn together, situate learning, construct knowledge, and exercise agency for their learning. In this section, I define CI, examine three prominent models of CI designed to advance educators' professional learning, and relate key aspects of CI to the literature on supporting effective professional learning. Then, I identify what is still needed in research to better understand how to support learning through CI and how the current study addresses that need.

*What is Collaborative Inquiry?*
CI is an approach to professional learning that incorporates teachers' opportunities for socially constructing knowledge and learning by engaging in dynamic and iterative cycles of inquiry (DeLuca et al., 2015). CI stems from the 1970s and 1980s when paradigmatic shifts held teacher research to be a medium through which teachers might exercise agency for change and generate theory rooted in practice (Cochran-Smith & Lytle, 1999a, 2009b). These shifts reflected the growing assumption that educators are knowers and agents within their own educational contexts, and critiqued notions of teachers as technicians who receive and implement others' knowledge about teaching (Clarke, 2023; Cochran-Smith & Lytle, 2009b). Correspondingly, teacher research began to move away from "research on teachers" to "research with teachers" (Clarke, 2023, p. 234). As a result of this shift, a professional learning movement rooted in advancing teachers’ opportunities to build knowledge from reflection on practice through practitioner inquiry has been developing for just under three decades (Cochran-Smith & Lytle, 1999a), informed by earlier ideas about the power of reflection for catalyzing new understandings (Dewey, 1938). In the early 1990s, growing trends in educational research "by teachers" set the stage for a variety of approaches to professional learning centered on teacher inquiry (Clarke, 2023, p. 234).

Forms of professional learning characterized by the use of deliberate reflection for generating knowledge are commonly referred to as teacher inquiry (Clarke, 2023), practitioner inquiry (Cochran-Smith & Lytle, 2009a), and inquiry (Dana & Yendol-Hoppey, 2019). Inquiry for professional learning often involves educators in making aspects of practice explicit (e.g., defining an issue), investigating issues of practice that spark curiosity, and sharing outcomes which provide opportunities for "those with a knowledge of teaching to react and respond to our work which, in turn, presents opportunities to extend and further our own and also the
profession's understanding of practice" (Clarke, 2023, p. 235). Inquiry is commonly animated through professional learning communities and professional learning networks which are useful for enabling the space and structures (e.g., protocols) supportive for individuals or groups of professionals to connect and learn through practice (Dana & Yendol-Hoppey, 2019). An array of professional development approaches that share an orientation towards inquiry include, but are not limited to, participatory action research, lesson study, and appreciative inquiry which emphasize trying new practices, lesson design and interrogating existing strengths respectively (Clarke, 2023; Cochran-Smith & Lytle, 2009a). Similarly, the subject of this dissertation, CI is an approach to professional learning grounded in inquiry and reflection.

In their scoping review, DeLuca et al. (2015) outlined how approaches to CI commonly incorporate three structural features. First, CI emphasizes collaborative processes through which educators engage in dialogue about experiences, which are assumed to be significant, relevant, and key for co-constructing meaning. The second structural feature common across cycles of inquiry involves educators taking some sort of action in their context in relation to the topic of inquiry. Taking action often involves teachers working together to build from what they know or are learning about their students to responsively plan and adapt teaching approaches. Third, cycles of inquiry incorporate continuous reflection in an effort to support teachers to make connections between their learning, practice, and experiences.

These three structures are often mobilized in communities of inquiry, which are learning environments that invite educators to come together, explore a shared interest, and "pose problems, identify discrepancies between theories and practices, challenge common routines, draw on the work of others for generative frameworks, and attempt to make visible much of that which is taken for granted about teaching and learning" (Cochran-Smith & Lytle, 2009b, p. 45-
Through communities of inquiry, educators engage in situated reflective processes and collaborative dialogue by taking up inquiry questions that often reflect "discrepancies between what is intended and what actually occurs" for students (Cochran-Smith & Lytle, 2009b, p. 41). The situated work of communities of inquiry reflects the assumption that educators have substantial understanding about what is going on in their contexts and are well-positioned to generate knowledge that will contribute to improving learning by critically reflecting on the practice and ideas of others. Communities of inquiry emphasize learning processes over outcomes and provide "the security and guidance for thinking collaboratively ... where personal meaning is put into the public arena for critical consideration" (Garrison, 2016, p. 54). These learning contexts not only provide opportunities to move from individual to shared reflection on practice, but can also support change more widely when educators make local knowledge "accessible and usable in other contexts ... thus helping to transform it into public knowledge" (Cochran-Smith & Lytle, 2009b, p. 43; see also Halbert & Kaser, 2022).

Current approaches to CI have the potential to engage teachers in a type of transformative learning that can occur when teachers are spurred to question their existing assumptions about teaching and learning (Halbert & Kaser, 2022; Mockler & Groundwater-Smith, 2015). Mezirow (2006) describes transformative learning as a process involving the alteration of "problematic frames of reference" which "selectively shape and delimit our perception, cognition and feelings" to "generate beliefs and opinions that will prove more ... justified to guide action" (p. 26). The power of critically reflecting on one's thinking and practice to build new ways of understanding is a key aspect of professional learning through CI.

Three Models of Collaborative Inquiry
In this section, I highlight three models of CI to provide a window into the ways principles of CI have been taken up by researchers and educators and also to set the stage for the research questions and context under study. The first model explored here is Halbert and Kaser’s spiral of inquiry. I chose to present this model as both an illustrative comparator and because participants in this study were introduced to Halbert and Kaser’s spiral of inquiry as a structural support to their learning (Halbert & Kaser 2013, 2022). Halbert and Kaser have been influential internationally in impacting professional learning and change because of their approach to mobilizing CI. Their model (developed in collaboration with Helen Timperley; see Timperley et al., 2014) has been taken up by educators from across roles (e.g., teachers, educational assistants, vice-principals, principals) to engage in "disciplined inquiry" (Kaser & Halbert, 2017, p. 32) about students' learning for the purposes of "making a difference in valued outcomes for learners" (Kaser & Halbert, 2017, p. 41).

Halbert and Kaser's spiral of inquiry incorporates six overlapping processes, each accompanied by complementary guiding questions (see Figure 2.1). They describe the spiral as a deliberate choice in that it visually emphasizes how educators and/or communities of inquiry move through inquiry processes in an iterative way, rather than in a specific sequence. As an entry to spirals, educators are invited to scan their contexts to gather evidence about student learning before then making decisions about where they plan to focus their attention to positively impact students. As they develop hunches, educators are asked to take a reflective stance on what they have observed and consider factors (including themselves) that may be contributing to the issues they have identified. As they work through the spirals of inquiry, educators are asked to be deliberate in considering the new professional learning they need to move forward and make changes to practice. Following practice changes, educators are encouraged to consider whether
and, by how much, they have impacted students' learning. Throughout these processes, educators ask: "What is going on for our learners? How do we know? Why does this matter?"

**Figure 2.1**

*Spirals of Inquiry (Halbert & Kaser, 2013; Reproduced with permission)*

Halbert and Kaser describe how educators participating in the spirals of inquiry approach are encouraged to share their learning with others. Through a networked approach, educators from different contexts and in varying roles are poised to stimulate and mobilize educational innovation. As such, their approach to professional learning is also premised on the notion that CI can effect educational reform on a broader scale.
The second example I chose to include here is a model of CI adapted from Helen Timperley (Timperley, 2011; Timperley et al., 2009), an internationally recognized scholar focused on educators’ professional learning, that was taken up by the Ontario Ministry of Education to foster professional learning at a provincial systems level (Ontario Literacy and Numeracy Secretariat, 2010, 2014; see also DeLuca et al., 2017; Hargreaves, 2019). As is depicted in Figure 2.2, the CI model adopted in Ontario includes determining goals for students’ learning as well as educators' own professional learning; deepening educators’ professional knowledge and skills; enacting practice changes that engage students in new experiences; and reflecting on impacts of efforts undertaken.

**Figure 2.2**

*Cycle of Inquiry Adopted by OLNS (adapted from Timperley, 2011; Timperley et al., 2009)*

The CI approach put forth in Ontario emphasized the variability in how inquiry cycles might play out and highlighted explicit attention to specific characteristics that support quality CI (see Figure 2.3). Namely the Ontario model suggests that productive CI is relevant to student
learning, involves collaboration, is informed by reflecting on one's actions, incorporates reasoned interpretations, involves adapting practices in response to what is learned through inquiry processes (and vice versa), and making reciprocal connections between theory and practice (OLNS, 2010, 2014).

**Figure 2.3**

*Seven Characteristics of Inquiry from OLNS 2010*

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>Student learning guides inquiry</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Teacher inquiry is a shared process</td>
</tr>
<tr>
<td>Reflective</td>
<td>Actions are informed by reflection</td>
</tr>
<tr>
<td>Reasoned</td>
<td>Analysis drives deep learning</td>
</tr>
<tr>
<td>Adaptive</td>
<td>Inquiry shapes practice and practice shapes inquiry</td>
</tr>
<tr>
<td>Reciprocal</td>
<td>Theory and practice connect dynamically</td>
</tr>
</tbody>
</table>

Overall, the Ontario example shows how a model of CI was elaborated with attention to the characteristics that might support inquirers' productive engagement in learning. As CI evolved in the Ontario context, emphases on these characteristics reflected efforts by provincial leaders to de-emphasize the idea that CI follows a predictable path or requires a specific set of steps. Instead, they highlighted these characteristics as "essential for promoting professional learning that contributes to student learning" (OLNS, 2014, p. 4).

The third model I chose to review for this dissertation is Butler and Schnellert’s (2012) situated model of teacher inquiry (see Figure 2.4). This model locates its theoretical roots in both the literature on professional development, as outlined earlier, and also in a model of self-regulated learning (SRL) as adapted to understanding teachers’ professional learning processes. SRL refers to active, intentional, and strategic control over one's learning before, during and after
engaging in learning activities (Butler et al., 2017). Self-regulating learners know how to control their thoughts, feelings and actions to reach goals and navigate the requirements of learning environments (Butler et al., 2017; Winne, 2018; Zimmerman, 2008). Metacognition, motivation, and strategic action are key dimensions of SRL (Butler et al., 2017; Perry et al., 2018; Winne, 2018). Metacognition refers to self-awareness of strengths and challenges in relation to what is needed for learning through a particular activity and is supported by reflection on one’s thinking and learning in particular contexts. Motivation is linked to agency and supports SRL because it shapes, and is influenced by, how individuals take up and maintain their engagement in learning activities and work towards goals. Significantly, strategic action is at the heart of SRL and is defined by engagement in cyclical processes that involve setting goals, planning for the use of strategies, enacting them to achieve goals, monitoring the efficacy of one's approaches, and adjusting responsively (Butler et al., 2017).

Butler and Schnellert (2012) describe models of SRL as "parallel to definitions of ‘inquiry’" (p. 1207), which also involve a cycle of goal-directed, iterative, and dynamic processes (i.e., setting goals, planning, enacting, monitoring, adapting). More specifically, they tease apart how teachers can engage in both practice- and learning-level inquiry processes that contain a core focus on student learning. First, their model suggests that teachers engage in practice-level inquiry when they identify goals for their students' learning, plan practices to advance their goals, monitor how students respond to practice changes, and make needed adjustments to their approaches. These cycles are centrally focused on advancing practice to better achieve outcomes for learners. Second, Butler and Schnellert characterize practice-level inquiry cycles as nested within learning-level inquiry cycles. Educators engage in learning-level inquiry when they identify gaps or needs to set goals for their own learning, intentionally make
plans for how to address their goals (e.g., by accessing supportive resources), monitor how their learning is unfolding, and adjust as needed. Butler and Schnellert emphasize the iterative nature of practice- and learning-focused inquiry, eschewing notions that one should necessarily move neatly and completely from one phase of inquiry to the next. Rather, inquiry cycles can exist within inquiry cycles as individuals self-regulate their practice and learning.

**Figure 2.4**

*Butler and Schnellert's (2012) Model of Teacher Inquiry*

Common across the three CI models outlined above is a focus on student learning, with information about students’ needs and progress expected to catalyze inquiry. Further, reflecting on students’ responses to enacted teaching approaches is expected to sustain inquiry processes. Each model also highlights the necessary role that new and/or deeper professional learning plays in inquiry cycles given that inquiry-based processes are expected to foster teacher learning.
Finally, each model assumes the process to be iterative and non-linear with micro-level inquiry processes expected to inform how inquiry unfolds as teachers' questions are developed and re-developed.

The first two models have been influential for energizing professional learning in Canada and internationally. All three models are useful for showing how CI processes can be conceptualized and put to pragmatic use. To inform my analysis, for this study I took up Butler and Schnellert's (2012) socio-constructivist model because, given its theoretical perspective, it is helpful for understanding how individuals are constructing and building knowledge in a social context. I also chose it because they developed it as part of research investigating how educators were fostering SRL by students, which was also the explicit focus in the current study. Finally, Butler and Schnellert's model is helpful for my study because it offered a lens for considering how practice- and teacher learning-level inquiry cycles are interconnected, which is also useful for investigating professional learning processes (see also Butler & Schnellert, 2020; Butler et al., 2013).

In the current study, I focused on building from research that Butler and Schnellert have undertaken previously to advance in their conceptualization of CI. I chose to adapt their model to further conceptualize and investigate how an initiative can bring together multiple dimensions identified in the literature as supportive of CI. In my adaptation I foreground what teachers bring to their learning (individually and together) and the space and support needed for them to act with agency in defining their engagement within learning opportunities. I also highlight the need to support fuller forms of cyclical inquiry (both practice- and learning-focused and the relationship therein) while interrogating the positioning of resources and supports to professional learning. Bringing these dimensions together as foci of my study allows me to advance needed
understanding about how to support productive collaboration, fuller forms of practice- and learning-focused inquiry, and the ways resources and supports work to foster learning and agency in tandem.

**Situating Collaborative Inquiry in the Landscape of Professional Learning**

Advocates of CI suggest the approach’s promise for helping educators and other stakeholders to achieve desired goals (Brownell et al., 2014; DeLuca et al., 2017; Halbert & Kaser, 2022; MacNeil et al., 2021; Schnellert et al., 2008; Timperley et al., 2007, 2014). In particular, the collaborative, situated, and longitudinal nature of CI addresses many of the problems associated with previous models of professional development. First, CI commonly provides educators with opportunities to learn together over time in part by engaging them in critical discussions that allow individuals and teams to address authentic concerns in situated contexts (e.g., Birenbaum et al., 2011; Butler & Schnellert, 2008, 2020; Schnellert & Butler, 2021; Schnellert et al., 2008). Because approaches to CI often provide teachers with opportunities to come together with the deliberate goal of focusing on their own learning, they provide structured time through which teachers can together reflect on action (Borko, 2004; Brownell et al., 2014) and make connections between their past and current experiences, one another’s emergent learning, and students’ needs and responses to instruction (Butler & Schnellert, 2012, 2020; Hung & Yeh, 2013; Schnellert et al., 2008). The situated nature of CI assumes that teachers learn more effectively when they can engage not just in thinking within practice contexts, but also in practice-based thinking that can extend to professional learning sites (Ball & Cohen, 1999; Butler & Schnellert, 2020; Schnellert & Butler, 2021). Such an approach also creates opportunities for teachers to build from the beliefs, values, and sense of responsibility they bring with them to learning initiatives (Kennedy, 2016; Wallace & Priestley,
Further, the longitudinal nature of CI, often over one academic year, allows teachers the time to leverage the connections they make among learning and practice to build deeper understanding about teaching and learning (Butler & Schnellert, 2020; Halbert & Kaser, 2022; Zeichner, 2003). This is in contrast with short term workshops that leave teachers unsupported to grapple with, and adapt, new ideas to practice (Butler and Schnellert, 2012; Frost, 2012).

Another facet of CI that lends to its promise is in the ways educators are positioned as co-constructors of knowledge, rather than recipients of others’ expertise in transmission-style professional development. Cochran-Smith and Lytle’s (1999b) foundational work conceptualizes "knowledge-of-practice" as the idea that teachers are not expected to simply generate knowledge or learn from the knowledge of others. The authors do not differentiate between knowledge as practice-based (i.e., produced in the act) or formal (i.e., produced in research). Rather, they assert that within inquiry communities, teachers are positioned as agents to move past these dichotomous ideas to “play a central and critical role in generating knowledge of practice by making their classrooms and schools sites for inquiry, connecting their work in schools to larger issues, and taking a critical perspective on the theory and research of others” (p. 273). Indeed, a goal of CI is to foster educators’ "inquiry as stance" where they can critically examine their underlying assumptions to construct new meanings and create change (Cochran-Smith & Lytle, 2009b). Through CI, not only do classroom teachers have the opportunity to push one another’s thinking to generate new knowledge, but university-based educator-researchers, instead of being cast as outside experts and developers of teachers, can take on the role of collaborator and co-learner (Forey et al., 2012; Schnellert, 2011; Schnellert & Butler, 2021). When collaborators move beyond sharing (Nelson, 2009) and offering one another solutions (Charteris & Smardon, 2015), they can support each other to reconsider and co-create approaches to teaching in a way
that has the potential to be transformative (Halbert & Kaser, 2022; Mockler & Groundwater-Smith, 2015).

Finally, CI has the potential to address educators’ needs to be agents of their own learning, in part, by providing them with opportunities to grapple with problems they identify, draw from their experience, make connections between their learning and practice, and generate knowledge that is meaningful in their contexts. At its core, CI is focused on educators’ inquiry related to the needs of students (Halbert & Kaser, 2022; Hardy, 2014) thus creating space for teachers to exercise choice (Ciampa & Gallagher, 2016) and enact and develop agency in relation to their own contexts (Butler et al., 2015; DeLuca et al., 2017; Nelson & Slavit, 2007; Priestley et al., 2012; Wallen & Tormey, 2019). Indeed, when educators have a voice in the instructional decisions they feed into cycles of inquiry, they are more likely to invest in inquiry processes overall (Schnellert et al., 2008).

The positioning of educators as agents in their own professional learning in CI has implications for the ways professional learning is offered (MacNeil et al., 2021). CI requires that educational leaders both share leadership and participate in inquiry (Copland, 2003; Halbert & Kaser, 2022) and that researcher-educators carefully attend to the need for teachers to be enabled as agents in co-constructing knowledge, practices, and roles (Tan, 2014; van Schaik et al., 2019). CI requires shifts in assumptions about the way professional learning is contextualized, knowledge is generated, and individuals take on responsibility for their own and others’ learning. As such, the work of CI is complex and requires greater understanding about the ways in which its key elements might be nurtured or constrained when designing professional learning initiatives.
Fostering Collaborative Inquiry

Despite the prevalence and promise of CI, there is still a need to build understanding about how to support, sustain, and design opportunities for educators’ professional learning (DeLuca et al., 2015; McLaughlin & Talbert, 2006; Opfer & Pedder, 2011; van Schaik, 2019; Webster-Wright, 2009; Wilson & Berne, 1999). Indeed, because of its prevalence and promise there exists an even greater need to build understanding how to support educators in their learning through CI. In the following section, I review research with the intent of illuminating the supports needed and challenges to consider when developing professional CI. Following that, I highlight the ways in which the present study responds to calls for further research in this area, in particular, the need to build understanding about how to support generative collaborative learning, more robust engagement in inquiry processes (both practice- and teacher learning-focused) and the ways in which resources and supports can be provided to support meaningful learning as educators make decisions about how to take them up.

Collaboration

Although collaboration is a key component of productive professional learning (Darling-Hammond et al., 2009; Durksen et al., 2017) and is specifically integral to CI (DeLuca et al., 2015, 2017; Halbert & Kaser, 2022; Luna et al., 2004), it is not enough to simply provide educators with the time and space for collaboration (Butler & Schnellert, 2012; de Jong et al., 2019; DeLuca et al., 2017; Nelson, 2009; Trabona et al., 2019; Zeichner, 2003). Research continues to reveal the multiplicity of ways in which collaboration actually unfolds (e.g., Dalby, 2021; de Jong et al, 2019; Gaines et al., 2019; Hardy, 2014; Little, 2003; Nelson & Slavit, 2007) among communities of inquirers (Reeves et al., 2017), suggesting a need to further understand experiences of professional learning and, in particular, collaboration.
Collaboration in a community of inquiry is intended to support learning through critical reflection (Borko, 2004), with particular emphasis on the power of collaboration to support individuals to shift their existing assumptions about teaching and learning (Mockler & Groundwater-Smith, 2015) and build understanding about how to improve teaching (Brownell et al., 2014). Through collaborative work, communities can build from the diverse experiences individuals bring to push one another to view their contexts through alternative lenses (Luna et al., 2004). However, critical and collaborative reflection can also be difficult when individuals or groups rationalize practice in a way that limits their ability to view problems or issues differently from an existing, dominant perspective (de Jong et al., 2019; Little, 2003; Loughran, 2002). Further, it can be challenging for busy collaborators to move beyond typical patterns of interaction, for example in a staff meeting (Grossman et al., 2001; Nelson, 2009; Vangrieken et al., 2015), and groups may require customized support to engage in critical discourse and reflection (Nelson, 2009; Trabona et al., 2019). It is important to understand how teams of inquirers might build relational agency, or “a capacity to align one’s thought and actions with those of others in order to interpret [and respond to] problems of practice” (Edwards, 2005, p. 169). Relational agency can support educators to develop their capacity to recognise others as resources and also to serve as resources themselves (Edwards, 2005), which is important for elaborating on research on agency and collaboration in teacher learning.

Research has documented how collaboration is important for productive forms of professional learning (e.g., Nelson, 2009). For example, Butler and Schnellert (2012) studied teachers’ engagement in a multi-layered community of inquiry as educators were working together to strengthen their learning and practice related to adolescent literacy. Their purpose was to trace how collaboration was evidenced across the community and link that to teacher
learning and practice development. Butler and Schnellert found that individuals’ or teams’ engagement in inquiry was influenced by their collaborative relationships. While most participants set practice-level goals related to their students’ learning needs and paired their practice with those goals (i.e., enacted new strategies), participants were not as likely to work collaboratively to plan, reflect or adjust approaches based on monitoring outcomes (i.e., move through all stages of the inquiry cycle). However, those who did work in rich, collaborative relationships were most likely to move beyond goal setting to work through complete cycles of inquiry. Also significant was that individuals formally positioned to support classroom teachers (i.e., resource teachers or literacy leaders) engaged most fully in cycles of inquiry. This research suggests that supporting individuals to monitor and adapt their approaches can be challenging. It also suggests that collaborative relationships and individuals who have dedicated roles to collaborate may be important support structures to realize the goals of full engagement in cycles of inquiry.

In a second example, Leko et al. (2015) conducted a study to investigate the discourse patterns among individuals from two cohorts of special educators who participated in a collaborative professional learning opportunity on the topic of reading instruction for upper elementary students with disabilities. The authors focused in particular on the discourse patterns of individual teachers and how those patterns influenced the opportunities other cohort members had for learning about literacy instruction. Through a discourse analysis, they differentiated individuals’ discourse patterns along two dimensions: knowledge and inquiry. In terms of knowledge, they noticed that individuals’ contributions to group conversations could be characterized at three levels. Some individuals evidenced what they described as the richest command of knowledge (i.e., integrated new knowledge learned with other sources of
knowledge); others they described as developing “implementation-level” knowledge (i.e., strong understanding of concepts they implemented in practice, but no evidence of integrating new knowledge to a broader understanding); finally, others they described as generating a “low-level of knowledge” (i.e., struggled to understand content). In a second dimension, individuals’ discourse patterns were considered either as reflecting high levels of inquiry (i.e., a willingness to learn more about content and practice) or low inquiry (i.e., lack of willingness to learn more about content and practice). Study results indicated that those who had integrated knowledge and were high inquirers provided the richest learning opportunities for their colleagues. However, those who had difficulty grasping concepts but were highly inquisitive also supported rich forms of learning for their colleagues. Importantly, individuals’ willingness to inquire was more strongly related to supporting others’ learning than the amount of knowledge they brought in and/or generated. Leko et al.’s study stresses the value of nurturing individuals’ inquiry-oriented stances to strengthen opportunities for collaborative learning.

In a third example, Vrikki et al. (2017) investigated collaboration as enacted through lesson studies in order to build understanding about how collaboration influences learning. The lesson study model taken up by teachers in this research involved them first in identifying students who were struggling (i.e., the case students), choosing a focus for a lesson they would plan together and deciding which teacher would teach it. One teacher then taught the collaboratively planned lesson while the other teachers observed the responses of the case students. Following the lesson, teachers interviewed the case students to get a sense of how they experienced and perceived the lesson. Then, participating teachers together reflected on the learning experience and planned the subsequent lesson. Participating teachers repeated this cycle three times. The authors sought to understand how teacher learning processes, be they
descriptive (i.e., learning at the concrete, practical level) or interpretative (i.e., connecting practice to theory), were influenced by discussions. They found that when teachers built on one another’s ideas about individual students, then individuals showed evidence of descriptive learning. However, when dialogue showed evidence that teachers were focused on groups of students and were abstracting common principles from concrete examples, then they were more likely to show evidence of interpretative learning processes. The authors concluded that the educators’ discussions heavily influenced teachers’ learning processes, a process which can be supported in CI through the use of collaborative tools or facilitators for example. Thus, building understanding about how to support productive discussions is warranted (Little, 2003).

Taken together, these three studies illustrate the complex and reciprocal relationship between processes of both collaboration and inquiry. They showed how rich collaboration can influence engagement in inquiry cycles (Butler & Schnellert, 2012) while individuals’ inquiry stances (Leko et al., 2015) and dialogue (Vrikki et al., 2017) can influence opportunities for educators’ learning. Because research shows how collaboration influences desired learning, more information is needed about how to support collaboration in relation to learning goals (Reeves et al., 2017). In response, the current study adds exploration of how CI processes can be supported in order for educators to engage in, and build from, collaboration in generative ways.

**Situated and Longitudinal Collaborative Inquiry**

When professional learning is ongoing and situated, educators have more opportunities to build from experience, focus on student learning, and dynamically reflect on practice over time by making associations between learning, practice, and student responses (Bruce et al., 2010; Ermeling, 2010; Halbert & Kaser, 2022; Webster-Wright, 2009). In these ways, teachers are actively constructing knowledge as they engage in inquiry processes in ways that are intimately
connected with practice (Hung & Yeh, 2013). However, professional learning opportunities can effect changes in teachers’ practices without those changes leading to improvements in student learning outcomes (Fischer et al., 2018), underscoring the need for a sustained focus on students to ground professional learning and practice adjustments. How information about students is fed into inquiry and taken up by educators influences educators’ productive engagement in inquiry cycles (Butler & Schnellert, 2012; Schnellert et al., 2008). For example, when individuals do not feel comfortable sharing information about their own, or students’, struggles, they may have difficulty examining gaps in professional knowledge or questions about teaching (Nelson, 2009). When communities of inquiry are focused on data sources as fuel for inquiry, rather than as measures of achievement, educators are more likely to engage in full inquiry processes (Birenbaum et al., 2009; Schnellert et al., 2008).

Attending to information about students’ learning is key to engaging in inquiry and building understanding about teaching and learning (DeLuca et al., 2015; Halbert & Kaser, 2022). However, research has documented that participants in inquiry engage most frequently in identifying problems of practice, creating goals and plans to address issues, and enacting new practices and less frequently in monitoring and reflecting on students’ responses (Brownell et al., 2014; Butler & Schnellert, 2012; DeLuca et al., 2017). However, support for reflection on action is key given that it fosters more integrated learning and longer-term attention to instructional goals (Brownell et al., 2014; Butler & Schnellert, 2012, 2020). The cyclical nature of inquiry represented in CI models communicates its iterative characteristic, with the expectation that inquiry be continually re-considered, refined, and rebuilt as new inquiry. However, research suggests that educators are less likely to iteratively inquire past academic years and more likely to choose new inquiry foci each academic year (DeLuca et al., 2017). Evidence shows that when
teams do take on an inquiry stance (Cochran-Smith & Lytle, 2009b), perceiving themselves as inquirers and learners, they are more likely to move to successively deeper levels of reflection and inquiry (Birenbaum et al., 2009; Nelson, 2009). The variability with which teams move past enacting new strategies suggests that facilitators (e.g., educator-researchers, district-level support teachers) acting in a supportive role have a key role to play in supporting individuals to engage deeply in reflecting on action, as connected to student responses, in particular when they pair content-based knowledge with skillful facilitation of critical discourse (Gelfuso & Dennis, 2014).

Given the variability with which individuals and teams take up inquiry stances through CI initiatives, more understanding is needed about how best to support successful CI. Building on the theoretical perspective that knowledge is both situated in context and socially constructed has implications for resourcing professionals’ learning through guidance and tools (Borko, 2004; Putnam & Borko, 2000). While individuals bring resources to groups of inquirers given their knowledge, skills, and experiences (Horn & Little, 2010; Perry et al., 2018), attention to the resources and tools that can leverage the structural space created by CI is warranted (Butler & Schnellert, 2012). Beyond opportunities for socially-constructed learning, the situated and longitudinal structure of CI is expected to help educators build from what they know while learning from and in practice. Implementing key characteristics of CI (e.g., collaboration, inquiry cycle as a structure for learning processes) does not guarantee that members have the opportunity to engage in inquiry in generative ways (Brown & Poortman, 2018). The current study adds needed understanding about how structures and supports can influence the ways educators make learning links to their practice contexts as they engage in the complex work of situated professional learning.
Facilitators also have a crucial role in helping individuals sustain attention to student needs and inquiry processes (Gibbons et al., 2021; Gonzalez & Skultety, 2018; Hardy, 2014; Schipper et al., 2017). Not only can they provide support for sustained engagement in inquiry processes, but they can also balance the need for teachers to make choices about their learning goals and trajectories. Further, facilitators with expertise in an area of interest, for example a university-based researcher-educator, are well positioned to be a resource to content-based learning by offering new information while at the same time supporting teachers to construct new knowledge and practices (Cordingley, 2015; Putnam & Borko, 2000). While the work that researcher-educators and teachers do together in communities of inquiry has the potential to bridge gaps between theory and practice (Avalos, 2011; Schnellert & Butler, 2021), researchers may face biases from educators who perceive a discrepancy between their "real world" work and university expertise (Adair Breault, 2013, p. 96; Breault & Adair Breault, 2012). To counter the danger of being perceived as an outside expert imposing ideas on educators, Schnellert (2011) provided insight into his role as both researcher and facilitator in a community of inquiry. He described the ways in which participating teachers found him to be supportive to their learning given how he structured learning sessions, modeled lessons, and encouraged reflection. Notably, in these ways he took on more than just a facilitative role supporting engagement in inquiry processes (e.g., prompting reflection), which has been found to be key for enabling successful inquiry. Effectively, Schnellert showed how facilitators can contribute to multiple dimensions of learning among inquirers by supporting both access to content and support for learning processes. The current study advances understanding about how facilitators can influence educators' engagement both with content-focused (i.e., supporting students' SRL) and process-
focused (i.e., collaboration, inquiry) aspects of professional learning balanced with opportunities for educators to act with agency in co-constructing meaningful learning.

Researchers studying CI have indicated that it is helpful when participants take up a variety of resources to inform their inquiry-oriented thinking (Brownell et al., 2014; Butler & Schnellert, 2012, 2020; Butler et al. 2015; Schnellert, 2011). For example, Butler et al. (2015) found that teachers valued initial workshops through which they gained insight and built together from common frameworks for effective practice. Brownell et al. (2014) found that "more knowledgeable" teachers in a community of inquiry relied heavily on texts for information rather than on their colleagues as a source of learning (p. 10). Charteris and Smardon (2015) linked critical discussion protocols with a community’s co-construction of trusting environments because protocols promoted learning-focused, judgment-free discussions. Mockler and Groundwater-Smith (2015) highlighted the role students might play as resources to inquiry given the insight they can provide on educational issues and processes. Schnellert (2011) documented how teachers drew from the ideas of others, including authors of informational texts, to resource their inquiry-oriented learning. Such resources can potentially strengthen the connections that teachers make between new learning, theory, practice, and one another. Tools that allow educators to leverage opportunities for knowledge construction by helping them make connections between outside resources (e.g., authors, colleagues, educator-researchers, student data) and their own thinking and experiences are key to supporting sustained engagement in CI. Concerns about educators having difficulty making connections between theory and practice (DeLuca et al., 2017) warrant increased understanding about how structures supportive of CI can assist individuals and teams to make those connections. In the current dissertation, I add to this literature by exploring how facilitators can design and enact supports that can promote educators'
opportunities for agentive learning with the provision of knowledge-building resources throughout their engagement in CI processes.

*Educators’ Voices in Collaborative Inquiry*

Design features of CI opportunities importantly influence the ways in which teachers are able to exercise agency, build on their experiences, and work in line with existing beliefs to engage in inquiry-oriented learning (Kennedy, 2016). A core feature of inquiry-based learning is starting with questions that are meaningful to participants. In some cases, inquiry topics are chosen individually but fall under a larger, shared concern colleagues have about learning (e.g., Butler & Schnellert, 2012; Charteris & Smardon, 2015; Schnellert, 2011); in other projects, a common inquiry question has been communally determined (e.g., Nelson, 2009). While teachers have expressed a preference for choosing their own questions (DeLuca et al., 2017), what seems to be most important is that questions are meaningful to educators and they have an interest in exploring them. For example, So (2013) studied a community of inquiry in which the inquiry question was negotiated amongst the group within the topic of inclusive education. Teachers’ engagement in inquiry ranged from superficial to active and was determined to be greatly influenced by their level of interest in the topic. Such research shows how providing opportunities for individuals to make choices about what they are investigating is a key component to consider when designing CI initiatives.

While CI is promising for attending to teachers’ agency, opportunities for teachers’ professional learning are necessarily tied to a larger socio-political context be it at the school, district, provincial/state, or national level (Cochran-Smith & Lytle, 2009a). As in other promising educational initiatives, when professional learning becomes mandated and teachers lose opportunities to make decisions about what is important for their own and their students’
learning, promising features of CI might be undermined (Hardy, 2014). Indeed, voluntary participation has been shown to be a predictor of success more than program duration, intensity, and content (Kennedy, 2016). Further, the extended educational and/or policy context might be a complicating factor that detracts from a focus on teaching and learning (Hardy, 2014). However, the socio-political contexts in which communities of inquiry are embedded can also be sites for leaders to leverage opportunities to support teachers’ enactment of agency as individuals from across the educational system share responsibility for student learning (Butler et al., 2015; MacNeil et al., 2021). Further, educators (from across roles) engaging in CI initiatives can re-position themselves when confronted with constraining forces (e.g., top-down accountability policies) to push back and create meaningful change as they seek to influence students’ learning (Cochran-Smith & Lytle, 2009a). The current study has the potential to advance understanding about teachers' opportunities to exercise agency for their learning, and even build up their sense of self-efficacy, by investigating how teachers negotiate a given socio-cultural context (i.e., a particular provincial, district, community of inquiry, school, classroom) as they make decisions for their learning.

**Connecting the Literature to the Community of Inquiry in this Study**

For the present study, I investigated one community of inquiry (CoI) in order to build understanding about how to support collaborative inquiry (CI) generatively with a particular focus on how supportive inputs can foster opportunities for educators to learn agentively through collaboration and inquiry processes. The purpose of the CoI in this study was to support educators who wanted to deepen their understanding about how to foster students' self-regulated learning (SRL). As described briefly earlier, SRL offers educators a theoretical framework for fostering learners' agency and ownership for their learning, a sense of control over outcomes,
awareness of themselves as learners, and inclusive learning environments (Butler et al., 2017). For educators, advancing SRL involves fostering students' agency while still offering supports to assist them in being strategic as they engage in learning (Butler et al., 2017). The CoI under study was designed to have flexibility that would support teachers in making choices in line with their own learning needs, based on what they were noticing about their students' learning needs. Commensurate with much literature examined in this chapter, the CoI was structured to provide teachers with the opportunity to: (a) come together throughout the year and learn collaboratively; (b) engage in situated and longitudinal inquiry processes; (c) work together and with a facilitator to reflect on practice and co-construct knowledge; and (d) have a voice in making decisions about learning for them in relation to their particular contexts.

**Conceptualizing Collaborative Inquiry for Investigation**

To guide my investigation in the current study, I adapted the Butler and Schnellert (2012) and Schnellert and Butler (2014) models (see Figure 2.5) so as to focus attention on important aspects of this collaborative, situated, and longitudinal opportunity for teachers to construct knowledge and exercise agency.
This model is useful for bringing together dimensions of CI in relation to what individuals bring to learning opportunities, creating space for them to have agency in making decisions for their learning, promoting fuller engagement in inquiry-based processes, and positioning supportive inputs throughout. To that end, in this model I depict: (a) what teachers, both individually and collaboratively, brought to the CoI; (b) space for teachers to enact agency about how their learning unfolded; (c) how teachers were addressing practice-level inquiries related to students’ SRL (i.e., the inner circle in Figure 2.5); (d) how teachers were identifying and regulating their own professional learning (i.e., the outer circle in Figure 2.5); and, (e) how supportive inputs were dynamically related to teachers’ engagement in practice- and learning-level cycles of inquiry.

In response to the literature, and as an extension of our earlier research (see MacNeil et al., 2021), I added reference to the ways teachers’ individual experiences, assumptions about
teaching and learning, beliefs and values, and sense of responsibility influence their engagement with professional learning. Further, my adapted model is useful for extending our previous work on educators' and educational leaders' experiences of agency and self-efficacy in a multi-layered change initiative (Butler et al., 2015). Because the current study focuses on the ways educators direct their learning through CI, and how they make connections between their learning, practice changes and students' responses, this model is useful for highlighting agency and potential growth in self-efficacy. This model is also informed by literature that points to a need to build understanding about how to support fuller cycles of practice- and learning-focused inquiry (Butler & Schnellert, 2012; 2020). To that end, I chose to retain Butler and Schnellert’s (2012) practice- and learning-level cycles of inquiry to investigate the interplay between practice and learning in real time as individuals move through inquiry cycles (Butler & Schnellert, 2012; 2020). My model also builds on what has been learned about how educators can be positioned to enact agency by highlighting the role of supportive inputs (e.g., knowledge-building resources, facilitators, reflective tools) in fostering opportunities for educators, positioned to make decisions about how to take them up, as they direct their engagement in inquiry processes (Butler & Schnellert, 2012, 2020; Schnellert & Butler, 2021).

The adapted model helped me to examine how educators, alone and together, brought their existing experiences, assumptions, values, sense of responsibility and knowledge to their work with CoI structures and supports to "open the black box” of teacher learning (Little, 2003, p. 940) through CI. In highlighting nested practice- and learning-focused inquiry cycles, the current study has the potential to further understanding about how educators can be supported to adapt their thinking or practice which is centrally important for sustaining practice revisions that can lead to ongoing change (Butler & Schnellert, 2012; Schnellert, 2011). By intensively
investigating the ways supports and structures can facilitate educators' movement between classroom- and CoI-focused learning opportunities (e.g., reflections; collaborative discussions), this study can build understanding about how educators make important theory-practice connections (Butler & Schnellert, 2020). Finally, this model was helpful for me to conceptualize, examine, and report on, how supportive inputs could spark meaningful learning, while at the same time preserving educators' agency in making decisions for their learning.

**Contributions and Research Questions**

This research contributes by meeting the need to study participants’ “holistic, situated experience of learning” (Webster-Wright, 2009, p. 711) with a focus on teachers’ efforts at engaging with authentic, situated professional learning opportunities (Nelson, 2009). Further, much of the research on teacher professional learning has been in the form of practical guides about how to design CI, with less research focused on understanding how to support and sustain CI (DeLuca et al., 2015). In particular, because research has documented the ways in which teachers have strong starts to CI (Butler & Schnellert, 2012; DeLuca et al., 2017), more understanding is needed about how to support teachers to fully engage in inquiry cycles by taking into account how teachers are conceiving of new learning in tandem with students' responses to practice changes (DeLuca et al., 2017). Relatedly, studying a CoI can advance understanding about how to support individuals to build an inquiry stance and collaborate and learn together (Butler & Schnellert, 2012). This study also intensively focused on how individuals draw in, and build from, available resources (e.g., instructor feedback; collaborative conversations; readings) to support their practice-situated thinking and learning (Cordingley, 2015; Hardy, 2014). Further, this research responds to the need to better understand how CI that
is founded on robust theoretical frameworks (i.e., SRL) can contribute to the broader theoretical basis for CI (DeLuca et al., 2017).

In sum, because CI has been implicated as a promising approach to professional learning, the intention of this research was to better understand how to design and support opportunities for professional learning through CI. The CoI investigated here was designed with key aspects of generative professional learning in mind with its explicit attention to supports provided for collaboration, sustained and situated work, as well as teachers’ knowledge construction and agency. Within this context, my research questions were:

1. How was learning supported in this particular collaborative, inquiry-based professional development context?

2. How did educators take up opportunities for learning as constructed in the community of inquiry?

3. How was teachers’ learning and practice (separate or together) impacted through participating in this approach to professional development?
Chapter Three: Methodology

Research Design

A focus on a professional learning context and all its complexity required a research methodology that could help me analyze how professional learning processes unfolded in relation to teachers’ engagement in inquiry learning and practice development. For example, it can be difficult to uncover the ways members of a group are collectively influencing one another’s learning through their experiences in a professional learning context. Further, through opportunities for situated learning, learners build from multiple experiences, resources, interactions and contexts requiring a research methodology that could help me make connections among these dimensions. To capture the inherent complexities of a professional learning context, I used a case study research design for the current study (Butler & Cartier, 2018).

First, a case study research methodology is appropriate because a primary goal of this study was to move beyond description to understand individuals’ experiences and explain how and/or why a social phenomenon (i.e., the community of inquiry, or CoI, under study) “works” (Yin, 2018, p. 4). Case study research is appropriate to investigate direct observations of dynamic processes that unfold over time coupled with gathering insight into participants’ experiences (Yin, 2018). Case studies are also helpful for investigating bounded phenomena (i.e., the CoI) that are embedded within contexts that involve conditions relevant to the case (Yin, 2018). I used a case study approach to explore individual teachers’ learning trajectories as nested subunits within the CoI, while attending to the features of the case as a whole that could help build understanding about professional learning through CI. Taking up a case study allowed me to explore the interaction between internal and external influencing factors as experienced within
the case by connecting multiple sources of evidence in situ over the course of the academic year and in post-CoI interviews (Butler & Cartier, 2018).

**Defining the Case**

The case is defined here as the professional learning community that took part in the CoI. The case is temporally bounded by July 2014 and May of 2015 because members of the CoI first came together in July of 2014 and formally dispersed in May of 2015. The case is geographically bounded by formal activities that took place across two school districts and at a university on the West Coast of Canada. The geographical boundaries also extend to educators’ classrooms in two school districts (seven teachers from the partnering school district and one teacher in an outside school district) given that participants were connecting their learning through the CoI with experiences in their classrooms. The learning of each educator who participated throughout the 2014-2015 academic year and were data sources for this study constitute embedded subunits for analysis within the case (Butler & Cartier, 2018, Yin, 2018). These embedded subunits provided me with the opportunity to analyze individuals’ learning trajectories to “compare or synthesize any within-case patterns across the cases” and warrant conclusions about the CoI (Yin, 2018, p. 196).

**The Context for this Study**

The CoI was borne out of a partnership between the university and one local school district. The Director of Learning Services from the partner school district first reached out to the lead facilitator (LF) of the CoI in May of 2013 to lead two professional learning dinner series, one with administrators and one with teachers. The Director of Learning Services expressed an interest in the LF’s expertise in SRL given that the teachers in the district had been focusing on social-emotional learning and she anticipated teachers would be interested to learn about how
social-emotional learning connected to principles of SRL. District-level leaders and teachers in the school district had been focusing their goals and professional learning opportunities on assessment for learning, students’ inquiry-oriented learning, and differentiation which she also felt would connect well to learning about SRL. Teachers’ enthusiasm for learning about SRL was evident in their choice to participate in the supper series.

Based on the groundswell of teachers’ interests to explore SRL, district-level leaders and the LF considered how to provide a more sustained and situated offering that would allow teachers to choose pathways to participate so as to meet their individual professional learning needs. Following on an initial meeting with two district leaders, the LF created a proposal for the CoI (see Appendix A) to capture the initial planning between the university and the partnering school district. Stated goals were to: (a) support educators to integrate supports for SRL into their classrooms; (b) build capacity in districts to lead learning and practice focused on supporting SRL; and (c) create flexible pathways for participation. The partnership continued between the university and the school district with members on each side sharing responsibility for planning the CoI, recruiting educators and welcoming them to first meetings. While educators paid tuition based on their type of participation (see below), the partnering school district also contributed a per student amount to create a cohort within the district. The partnership extended to sharing the cost of snacks for each meeting.

From the beginning, teachers were able to make choices about how they engaged in this professional learning opportunity. First, educators who joined the CoI chose to do so because they shared an interest in better understanding SRL and how to support it in their classrooms. Second, they were able to make decisions about how they would formally engage in the CoI based on their individual needs. Often Faculties of Education offer courses as a structure for
supporting the professional learning of educators. But planners from the partnering school
district and university recognized that teachers in the district might or might not need or want
course credit for current or future purposes (e.g., to count for or transfer into a degree). Taking
advantage of the university’s flexible professional outreach infrastructure, the CoI was housed
within the professional development outreach branch of the Faculty of Education. Members of
the professional development outreach branch worked with the LF, in consultation with the co-
facilitator of what became the summer institute (another university researcher expert in
collaborative professional development and SRL), to construct a CoI through which participants
could choose to participate in three different ways: (a) by just attending a three-day summer
institute (not for course credit); (b) by attending both the three-day summer institute and
facilitated (by a university instructor) learning team meetings throughout the academic year as an
undergraduate non-credit option, or (c) by attending the three-day summer institute and learning
team meetings for course credit at either the undergraduate or graduate levels, with slightly
different formal requirements to match the level of the course. Once they began participating in
the initiative, participants could further make choices about their ways of participating (e.g., their
particular focus for inquiry; what resources they took up; with whom they collaborated).

That the district could offer flexible supports to teachers’ professional learning reflects
the provincial context in which this study took place. District leaders were able to make
decisions about what to prioritize for professional learning amongst educators in their context.
Further, the opportunities teachers had to make choices about how they wanted to participate
also reflected the provincial context where teachers, by and large, have latitude when choosing
how to direct their professional learning. Further, compared to other contexts with stringent
mandates for curricula and practice approaches, teachers (particularly at the elementary school
level) were working in a context in which they had room to make choices about how to direct their practice goals. At the same time, teachers in this context assumed time and financial costs associated with their learning given that they took up learning in the CoI on their own time (unpaid) and, in the case of teachers taking the CoI as a credited course, were likely paying tuition.

**Researcher Positionality and Role**

I became interested in understanding how to support educational change in service of advancing learning experiences for all students as a teacher in K-12 contexts. I was a teacher for nine years when I began my PhD in the same province that this study was conducted. Early in my career I worked as a general classroom teacher, specialist teacher in music and core French as well as a support teacher for students who were learning English and/or experiencing challenges in academic subject areas. Later, I built from my learning through my M.A. in Special Education to work with classroom teachers to enhance learning opportunities for all students. Building from my collaborative experiences in classrooms and in professional development, coupled with research I was completing during my MA, I wondered about the power of professional learning for fostering positive change in schools. As a graduate student, I pursued that line of inquiry when I took on the role of research assistant in a study aimed at understanding teachers' professional learning and agency through collaborative inquiry in a particular accountability context. Through that work, I built up my research skills by transcribing interviews, analyzing data, presenting at conferences, and publishing in peer-reviewed journals (see Butler et al., 2015; MacNeil et al., 2021) In the current study, I have built from my continued interest in professional learning as it relates to honouring and preserving teachers'
sense of agency and professional responsibility, as well as influencing their self-efficacy for effecting real change (Butler et al., 2015; MacNeil et al., 2021).

Throughout this study my role shifted over time. During the initial, three-day summer institute I participated in a learning role. Throughout the five learning team meetings that took place across the academic year I continued to act as a learner but also acted as co-facilitator. Following the completion of the CoI, I formally took on the role of researcher.

More precisely, during the three-day summer institute I engaged as a participant eager to learn about SRL given that I, too, was a teacher who had questions about supporting students’ SRL. For example, I worked with small groups in breakout discussions and drew from recommended readings. At the same time, I had started a field studies project for course credit (assessed by my research supervisor) that was centered on understanding how CoI processes unfolded in relation to what I was learning through my graduate studies about professional development. To further the goals of my field study project, I took field notes based on my observations, had discussions with the LF about how the CoI came to be, and kept track of documents that might help to describe the context for the initiative for my field study report.

Throughout learning team meetings, I continued with my field study project, for which I took notes on CoI processes and my experiences with them. I was also positioned as co-facilitator, with the LF, so that my collaborations with CoI members were framed to a lesser degree as a co-learner and more as a facilitator. That being said, I was also a practicing teacher and openly shared my questions related to my learning and was honest about my developing understanding of how to support SRL in classrooms.

Once the CoI was completed, my research supervisor and I conceptualized the present research study and decided to focus more specifically on how supports were embedded into the
imitative to support educators’ generative engagement in CI. I drafted the ethics application and, following approval from our university’s ethical review board, I contacted participants about their willingness to participate in our research study. For that, to accomplish our goals in the study, we asked participants for permission to access information generated during the initiative (summer institute and learning team meetings) to describe what had happened throughout the CoI, including my field study notes, participants' assignments, and program documents. We also asked participants if they would be willing to participate in interviews (see Data Collection below). With funding from an award, my research supervisor formally appointed a peer and I as graduate research assistants to collect interview data. My peer and I co-interviewed three participants and then I completed the remaining interviews on my own. After collecting interviews, I personally transcribed all participant interviews. I am solely responsible, with support from my supervisor, for all data analysis and interpretation.

Throughout my involvement with the CoI, I was identified as a graduate student. I held an insider perspective because I had participated in CoIs before and I was a teacher. At the same time, I held an outsider perspective because I was not a teacher from the participants' school districts nor was I participating for the purpose of advancing my own professional learning through CI processes.

Participants

Eleven educators participated in the CoI (see Table 3.1). All participants were part of the three-day summer institute at the university and then extended into the year-long learning team meetings. Eight of these individuals provided data sources and therefore their learning constituted the embedded subunits of analysis for this study. Findings are reported based on these eight data sources. One participant, Claire, was the teacher in another school district (not
the partnering school district) who had asked for special permission to participate and was
allowed to do so by the partnering institutions. Participation in all parts of the study was
voluntary. I did not ask participants to self-identify gender or ethnicity for the purposes of this
research, however, it appeared that they were all female and Caucasian.

Throughout their engagement in learning activities, participants taking the course for
credit were required to reflect on their learning and practice in formal assignments, show
evidence of working through an inquiry cycle, share their thinking and learning during the
summer institute and learning team meetings as well as throughout the final celebration of
learning. Participants not taking the course for credit were encouraged to interpret credit course
requirements as meaningful given their goals. Seven of the eight participants who were data
sources took the CoI for credit (i.e., as a course) with one (Alex) participating for non-credit.
Because Alex chose to submit all but one assignment, her learning was analyzed in the same way
as participants taking the CoI as a credited course.

Table 3.1

Participants’ Roles and Participation Type

<table>
<thead>
<tr>
<th>Participant</th>
<th>Role</th>
<th>Participation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tara(^b)</td>
<td>Classroom Teacher</td>
<td>Non-credit</td>
</tr>
<tr>
<td>Kylie(^b)</td>
<td>Classroom Teacher</td>
<td>Non-credit</td>
</tr>
<tr>
<td>Suzanne(^b)</td>
<td>Classroom Teacher</td>
<td>Non-credit</td>
</tr>
<tr>
<td>Alex(^c)</td>
<td>Classroom Teacher, Gr. 2</td>
<td>Non-credit</td>
</tr>
<tr>
<td>Claire</td>
<td>Classroom Teacher, Gr. 1</td>
<td>Undergraduate, for credit</td>
</tr>
<tr>
<td>Eleanor</td>
<td>Educational Assistant</td>
<td>Undergraduate, for credit</td>
</tr>
<tr>
<td>Racquel</td>
<td>Support Teacher, Gr. 4-7</td>
<td>Undergraduate, for credit</td>
</tr>
<tr>
<td>Leah</td>
<td>Classroom Teacher, K/Gr. 1</td>
<td>Undergraduate, for credit</td>
</tr>
<tr>
<td>Marianne</td>
<td>Support Teacher, K- Gr. 7</td>
<td>Undergraduate, for credit</td>
</tr>
<tr>
<td>Kit</td>
<td>Classroom Teacher, Gr. 2/3</td>
<td>Graduate, for credit</td>
</tr>
<tr>
<td>Christina</td>
<td>Classroom Teacher, K</td>
<td>Graduate, for credit</td>
</tr>
</tbody>
</table>

\(^a\)Names are pseudonyms.

\(^b\)For the purposes of data analysis, this participant was not a data source or embedded subunit.

\(^c\)Chose to submit assignments as non-credit participant; data source for the current study.
Recruitment and Ethics

All educators who were involved in the CoI (2014-2015) were invited to participate in this study via email. As part of CI processes, multiple forms of evidence were collected over time (e.g., assignments) and through my participation as a field study student (e.g., observation journal). When the current research study formally started, I asked for participants’ permission to access the data already collected retrospectively, as well as to participate in a follow-up interview. The combination of evidence enabled me to trace their learning from/with each other, and in relation to data that described the conditions established across the year.

Five of the eight participants who submitted assignments also agreed to be interviewed between nine and twelve months after the conclusion of the project. These interviews provided me with a window into how the project had been shaping their thinking and learning over time. Table 3.2 indicates the data obtained from each participant with the core data set being drawn from the eight participants who submitted assignments.

Table 3.2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assignments</td>
<td>Post Interview</td>
</tr>
<tr>
<td>Tara</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Kylie</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Suzanne</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Alex</td>
<td>Yes</td>
<td>Yes (June, 2016)</td>
</tr>
<tr>
<td>Claire</td>
<td>Yes</td>
<td>Yes (February, 2016)</td>
</tr>
<tr>
<td>Eleanor</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Racquel</td>
<td>Yes</td>
<td>Yes (February, 2016)</td>
</tr>
<tr>
<td>Leah</td>
<td>Yes</td>
<td>Yes (June, 2016)</td>
</tr>
<tr>
<td>Marianne</td>
<td>Yes</td>
<td>Yes (May, 2016)</td>
</tr>
<tr>
<td>Kit</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Christina</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
**Procedures**

The CoI ran throughout 2014 and 2015 (July to May). We obtained ethics approval in December of 2015 (H15-01929). As described above, part of our data collection was to access CoI documents, my field study notes and report, and assignments students of the CoI had generated over the course of the 2014-2015 academic year. Then in the 2015-2016 academic year we added the interview data. In this section, I explain professional learning activities offered, procedures undertaken to gather data over time, and my approach to data analysis.

**Professional Learning Activities**

The CoI was intended to provide educators, special education support personnel, and educational leaders with opportunities to come together over one academic year to learn about supporting SRL in classrooms and schools. The CoI was comprised of three main components, starting with a three-day summer institute led by the LF and a faculty co-facilitator (Co-F), followed by five learning team meetings throughout the school-year, and a final celebration of learning event (all of which were led by the LF and co-facilitated by myself; see Figure 3.1). Participants chose to join the CoI because of a shared interest in SRL overall. In addition, participating teachers were provided with opportunities to exercise choice and make decisions about their unique learning goals throughout. For instance, all participants in the CoI were a part of the three-day summer institute at the university in attendance with other educators from multiple school districts. Teachers from the partnering school district were then given the option of being part of the year-long CoI, as a follow-up to the summer institute. Those who chose to continue their participation met in learning team meetings and at the end of the school year came together in a celebration of learning (see Figure 3.1). Below, I briefly elaborate on the supports,
structures, and processes that were part of the CoI to provide an understanding of the context in which learning was taking place.

Figure 3.1

*Structure of the CoI*

Summer Institute. The summer institute was an opportunity for educators, educational leaders, and graduate students to come together to learn more about SRL. The overall agenda was organized into three days: Day one was an introduction ("What is SRL and how can we support it in schools?"); day two was an opportunity to probe deeper into understanding and supporting SRL; and day three was intended to help participants conceptualize and plan their next steps in relation to supporting SRL in their respective contexts. Each day, participants built from the LF's and faculty Co-F's presentations, as well as readings, case studies, and collaborative discussions by engaging in individual and group learning activities (e.g., small-group discussions; individual reflections). Throughout, educators were supported by the LF and Co-F to consider how they might extend their learning throughout the year by taking an inquiry approach to their learning. To seed these processes, across the three days, the LF and Co-F invited educators to draw from Halbert and Kaser’s (2013) spirals of inquiry framework (see Figure 2.1) and engage in activities that invited them to make links between their practice contexts and what they were wondering about in terms of fostering students' SRL.
**Learning Team Meetings.** Learning team meetings incorporated both during, and between, session learning activities. Before the first sessions, those who were participating in the year-long CoI bridged from the three-day institute to the first learning team meeting by tracing their learning from the summer institute in a formal reflective assignment. This written assignment was designed to prompt participants to examine how they were thinking about their questions in relation to readings, presentations, and/or discussions. Further, participants were required to write about how they would move toward a more focused inquiry topic over the year.

Each of the five learning team meetings followed a repeated structure designed to allow participants to learn and reflect together (see Figure 3.1). Despite the predictability of the following session components, each learning team meeting was adapted to accommodate specific learning needs and goals as needed. For the most part, sessions began with unstructured mingling, followed by a free write, oral check-in (or air time), break, large- and small-group discussions, work time and reporting out of next steps.

More specifically, participants were first invited to mingle over snacks provided jointly by the university and partnering school district. Following unstructured mingling, the LF outlined the planned activities and I facilitated a free write. During the free write, participants were invited to write about what they had been thinking, doing or seeing. The free write was a time to reflect and also focus thinking for the subsequent air time in which participants each had two minutes of uninterrupted time to verbally share what they had thought, seen or tried and describe their evolving inquiry plan. During this time, participants were encouraged to listen for possible connections among one another’s thinking and experiences in order to network and potentially work together. After air time, the LF typically highlighted key themes she heard between participants’ reports, the readings and the session topic. Following a break, for the first
three sessions the LF engaged participants in a focused discussion that was chosen based on participants’ expressed interests. For example, in the second session, the LF led a discussion on supporting students to become more independent in classrooms. During that time, she incorporated practical examples, research findings, and participants’ contributions. In the final two sessions, for the focused discussions, participants took on leadership roles by selecting and sharing resources as well as facilitating small group discussions. Following the focused discussion (whole group or smaller-group resource sharing), participants had the opportunity to work on their inquiry projects after being reoriented to the inquiry process and given prompting questions (e.g., How is your question evolving? How are you learning? What more will you do? What are you learning? How will you refine your question and plan?). During work time, participants had the opportunity to work alone or together and access feedback from the LF or myself. Following work time, the LF oriented participants towards suggested next steps and I facilitated a brief share out in which participants described their intended next steps.

Between learning team meetings, all participants were expected to complete reflective tools which were templates designed to help them scan their learning environments for SRL or reflect on actions they had taken. As with their initial reflection on the summer institute, the assignment was also designed to help participants link what they were seeing and doing (i.e., through practice) and what they were learning from resources (i.e., through readings, meetings, discussions). In addition to those four reflections, participants were expected to complete an inquiry project, which they built in pieces over the year with opportunities for support and feedback from the LF. For students taking the course for credit, this larger inquiry project incorporated smaller, cumulative reflective assignments beginning with a draft inquiry question,
a plan for their inquiry project, a refined inquiry plan, the identification of a resource, the sharing of a resource, a reflection on learning from resources, and finally an inquiry project report.

Readings were offered to all participants in the CoI (regardless of their registration status) by the LF and the course outline included a list of recommended readings organized into subtopics related to SRL (e.g., motivation, teachers working together to support SRL). Teachers were encouraged to choose from the list throughout the year based on their particular interests. Choice was embedded in reading opportunities in different ways depending on the session. For instance, teachers could choose the subtopic they wished to explore in the subsequent learning team meeting as a group. Based on that, the LF suggested one common reading and invited participants to take up another reading of their choosing. An important resource to the CoI was a shared text co-authored by the LF, the Co-F, and another colleague which takes up an inquiry stance (e.g., referring to the Halbert and Kaser (2013) model of inquiry in the introduction). The draft version of the book was downloaded onto the CoI's portal and available for reading. At times the group chose to read a chapter from that book together. Then teachers were encouraged to choose other chapter(s) over time based on their interests and/or the learning team meeting topic. The book incorporates relevant theoretical and research bases, practical examples and prompts for readers to reflect on their practice and experience. As such, it was well-matched to an inquiry-based professional learning context.

**Celebration of Learning.** Participants were invited to present on their final inquiry projects to their peers during the culminating event, a celebration of learning that was held during the final learning team meeting in May of 2015.

**Data Collection Methods**
To observe and make links between processes and outcomes that unfolded over time, I drew from multiple forms of evidence (Butler & Cartier, 2018) collected during the period leading up to the CoI, throughout the CoI, and after it ended (see Figure 3.2). To get a sense of the context external to the case, I relied on my discussions with the LF about the inception of the CoI and examined marketing information documents (e.g., websites; flyers). To better understand the structures that supported CI, I examined the: (a) CoI proposal, (b) learning team meeting agendas, (c) learning team meeting Powerpoint presentations, (d) course syllabus, (e) assignment descriptions and reflective tool templates, and (f) field study observations. To trace how teachers took up opportunities for learning and how their learning and practice were impacted I examined teachers’ (a) reflective assignments, (b) inquiry projects; and (c) interviews conducted in the following year.

**Figure 3.2**

**Data Sources**

**Context External to the Case.** To describe how the case was situated in the larger context, I examined CoI documents and websites which served to communicate to potential participants the purposes and structure of the CoI. I also relied on descriptions provided by the
LF during our discussions about how the CoI was created. Doing so allowed me to understand how the partnership was established between the university and school district.

**CoI Case Context.** Multiple forms of evidence were used to describe the CoI context and to gain understanding about how it was working to support learning (i.e., research question one). Evidence was also used to describe how educators were working within and beyond the intentional structure of the CoI and drawing in resources to build understanding about supporting SRL in their classrooms (i.e., research questions two and three).

**CoI Proposal.** The CoI proposal was used to get a sense of the intended purposes and the overall structure of this initiative (see Appendix A).

**Session Agendas.** Agendas for both the three-day summer institute and each of the learning team meetings were used to describe the structure of each session and the ways in which learning was supported and resources to educators’ learning were being provided.

**Powerpoint Presentations.** Powerpoint presentations provided more details about specific topics that were addressed within each session and the ways in which these were described to participants.

**Course Syllabus.** The course syllabus was examined to provide evidence of the structural supports to participants’ learning and the rationale for them. Analysis of the syllabus revealed specific aspects of the CoI that were designed to support educators’ learning as well as the expressed purpose of the CoI. It also detailed how participants were expected to actively partner in taking on responsibility for their own learning through their participation in the course. Further, it provided insight into the ways in which expectations were different for participants depending on how they were formally participating in the CoI.
**Assignment Descriptions; Templates.** Assignment expectations and reflective tools (e.g., scanning and reflecting templates) were examined to gain an understanding of how participants were being supported to make connections between their learning and practical contexts as well as engage in CI processes.

**Field Study Observations.** My observations of CoI learning sessions, from the summer institute and throughout learning team meetings, were examined to understand how actions unfolded in real time and to gain a richer understanding of the case context.

**Tracing Participants’ Learning and Impacts on Practice and Thinking.** Multiple forms of evidence were used to trace participants’ learning as articulated in their own words. Data collection approaches here provided the core evidence for this project given that they fostered my ability to see how learning was being supported, experienced, and impacted. In these data sources, participants described their thinking and learning in relation to working on their own and with others through inquiry cycles and supportive structures and resources. Both reflective assignments and inquiry project data sources included instructor feedback which served to provide evidence of supports to, and impact on, participants’ learning.

**Reflective Assignments.** Participants completed several reflective assignments throughout the year that asked them to communicate what they were thinking in relation to new understandings they were building as well as what they were experiencing through their practice contexts. These included reflective tools (i.e., scanning and reflecting templates), that invited them to make connections between what they were seeing and doing in practice to what they were learning through CoI activities and experiencing through inquiry processes (see Appendix B). Analyzing participants’ other reflective assignments provided an opportunity to see how they were making connections between practice and learning, reveal the ways in which they were
drawing in CoI supports to shape their learning in and through practice, and impacts on their professional learning. Reflective assignments also provided opportunities to investigate how participants were experiencing successes and challenges as they learned through CoI processes.

**Inquiry Projects.** Participants worked on an inquiry question over the course of learning team meetings. They built from smaller, cumulative assignments to form the overall inquiry project. The first asked them to provide a description of their draft inquiry question and rationale for taking it up. The next assignment asked for an inquiry plan outlining their inquiry question, rationale, its significance, a plan for investigating their inquiry topic, and plans for their practice and how they might monitor student responses. Participants were encouraged to continually refine topics and plans incorporating instructor and colleague feedback along the way. The third inquiry project assignment asked participants to indicate their choice of a resource relevant to their inquiry project which they wanted to share with their colleagues, combined with a reflection on their learning through engaging with resources and discussions with colleagues. For their final assignment, participants were asked to submit an inquiry project report that included the relevant components of cumulative assignments and added descriptions of what happened through their inquiry, what they learned through their engagement with resources, and what they were thinking about as they moved forward in their learning, inquiry or practice.

This collection of inquiry project assignments provided the second source of data used to trace participants’ learning across the academic year. Because participants’ inquiry projects were built cumulatively and they were encouraged to draft and refine their questions and plans over time in response to what they were noticing about their practice, thinking, and learning, inquiry projects also served as evidence of how learning was being supported and impacted iteratively over time. Further, educators’ inquiry projects provided an opportunity to learn more about the
intricacies of how inquiry unfolded for individuals through the CoI. Like reflective assignments, inquiry project components were designed for participants to provide accounts of their learning experiences, thus, providing a window into both successes and challenges reported by them.

**Interviews.** Interview protocols were designed to gain insight into participants’ perceptions about: (a) how the CoI supported their learning; (b) if and where they were accessing supportive resources outside of the CoI; (c) their new and/or different practices; (d) the impact of their learning and practice changes on student or colleague learning; (e) next steps for their learning; (f) advice for future CoI iterations (see Appendix C). The interview protocol addressed all research questions given the focus on supports to learning, how participants experienced learning through, and beyond, CoI activities, and as participants' perceptions of how their practice and thinking shifted. Interviews also provided an opportunity for participants to communicate their perceptions about how CoI activities had and had not worked as intended.

**Data Analysis and Representation**

**Overview: Evidence and Research Questions.** To better understand contextual factors that influenced learning opportunities for research question one (How was learning supported in this particular collaborative, inquiry-based professional development context?), I conducted document reviews to generate findings about how the CoI was structured to support learning. For this first question, I also analyzed supports to learning offered by facilitators (e.g., written feedback). For question two (How did educators take up opportunities for learning as constructed in the community of inquiry?) and three (How was teachers’ learning and practice impacted through participating in this approach to professional development?), I analyzed data sources that provided a window into participants' self-reported learning processes and impacts (e.g., reflective assignments, interviews). In the following sections, I detail the process I undertook to analyze
and represent all data sources. Given the richness of my data sources and my sensitive analytic procedures, my analysis unfolded in complex ways that were difficult to distill in a linear, narrative form. While there were aspects of analysis that progressed in phases from one to the next (e.g., a first cycle to a second cycle code; see below), there was also tremendous iterative and recursive work. At the same time, concurrent processes (e.g., revising, jotting, memoing; see below) complemented and informed each of my analytic processes.

**Data Preparation.** Data preparation occurred during and after data collection and primarily involved filing digital documents (e.g., reflective assignments). Audio-recorded interviews were transcribed by me and made into digital documents. All data were saved on a password-protected computer.

**Data Organization.** To organize all sources of evidence (listed above), I created a database by uploading documents into NVivo®. The reason for creating a database was to create a separation between the evidence as collected and the final, narrative research report. In doing so, I aimed to bolster the reliability of my study because others could conceivably inspect evidence distinct from my conclusions (Yin, 2018). Creating a database further served the function of supporting my subsequent analyses by helping me identify and organize the multiple sources of evidence I collected. I also printed out data to have hard copies for ease of note-making and to visually look within and across cases and the data therein. Digital data were kept on a password protected computer and hard copies were kept in a locked cabinet when not in use.

**Data Condensation.** As a first step towards making meaning of the data collected, I read all data sources to get a sense of the "larger picture" and ground my analysis in a "holistic account" (Creswell & Creswell, 2018, p. 182) of the phenomena under study (i.e., the CoI and learning experienced). Through this first reading, I captured my thinking using the memo
function of the NVivo software. This first reading also served to orient me to the data collected and helped me to become familiar with it before I turned my attention to analyses in relation to specific research questions.

*First and Second Cycle Coding and Concurrent Processes.* Following this initial reading, I again read all data sources but with attention to what each research question asked. This reading marked the beginning of the "data condensation" phase of my analytic process or "the process of selecting, focusing, simplifying, abstracting, and/or transforming the data" (Miles et al., 2020, p. 8). As I read, I began a process of "first cycle" coding (for data condensation purposes) which involved assigning codes "to the data units" themselves (Miles et al., 2020, p. 64). First cycle codes primarily involved a combination of: (a) "descriptive" (or summary) codes, (b) "in vivo" codes in "participant's own language," (c) "process" codes denoting "observable or conceptual action in the data," (d) "concept codes" or "bigger picture" codes that attached "meso- or macrolevels of meaning to data," and (e) "values codes" which "reflect a participant's values, attitudes, and beliefs, representing [their] perspective" (Miles et al., 2020, p. 66-67).

Throughout my analysis, I used an abductive coding approach given that I moved flexibly between inductive and deductive coding processes as needed (Agar, 1996; Butler, 2011; Tavory & Timmermans, 2014). For much of my analysis, I coded data inductively which I conceptualized as low inference coding. Often, this meant that I was staying as close as possible to what I was hearing and seeing in the data (e.g., from participants' descriptions of their thinking; reading in the LF's written feedback). At the same time, I also coded deductively because of my knowledge from relevant literature (including prior research) and related theory. For example, for my first research question (How was learning supported in this particular collaborative, inquiry-based professional development context?), I was sensitized by Figure 2.5
to deductively code for the structures I expecting to see (informed by the literature, see Chapters 1 and 2). While I did not expect to understand how and why they played a role in learning opportunities through my preliminary coding, I wanted to gather specific topics together in one place and analyze them to build my understand of key components of professional learning. Deductive coding also occurred when I generated higher-level pattern codes that caused me to be curious about how the data bore them out and stimulated further rounds of inductive coding.

To illustrate my approach to first cycle coding, I offer an example of how I began analysing data to answer my third research question: How was teachers’ learning and practice (separate or together) impacted through participating in this approach to professional learning? (see Figure 3.3). To begin, I read reflective assignments, inquiry projects, and interviews and assigned first cycle codes to them. First, I attached preliminary deductive codes to the data: (a) shifts in practice; (b) new insights into teaching and learning. But I also noticed there were other impacts that spanned beyond what I had anticipated, and so I created preliminary inductive first cycle codes that were organized as: (a) impacts to own professional learning; (b) impacts to colleagues; and (c) positive student outcomes.
First cycle codes were typically too broad to move towards second cycle coding and pattern finding. In those instances, I went back into particular threads of analysis and "subcoded" data (Miles et al., 2020, p. 72). To do so, I gathered all first level codes of a certain type in one place (either in NVivo or an Excel spreadsheet) and subcoded within. This occurred, for example, when I looked to my second research question: How did educators take up opportunities for learning as constructed in the community of inquiry? I attached a first level summary code to all data excerpts that included mention of collaboration given that this was an aspect of learning through the CoI that I wanted to analyze. This process resulted in one hundred and fifty-one discrete excerpts with the code collaboration attached. To move towards more useful codes, I then gathered all data segments coded as collaboration in one place, read them,
and began creating subcodes that were more helpful to move towards identifying meaningful patterns. To further focus on answering my second research question, I created a subcode called *collaboration uptake* which helped me to search for data that responded to my question about how participants were taking up opportunities for learning (and collaboration specifically) and hive off data that would not support my goal of answering research question two. Table 3.3 shows how I further subcoded data using a combination of descriptive, process, values, and concept codes.

### Table 3.3

**Example of Subcoding**

<table>
<thead>
<tr>
<th>First Cycle Code</th>
<th>Subcode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>Brainstorming and Problem Solving</td>
<td>Sharing problems of practice and together brainstorming how to approach them.</td>
</tr>
<tr>
<td></td>
<td>(Re)Considering practice approach</td>
<td>Participants reconsider how to approach their practice because of a collaborative discussion or interaction.</td>
</tr>
<tr>
<td></td>
<td>(Re)Thinking</td>
<td>Participants shift thinking because of a collaborative discussion or interaction.</td>
</tr>
<tr>
<td></td>
<td>Co-inquiring</td>
<td>Participants deliberately pursue inquiry questions together within the CoI and their practice contexts.</td>
</tr>
<tr>
<td></td>
<td>Drawing others into inquiry process</td>
<td>Participants draw others they are working with in their practice contexts into their inquiry process (e.g., enacting new practices and monitoring student outcomes).</td>
</tr>
<tr>
<td></td>
<td>Co-enacting inquiry processes</td>
<td>Participants co-enact inquiry processes with colleagues in their practice contexts (e.g., enacting new practices and monitoring student outcomes).</td>
</tr>
<tr>
<td></td>
<td>Sharing perspectives</td>
<td>Participants share and/or listen to one another about practice experiences.</td>
</tr>
<tr>
<td></td>
<td>Valuing collaboration</td>
<td>Participants describe collaborative interactions and express value for them.</td>
</tr>
</tbody>
</table>

This example of how I took up subcoding illustrates how I was revising codes because of how I was making determinations about whether or not coding was working to move me forward.
with my analysis (i.e., generating findings and reporting on my interpretations). Other examples of coding revisions revealed that I was coding too narrowly, resulting in a need to go back into data and eliminate the code or "change its type" (Miles et al., 2020, p. 75). This occurred, for instance, when I was interested in analyzing how resources were positioned to support learning in the CoI. My first cycle codes identified particular resource types (e.g., an article by a specific author) which did not prove to be useful for facilitating pattern finding or generating conclusions about how resources were mobilized and offered to support learning. These examples show how, throughout all coding phases, and especially early on, I revised codes based on how they were working to both represent the data and generate meaningful information about what I was learning through my analysis.

Concurrent with all phases of coding, and particularly second cycle coding (described below), I produced what Miles et al. (2020) refer to as "jottings" (p. 86-88; see also Emerson et al., 2011). As I systematically coded data, I effortfully remained "alert" to my thinking about what I was noticing (p. 86). I recorded my thoughts, or jottings, in the NVivo annotation and memo functions or in the margins of hard copies of data. My jottings often captured my thinking at a specific phase and later acted as a reminder about how I might approach subsequent cycles of analysis. For instance, when I was in the process of first cycle coding for agency, I wrote in a jotting:

When I'm coding L1 [level one] for voice am thinking about when participants exercise their voice. But, am also noticing when opportunities for voice are paired with explicit supports (like how the inquiry project is introduced as supported and also how question stems are given for developing inquiry questions).
Jottings such as this one show how, in focusing my attention to coding a given category (e.g., agency), I was noticing a dimension (e.g., supports) that seemed to accompany some of those instances of participants’ opportunities for agency. Later, I would interrogate this idea by engaging in second cycle coding to determine if the data bore out the suspected pattern. My first cycle of coding served to help me "initially summarize segments of data" (Miles et al., 2020, p. 79). In my second cycle of coding, I sought to group summaries to create smaller numbers of categories that I could speak to as meaningful findings (i.e., themes).

Once I felt satisfied that my first level coding was complete, I moved towards pattern coding by gathering all first level codes, or more often subcodes, in one place to search for patterns (typically in an Excel spreadsheet). Following on Miles et al. (2020), my first cycle coding was intended to help me summarize and organize data, and my intention during second cycle coding was to condense data into categories and then themes. As I read through the data excerpts subcodes were attached to, I ascribed pattern codes within a subcoded category. In some cases, I attached the pattern code within the spreadsheet itself or NVivo summaries (filtered by code). Often though, I created visual displays to examine the data in new and more animated ways that would help me see patterns and connections (Miles et al., 2020; Yin, 2018; see Figure 3.4).
Figure 3.4

Examples of Visual Mapping and Sorting

The picture on the left of Figure 3.4 extends the previous example of how I engaged in first cycle coding and subcoding for collaboration by showing how I clustered subcodes together to identify patterns. Figure 3.5 shows how I moved from first cycle coding and subcoding to identifying second cycle codes that helped me make meaning of the data in relation to what I asked in my study (i.e., What were participants' experiences of learning through the CoI?).
During and after deciphering patterns, I wrote "analytic memos" to accompany the labelled (subcodes and pattern code) maps I had created (Miles et al., 2020, p. 88-90). Analytic memos served as opportunities for me to elaborate on the patterns I uncovered and also to "synthesize [descriptive summaries of data or codes] into higher level analytic meaning" (Miles et al., 2020, p. 88). These higher level and more abstract interpretations of data became themes which I reported on in my findings (Chapters 4, 5, and 6 of this document). This second cycle of pattern coding and generating themes also served to "[lay] the groundwork for cross-case analysis by surfacing common themes" which I describe in the next section (Miles et al., 2020, p. 79).
Looking for Patterns Across Embedded Subunits. My methods for analyzing data described above reflect typical coding procedures used for thematic analysis in qualitative research. I invoked a case study methodology to understand, in an in-depth way, a given phenomenon (i.e., learning in a CoI) as situated in a real-world context (Butler & Cartier, 2018; Yin, 2018). Because I used an embedded case study design, with the first level being the CoI as the unit of analysis (i.e., the single case) and the second level being individual participants’ learning (i.e., subunits or embedded units of analysis), I took up analytic processes that allowed me to look for patterns within the single case as a whole, within each subunit (i.e., participants' learning), and across subunits. Nesting subunits can be "useful for studying contextual influences or change processes" (Butler & Cartier, 2018, p. 353).

However, Yin (2018) cautions that a drawback of an embedded case study design occurs when "the study focuses only on the subunit level and fails to return to the larger unit of analysis, or the original 'case'" (p. 52). Yin elaborates that this issue can occur when the findings from individual subunits are aggregated to make conclusions about the single case, casting it as the "context for and not the target of the study" (p. 52). With this in mind, I sought to remain cognizant that my analytic process attended to both levels, requiring me to look for patterns both within the case (i.e., the single case and the subunits) and across all units and both levels. For research question two (How did educators take up opportunities for learning as constructed in the community of inquiry?) and three (How was teachers’ learning and practice impacted through participating in this approach to professional development?), I frequently engaged in second cycle coding (see above) while looking first within subunits (e.g., individual participants' self-reports of experiencing learning), and then across them to match patterns I identified within case subunits (Yin, 2018). To aid in this type of analysis, I constructed matrices (or tables) to view...
data (e.g., participants’ quotes) and my interpretations (i.e., codes, summaries) in one place for systematic analysis (Miles et al., 2020). My matrices were constructed with attention to my particular analytic goals and varied as a result. For example, when I looked within subunits at how participants’ inquiry journeys unfolded, I attached *in vivo* codes to capture their reported thinking and actions. Then, I constructed a sequential matrix that captured the inquiry processes individuals engaged in over time, allowing me to plot the results of within-subunit patterns and make comparisons across (see Figure 3.6).

**Figure 3.6**

*Example Matrix for Comparing Within and Across Case Subunits*

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<td><strong>Participant Name</strong></td>
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<td>Goals</td>
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<tr>
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In addition to helping me condense, organize, and look across data sets, matrices also served to help me avoid "excessive detours" and stay focused on the "key issues" I hoped to learn more about (Yin, 2018, p. 199).
Trustworthiness

To ensure that my conclusions are trustworthy, I employed several validity strategies (Creswell & Creswell, 2018) and qualitative reliability procedures (Gibbs, 2007).

Validity Strategies

To ensure the credibility of my findings (Creswell & Miller, 2000), I triangulated data types (e.g., observations, interviews, reflective assignments) and their sources (i.e., participants experiences). Building from multiple types of evidence to warrant conclusions allowed me to generate themes in my findings that represented a convergence of evidence (Butler & Cartier, 2018).

I also searched for disconfirming evidence (Creswell & Creswell, 2018) to aid in generating an "authentic portrait" of the phenomena under study (Miles et al., 2020, p. 306). Part of this process involved attending to all of my evidence by "exhaustively" addressing my "key research questions" (Yin, 2018, p. 199). Once my themes were established, I searched for evidence that ran counter to my findings. This search for negative evidence supported me in addressing my goals of creating a credible account, because my socio-constructivist lens is based on the assumption that realities are "multiple and complex" (Creswell & Miller, 2000). The search for negative evidence was one way of honouring this complexity.

A third way in which my research methods strengthened the validity of my study was by my extended participation in the field (i.e., CoI; Creswell & Miller, 2000). Because of the longitudinal nature of the CoI, I was able to repeatedly observe CoI proceedings which served to help with triangulation. I also built up a rapport with participants so that during interviews, we were familiar with one another and had a common understanding of the mechanics of the CoI, fostering our ability to engage in deep conversations about their learning and perspectives.
An essential quality of my case study research design was communicating how the study unfolded by using detailed descriptions. In describing the CoI itself, the participants' experiences, and my findings using "rich detail" I aimed to help the reader feel as if they are "transported into a setting or situation" (Creswell & Miller, 2000, p. 128-129) and can see that the findings are credible by having access to the details of my study. For example, I include participants' voices in my reporting of findings to show how my interpretations are built from data.

I also had the opportunity to check on my own interpretations of the data because I engaged in a peer review of emerging findings with my research supervisor. At times, I engaged in co-analyzing data with my supervisor to strengthen the credibility of my findings and build up my data analysis skills. My supervisor also challenged me by asking "hard questions" about how I was drawing conclusions from the data (Creswell & Miller, 2000, p. 129).

**Reliability Procedures**

To enhance the likelihood that the process of my study "is consistent, reasonably stable over time and across researchers and methods" I employed several reliability procedures (Miles et al., 2020, p. 305). First, in this dissertation, I have communicated clear research questions and explained how my research design was suited to helping me answer them. I have also explained my own role within the study and how it evolved over time. Further, my data collection methods were described in detail and incorporated multiple types of data which were collected over time. Finally, the procedures of my data analysis were explained in detail and my findings are presented with enough "'thick description' for readers to assess the potential transferability and appropriateness for their own setting" (Miles et al., 2020, p. 307).

In the following chapters I describe the results of my analyses followed by a discussion of their meaning. In Chapter 4, I present my findings about how structures and supports were
designed to support learning in this CoI. Then, in Chapter 5, I communicate the results of my analysis about how participants experienced learning through the CoI. Following that, in Chapter 6, I show the results of my findings related to how participants in this CoI perceived impacts to their practice, their own learning and students' learning. Finally, in Chapter 7, I discuss the meaning of my findings in relation to current literature on professional learning, limitations of this study, considerations for future research and implications for practice.
Chapter Four: Structures and Supports for Learning

In this chapter I report findings related to my first research question: How was learning supported in this particular collaborative, inquiry-based professional development context? This chapter focuses on identifying characteristics of the CoI as intended and enacted. Here, I relied heavily on documents that helped me examine how the CoI was structured to support learning. This chapter sets the stage for the presentation of findings related to how these learning opportunities were taken up by participants and how they impacted participants’ learning and practice (Chapters 5 and 6, respectively) where teachers' voices figure more prominently.

Overview of Supports and Structures in the Initiative

Based on my analysis of evidence, I identified a number of structures and supports within the initiative that could be related to participants' learning and practice development. In this chapter, I start by providing a brief overview of the initiative, then in subsequent sections I report on my analysis of how the structures combined to create supports to educators’ learning and practice development.

To provide an overview of the initiative's structure I offer, in Figure 4.1, a visual representation to show how the initiative was designed to create opportunities and supports to participants' learning. My analyses showed that the supports within the CoI unfolded in complex ways, with a combination of structures that offered opportunities for participants to collaborate, access ideas through resources, and have a voice in making decisions about how their learning through inquiry processes unfolded. For example, in the summer institute, there were opportunities for participants to have a voice in selecting readings (or resources) they were interested in. During learning team meetings, the free write and air time offered opportunities for participants to have a voice in choosing what they wished to focus their thinking on and share
out with others. The components of the CoI are identified alphabetically, (a) through (g). The letter 'C' is used to identify when a structure was an opportunity for collaboration. The letter 'R' is used to reference when a structure presented participants with a resource to their learning. And the letter 'V' is used to identify when participants had a voice in deciding how they engaged in the learning opportunity.

**Figure 4.1**

*Overview of Structural Supports to CoI*

**How Structures Combined to Support Learning**

In the remaining sections, I report on key findings that showed how the CoI was structured to provide supports to participants' learning. First, I present findings related to how the CoI supported participants’ engagement in collaborative learning. Second, I show how the CoI
was structured to support participants' longitudinal and situated engagement in inquiry processes. Third, I show how participants were supported to engage with content-based resources. Fourth, I describe how written facilitator feedback provided opportunities for individualized support for participants' engagement in inquiry processes. As I report on these findings, I also weave in results related to the ways in which participants had a voice in making decisions about how they engaged with the learning opportunities presented to them.

**Opportunities for Collaboration**

Opportunities and supports for collaboration in this CoI were a key feature of its design. Evidence showed how: (a) collaboration was a deliberate aspect of the CoI's design and was clearly communicated to participants upfront and throughout the year; (b) collaboration was structured to provide participants with opportunities to share, and build, their understanding about SRL in relation to individual experiences, inquiries, and professional learning needs; and (c) supported, collaborative opportunities formalized participants' roles as resources to one another's thinking and learning.

**Deliberately Designed and Clearly Communicated.** Evidence showed how opportunities and supports for collaboration were intentionally woven throughout the CoI to promote participants' engagement with inquiry and learning overall. This planned focus on learning through collaboration was clearly communicated to participants before and during the enactment of the CoI. From the outset, the CoI was advertised as a supported opportunity for educators to come together within a “learning team structure,” giving potential participants a window into this approach to professional learning in which they might choose to engage (CoI Marketing Flyer, 2013). In marketing materials, each of the descriptors of the three components of the program emphasized collaboration: (a) “A Summer Institute: Collaborating to Foster Self-
Regulated Learning in Schools”; (b) “Five facilitated Learning Team Meetings across the year; and (c) A Culminating Event, through which participants share their learning” (Italics added; CoI Marketing Flyer, 2013). The LF of LT meetings provided a rationale for learning through collaboration in the first LT meeting when she explained how:

Teacher learning teams provide practicing teachers with opportunities to come together as communities or professionals with a shared focus to reflect on their practices, consider and plan alternatives, and experiment between meetings; receive guidance and sustained support from colleagues and facilitators.” (PPT, LT Meeting, October)

The syllabus, too, communicated the rationale for a collaboratively-based CoI by describing how “Across BC, educators are being engaged in 'inquiry-based' professional development. In this approach, teachers work together in communities of inquiry (e.g., learning teams) to advance their learning and practice development around particular issues” (Syllabus, p. 1). In a section of the syllabus written to convey to participants what they would experience, they were alerted to opportunities to:

Share and co-construct learning with both facilitators and colleagues. Activities during the Summer Institute will encourage collaborative learning. [LT] meetings will be structured to create opportunities for co-learning and co-planning. Finally, in the May culminating event, participants will share their learning with colleagues. (Syllabus, p. 2-3).

Taken together, these data showed the intentional use of collaboration invoked to support the learning and practice change goals of the CoI. The collaborative features of this CoI were not just behind-the-scenes pedagogical tools created by facilitators but were transparently communicated to participants as a key aspect of their professional learning.
**Collaboration Related to Participants' Learning Interests.** Opportunities for participants to come together to deepen understanding about SRL related to their individual learning interests. Throughout the CoI, participants had opportunities to ground collaborative conversations in their own interests about supporting SRL. For example, at the three-day summer institute, co-facilitators coupled presentations with frequent opportunities for participants to discuss their thinking and their inquiries with colleagues of their choosing. These small-group discussions often took place in table groups and were paired with prompts from facilitators to elicit participants' reflections about new learning in relation to their experiences and professional learning and practice goals. In such instances, participants were active in deciding where to focus their collaborative conversations based on what they deemed important for their learning. For example, in one prompt, participants were invited to consider how their past experiences were connected to principles of SRL and to together imagine how they might build from their existing practices to refine future practices to support students' SRL.

The structure of LT meetings provided increased opportunities for collaboration offered in the form of repeated participation structures at each session. These structures consistently represented opportunities for participants to together build understanding about SRL while grounding conversations in their individual interests. For example, each LT meeting ended with collaborative work time during which dyads or small groups worked together to advance their individual inquiry projects. Through these repeated participation structures, individuals had opportunities to ground their own inquiry-based learning process in opportunities to learn with and from others.

**Formalized Participants' Roles as Resources.** Above, I described some of the ways participants were encouraged to consider how they might network and build from one another's
learning during collaborative opportunities. Further to that, in this section I describe my finding that collaborative mechanisms at play in this CoI formalized participants' roles as resources to one another’s thinking during the summer institute and five LT meetings.

Evidence showed that opportunities for individuals to serve as resources to one another's thinking were deliberately created in this CoI. Further, these opportunities were paired with supportive scaffolds that allowed individuals to build from what they were learning about supporting SRL (e.g., from readings, presentations) and take up the role as contributor to one another's learning. For example, on day three of the summer institute, when they were being invited to create plans for inquiring into SRL for the upcoming academic year, participants were prompted to contribute to one another's thinking about their inquiries when they were asked to: "share your questions with one or two colleagues. Can you help each other think through and refine your questions?" (PPT, Summer Institute, Day 3). During LT meetings four and five, participants were expected to share resources with their peers in a focused discussion (i.e., sharing resources assignment). Here, participants were asked to choose and recommend a resource they were building from in their inquiry project that might inform others’ thinking. They were then asked to facilitate a small group discussion “like a study group,” (Syllabus, p. 8) on the resource they had recommended. At the same time, all participants were asked to pick one resource recommendation to read and prepare to discuss during class. In part three of the sharing resources assignment, participants were asked to “reflect on key take away ideas from resources and learning team discussions of them” (Syllabus, p. 8). These examples showed how the collaborative experience was structured in a way that formalized participants' roles as resources to one another's learning. This meant that participants may have been positioned to view
themselves as contributors to, and receivers of, one another's thinking and learning, as they engaged in opportunities to co-construct meaning through CoI activities.

**Section Summary: Collaboration.** Overall, evidence showed how collaborative processes were deliberately built into the structure of the CoI. This intentional design aspect was communicated clearly to participants before they even chose to sign on and throughout CoI activities. During the CoI, supportive participation structures offered participants opportunities for collaborating that were also driven by their interests and unique learning needs. Findings also showed how these supported opportunities for collaboration extended to formalizing participants' roles as resources to one another's thinking and learning, thus strengthening the degree to which collaboration could serve as a mechanism for professional learning and growth. Finally, the ways in which collaborative participation structures were offered provided participants with opportunities to choose what to share as they made decisions about learning with others through commonly offered participation structures.

**Opportunities for Situated and Longitudinal Engagement in Inquiry Processes**

In this section I report findings from my analyses in relation to how participants were given opportunities for, and supported to, engage in longitudinal (i.e., spanning an academic year) and situated (i.e., grounded in practice) inquiry-based professional learning. First, I found that a primary macro-level organizing structure was the year-long inquiry project coupled with in-person supports for participants to productively engage in full inquiry cycles. Second, I found that reflective tools were offered as a means of supporting participants to engage in full cycles of inquiry and make explicit links between their practice, thinking, inquiry projects, and professional learning. Throughout the section, I report findings that showed how participants were given the space, and encouraged, to build from their own interests and questions about
supporting students' SRL as they exercised their voice in decision-making processes related to their learning.

**Inquiry Project and In-person Supports.** My analysis revealed that features of the CoI were structured in ways that aided participants in initiating and maintaining a focus on questions they had about supporting students' SRL. More specifically, a macro-level inquiry structure (i.e., inquiry project) across the year was paired with in-person supports for individuals to engage in inquiry over time. In this first section, I describe how the inquiry project's cumulative nature and in-person supports were designed to help participants engage in a sustained (i.e., longitudinal) focus on their SRL-based inquiries while at the same time assisting participants to situate their inquiries in practice.

Analysis of Powerpoint presentations suggested the situated, longitudinal nature of the CoI's approach to inquiry was seeded during the summer institute. The summer institute opened with encouragement from both facilitators to adopt an inquiry stance to professional learning which was concretely represented by Halbert and Kaser’s (2013) *spirals of inquiry* (see Figure 2.1). Participants of the summer institute were encouraged to think about how an inquiry stance might support their learning and practice. For instance, on days one and two, the LF and Co-F invited participants to "scan," "focus," and "develop hunches" about what they were noticing about students' SRL in their contexts (Halbert & Kaser, 2013; PPT, Summer Institute, Days one, two, and three). Early on day three, participants were invited to make connections between what they were thinking and learning when they were invited to "start to imagine how [they] might engage in inquiry processes related to SRL?" They were further invited to consider how they might move to other spiral of inquiry processes when they were asked: "What did you hear that might help you: choose a focus? self-direct further professional learning; take and reflect on
action? judge how your efforts are going?” (PPT, Summer Institute, Day 3). In another example, on day three, morning activities were centered on opportunities for participants to generate inquiry questions, consider authentic examples of inquiry-projects related to SRL, and learn about the experiences others had engaging in inquiry processes and local networks. All participants were encouraged to enact and sustain their inquiries beyond the three days of the summer institute.

For the educators who chose to participate in the year-long CoI under study, the inquiry approach was formalized in an ongoing inquiry project. The inquiry project was introduced as a “Cumulative, Supported Experience” by the LF at the end of the summer institute in a mini-session for participants engaging in the year-long CoI (PPT, Summer Institute, Day 3). This inquiry project was again based on Halbert and Kaser's spirals of inquiry whose book (2013) was expected reading (for those taking the course for credit) or recommended (for those engaging in the course for non-credit) prior to commencing the September LT meetings.

In my role as participant and observer during the summer institute and later as facilitator during LT meetings, I did wonder if there might be confusion for participants as they navigated both Halbert and Kaser's take on inquiry as well as SRL concepts that had similar, overlapping ideas. Specifically, the SRL-based "cycle of strategic action" underlying presentations on SRL (the focus of the inquiry project) showed how self-regulating learners ideally engage in "(1) interpreting tasks and setting goals, (2) planning, (3) enacting strategies, (4) monitoring, and (5) adjusting" (Butler et al., 2017, p. 6). Participants in this CoI learned about this cycle of strategic action during the summer institute and through their pre-LT meeting readings (Butler et al., 2017, Ch. 1). Further, in the summer institute, participants were introduced to SRL-related research (through both a presentation and reading; Butler & Schnellert, 2012) in which the cycle
of strategic action was revised to depict inquiry in the context of teachers' professional learning (see also Chapter 2). Thus, participants were introduced to two models of inquiry, one was introduced as a guide for their learning through inquiry (Halbert & Kaser, 2013) and the other was more explicitly rooted in principles of SRL and introduced to illustrate an SRL and inquiry-based professional learning initiative (Butler & Schnellert, 2012). One participant, Racquel, struggled with teasing apart the two depictions and talked to me in session two (October LT Meeting) about her confusion. Later, in her interview, she described drawing in a colleague of hers to help her situate her own learning in Halbert and Kaser's spiral because she was struggling to do so on her own and with supports offered through the CoI (i.e., collaborative conversations; LF feedback; conversation with myself; see also Chapter 5 of this dissertation).

However, despite this potential confusion, the inquiry process participants were invited to engage in (based on Halbert and Kaser's model) was heavily supported by both the LF and myself as well as through all structural supports (e.g., assignments; reflective tools; collaborative discussions). The supported nature of the process undergirding the inquiry project was communicated at the outset in the syllabus. The first stage of the inquiry project (i.e., inquiry question) was described as a “draft” and participants were assured they would have “opportunities during the [October LT] meeting to share and refine your questions” (Syllabus). To further support participants to refine their inquiry questions, during the first, formal LT meeting, the LF revisited resources intended to support the development and refinement of inquiry questions that were first introduced by co-facilitators during the summer institute. For example, the LF provided participants with prompts intended to help them decipher, “What makes a good question?” (e.g., Is it a real question? Will it make you stretch? Will it provide you with a deeper understanding of a topic?”; PPT, LT Meeting, October). Participants were also
provided with possible “framing questions” which allowed participants to imagine a variety of question types they might address (PPT, LT Meeting, October). For example, the following prompt paired a specific question 'starter' with a brief idea about how the question might function as well as an example: “What happens when____? (e.g., *What happens when I provide one-to-one reading and writing conferencing with this child on a daily basis?*”). These examples gave participants a window into the ways in which different question stems might foster particular paths of investigation and encouraged teachers to explore the effects of a practice, strategy, or intervention. The LF then shared with participants a list of authentic examples of SRL questions teachers had asked in the past. Finally, participants shared their thinking about their inquiry questions with colleagues and were prompted to critically examine their questions, refine them and embed their conversations not only in their current thinking but also in their future actions related to their questions.

Cumulative and supportive structures that fostered both longitudinal and situated engagement in inquiry processes continued throughout the academic year. For example, supports were offered to help participants layer in the professional learning and practices they planned to engage in as they built out their inquiry projects. Between the October and November LT meetings, participants were asked to create a plan in which they built on their draft inquiry question, “including research you plan to do…what you will do in practice, how you will know if you’ve achieved your goals … and a list of resources you plan to draw on” (Syllabus). Similarly, supportive in-person discussions and activities were repeated in LT meeting two (November) when, for example, the LF revisited the spiral of inquiry (Halbert & Kaser, 2013) and then identified “Key Elements of Your Inquiry Plan” (see Figure 4.2). For that, the LF suggested how inquiry processes (e.g., setting and refining inquiry questions) were linked to advancing
professional learning through the dynamic processes that could resource their thinking and learning: “(a) reading/researching; (b) learning through practice and with students; (c) learning from with/colleagues” (LT Meeting, November; see Figure 4.2). In this session, supportive, collaborative activities were designed to surface: (a) how individuals’ existing inquiry plans were evolving; (b) how participants might further advance their professional learning; (c) new learnings and how they might shape inquiry; and (d) plans for linking learning, practice and reflection.

Figure 4.2

*Slide to Support Intentional Professional Learning in Inquiry Process*

Throughout LT meetings, participants were also encouraged to work collaboratively to provide feedback to one another “to ensure … plans are do-able and generative” (PPT, LT Meeting, November). By the January LT meeting, all participants were expected to submit a refined inquiry plan in which they “finalized their inquiry plans, building on feedback and your ongoing learning” (Syllabus). Similar, but less time intensive, supports to the inquiry projects were again offered by the LF in LT meeting three (January), four (February) and five (April), with opportunities for inquiry process-related collaborative discussions and participation structures (e.g., work time; sharing resources assignment). Finally, in May, participants
submitted a final report of their inquiry project in which they built on previous assignments and included descriptions of: (a) what happened through their inquiry; (b) their learning as they engaged with resources; and (c) their future plans for learning, inquiry or practice (Syllabus). At the final session on May 22, 2015, participants shared their learning in small groups.

Thus, evidence converged to show how this macro-level inquiry project, across the year, was supported by a cumulative approach that was paired with in-person supports for individuals to engage in inquiry over time.

**Reflective Tools.** My analysis revealed reflective tools to be a complementary structure that supported participants to make links between their in-practice work (e.g., taking action, monitoring students' responses), thinking (i.e., reflection), and inquiry-based professional learning. Evidence showed how reflective tools were used to create an opportunity for participants to situate their learning through inquiry in their practice contexts. These reflective tools were designed to help participants focus their attention on instances of practice they could then feed into their inquiry process and, more formally, their inquiry projects.

Four times throughout the academic year, participants were asked to complete one of two reflective tools designed to “link what you are learning to your practice” (Syllabus, p. 6). Reflective tools were templates which outlined the thinking participants were expected to trace, with the intention of helping them either "scan" for SRL in their classrooms or reflect on actions they were taking in service of their SRL goals. Within the *Developing Inquiry: Scanning for SRL in Classrooms* tool, participants filled out a four-quadrant template to help describe and surface their thinking related to: (a) Context: What was your plan for locating SRL in classrooms? What did you do?; (b) Observation: What happened? What did you notice, see, hear? Were there opportunities for SRL? Did students take up opportunities? Did students initiate SRL?; (c) React
and interpret: What did you learn? What did you think and feel: about locating SRL in classrooms; about supporting SRL in your classroom in the future?; (d) Reflect and Plan: What’s next? What are your questions now?” (see Appendix B). The second tool, Developing Inquiry: Reflecting on Action again provided opportunities for participants to describe their context, goals, reactions, interpretations, reflections and plans but had participants focus on any actions they had taken for supporting SRL (see Appendix B). Reflective tools were a repeated structure that participants engaged with to support their learning through their practice-based work. In terms of utility, one participant, Kit, described being confused about how to use the Scanning for SRL reflective tool and wrote in February:

I have not previously used this scanning form because I was not sure what I was supposed to be doing, or more specifically, I did not know which terms were appropriate to be using. I am more familiar with the idea of scanning now that I realize I can focus on one or two students as opposed to the entire class. (Reflective Tool, February)

Kit went on to complete reflective tools for the remainder of the year. Her example showed how even tools designed to be a support for learning could be perceived as intimidating before she became more familiar with inquiry processes. In another case, Claire, chose to adapt the reflective tool visually to suit her preferences as she filled it out. However, across the CoI, all participants used it to support their learning. In this inquiry-based professional learning initiative, reflective tools served to offer participants the space and guidance to meld together what they were noticing or trying in practice with what they were thinking as well as learning through the CoI. This represents a structure through which participants had the opportunity to overcome divisions between practical experiences, reflective thoughts, and theoretical learnings.
Section Summary: Opportunities for Situated and Longitudinal Engagement in Inquiry Processes. Findings showed that opportunities and supports for situated and longitudinal engagement in inquiry processes were embedded across multiple components of this CoI. First, the overall inquiry project and related in-person supports provided participants with an opportunity to initiate and maintain a focus on situated inquiry while taking on an inquiry stance. The cumulative approach to inquiry provided participants with an opportunity to sustain a focus on their questions as they engaged in full cycles of inquiry while at the same time being supported to navigate learning through practice.

Through reflective tools, participants were encouraged to ground their learning in what they were experiencing in their practical contexts, thus providing a structural support for participants to connect their learning, thinking, and practice. Further, reflective tools provided participants with explicit guidance on moving between inquiry processes (e.g., from reflecting to adjusting) while at the same time providing participants with the flexibility to move iteratively between them (e.g., by communicating new goals) supporting opportunities for sustained engagement in inquiry processes.

That the structures were offered as opportunities to guide engagement and then supported through carefully designed attention to how people would provide support shows how, in this CoI, inquiry-based learning was conceived of as complex work that demanded a highly supportive environment. Throughout, participants maintained opportunities to exercise their voice in determining inquiry questions and how they pursued inquiry processes. Further, because participants were consistently invited to base their work in this CoI on priorities they themselves identified for learning about supporting students' SRL, inquiry processes necessarily required that participants had a voice in determining how their learning journeys unfolded.
**Opportunities for Engaging with Resources**

Analysis of documents (e.g., syllabus, assignment templates), session field notes, session Powerpoint presentations, and participants’ assignments suggested that the CoI was designed with careful attention to the role of resources (e.g., readings, presentations, videos) in professional learning. In the current section, I report on findings related to the opportunities participants had to engage with content-based resources (i.e., information about supporting SRL) as they pursued their learning first throughout the summer institute and then throughout the academic year. In my description, I also report on evidence that showed how participants were invited to take on a more active role in making decisions about what resources to engage with over time.

**Resources at the Summer Institute.** Findings showed that the summer institute was designed to offer participants opportunities to build foundational knowledge about SRL, see how SRL supportive practices and environments look in real life, and make personalized meaning about how to support SRL in the future. Resources were provided by facilitators as a key medium for conveying information about supporting SRL in the form of presentations, videos, case studies, inspirational examples and recommended readings. Further, given their expertise in SRL, facilitators themselves were resources to participants’ developing understanding about SRL. For example, on day one of the summer institute, both facilitators (i.e., the LF and the faculty co-facilitator) provided foundational knowledge about SRL and a rationale for its importance to learners in K-12 education and beyond. During the morning, the faculty co-facilitator (Co-F) introduced her own research related to supporting SRL and writing in an elementary school primary classroom. This study was also offered as one of four recommended readings to participants on day one (Perry & Drummond, 2002). Similarly, on day two, the LF
elaborated on her research project in which she showed what self-regulated reading can look like for students in secondary classrooms. An article based on this study was also offered as a reading for participants to explore at the end of day two (Butler & Schnellert, 2012). These studies were linked to more specific concepts explored during the three days such as an exploration of SRL supportive practices as well as when and where SRL has the potential to breakdown. Both facilitators also presented information related to how feedback, theories of motivation and "growth mindsets" (Dweck, 2006) are interwoven with one another and integral to understanding and supporting SRL.

Participants also had opportunities to ground information in their own, existing understanding of SRL and individually or together (in small groups) co-construct understanding about SRL and implications of new learning for their practical contexts. Presentations about SRL by the co-facilitators were paired with opportunities throughout the three days for participants to grapple with resources both collaboratively and individually. Small-group reflections and discussions provided participants joining from multiple entry points (i.e., varying understanding and experience related to supporting SRL) to contribute from their unique perspectives. For example, on the morning of day one of the summer institute, participants were asked to think and then discuss in small groups what they already knew and wondered about SRL. Because participants were provided with optional pre-readings, participants who had chosen to take those up were invited to share their perspectives on those. Peppered throughout the three days were opportunities for participants to reflect on new information and personalize it through individual thinking and small-group reflections. For example, after being invited to read and consider a particular case study on day one of the summer institute, participants were provided with
questions intended to help them make links between a learning example and facets of SRL in relation to their own practice (see Figure 4.3).

**Figure 4.3**

*Prompts for Small-Group Discussion*

At the end of day two, participants were provided with four recommended readings from which they could choose as a complement to day two presentations and activities (including the articles mentioned earlier). Throughout the three days, participants were encouraged to consider how they might imagine bringing SRL principles to life in the upcoming school year. To that effect, day three activities and supports leaned more heavily towards supporting participants to consider how they might engage in inquiry-based learning beyond the three-day summer institute, as described earlier.

**Resources Through the School Year.** Findings showed that throughout the year, learning team meetings and assignments were designed to offer participants opportunities to grapple with a variety of resource types in order to deepen their understanding of SRL. Opportunities for participants to learn about, draw on, learn from, discover and share resources with one another were abundant. Findings showed that readings and focused discussions were significant sources for new professional learning in the CoI.
To support opportunities for new learning, participants were invited to engage with readings across the year-long CoI (required for students taking the course for credit; recommended for others). A range of LF recommended readings were offered to participants to take up before each LT meeting. First, participants were given the opportunity to extend from the readings they began in the summer institute to build common understanding about engaging in inquiry-based professional learning (Halbert & Kaser, 2013) and draw on SRL research and inspirational examples to inform their thinking (Butler et al., 2017). For the October through January LT meetings, participants were offered a mix of readings that were both shared for all and selected by individuals. In some cases, shared readings were selected by the group through a voting mechanism based on their learning interests. In February and April, participants took on the task of sourcing readings to share with their colleagues in small-group discussions they facilitated. Thus, readings represented an important source for new learning which participants were invited to draw into their inquiry-based learning process.

During LT meetings, focused discussions (or presentations) represented an additional portion of dedicated time for participants to engage with sources for new learning. The LF offered focused discussions informed by research on SRL and complementary inspirational examples for supporting SRL from authentic classroom contexts. These discussions were also sometimes opportunities for participants to make links between SRL-supportive practices and other goals they had for learners. For example, the LF presented information about how SRL supportive practices have the potential to support diverse learners (PPT, LT Meeting, January). In some cases, the topics of focused discussions were determined by the LF and at other times she invited participants to vote on the SRL subtopic they most wished to learn about. For example, during the first LT meeting (October) the LF presented participants with the Table of
Contents from the Butler et al. (2017) text to make a choice about the topic they wished to explore in the subsequent LT meeting. From the list of options (i.e., the book's Table of Contents), participants voted to build understanding about supporting students' independent engagement in SRL and reflection. The results of their vote (in which they used dot stickies on a piece of paper) was shared by the LF during that first session and then the group planned to read the chosen chapter in preparation for the subsequent meeting's focused discussion. Later in the year, the LF chose to focus her presentation on links between SEL and SRL given participants' interests and questions evidenced in their assignments. Then, in the April session, it was participants who chose the resources and led discussions about topics they thought would be of interest to peers. Thus, focused discussions, organized around topics of interest, represented an opportunity for participants to deepen their learning about a particular SRL sub-theme.

Balancing LF-led Presentations and Collaborative Discussions. In pre- and de-briefing conversations I had with the LF, I ascertained that she was grappling with how to balance providing resources and expertise while at the same time supporting participants' roles as agents in their learning. While she acknowledged that expertise from a university-based researcher and educator can be valuable, she was attuned to the notion that overemphasizing the provision of information might undermine her efforts to support participants to actively learn through inquiry-based processes that were practically situated in their contexts with their students.

In line with the LFs effort to balance the way resources (and information) were provided, across the year-long CoI more responsibility was given to participants to chart their own learning paths as they constructed knowledge about SRL through collaboration and inquiry. Analyses of session agendas showed that even though an expert in SRL served as LF for the academic year-long portion of the CoI (five LT meetings and one Celebration of Learning), a significant
proportion of in-session time was dedicated to collaborative interactions. This was a trend that increased over the course of the year. Session agendas indicate that facilitator-led focused discussions (i.e., presentations) on topics (i.e., SRL, procedural issues, CoI assignments and assessments) were always fewer in proportion than individual and/or collaborative reflective activities. Within a three-hour session, these facilitator-led discussions constituted fifty-five minutes in the October LT meeting with facilitator-led discussion time tapering down to twenty-five minutes in April and thirty minutes at the final Celebration of Learning in May. This finding is significant because it shows that participants were provided with opportunities to take on an increasingly active role in determining how they constructed new knowledge about SRL during in-person sessions, in addition to the practice-based professional learning they were engaging in outside of LT meetings. Still, resources and focused discussions maintained a continual presence throughout the CoI so that participants had opportunities to access resources for new and enriched learning outside of their classroom contexts and collegial discussions.

As a co-facilitator, I observed the LF-presented focused discussions to be a rich resource to learning and wondered at her decision to heavily weight time to peer-led collaborative discussions when she, an expert in SRL, was available as a resource to this small group of keen educators. At the same time, through the summer institute participants were given access to information and expertise about supporting SRL (i.e., SRL content provided by experts), while the LT meetings still provided resource access, but also became more focused on providing process-based supports for participants to learn through inquiry-based opportunities. This tension between balancing resource and agency is something I was sensitized to as I conducted my analysis about how participants took up these inquiry-based processes (Chapter 5) and how their learning and practice was impacted (Chapter 6).
**Connecting Participants with Relevant Resources.** Findings also indicated that written feedback on assignments provided a medium through which the LF built in opportunities for participants to connect with resources that were relevant to their learning. When participants were struggling with an idea or practice, the LF recommended resources to help build their thinking on the topic. For example, when Marianne was making links between her and her colleague's story workshop and SRL, the LF responded with a suggestion for a reading that might help Marianne see how she was supporting SRL:

> In Chapter eight of the Butler et al. [2017] book we talk about strategic questioning. We don't describe in as much detail as we might why this approach can be so powerful. But this is a terrific example of that! You are definitely scaffolding learning, with very clear goals in mind. But by asking questions you are still empowering learners to make decisions ... so they are being more successful but in way that still allows for their choice and creativity. (Reflective Tool, January/February)

In other examples, I interpreted the LF's suggestions for further reading as designed to help participants build understanding they might need to push further with their thinking and understanding in relation to SRL supportive practices. For example, when Alex included in her inquiry plan to "constantly review with the class what self-regulation is and what a self-regulated learner looks/acts like," the LF drew in an example from their book to support Alex to imagine how to support *learning* from an SRL perspective:

> One chapter in the Butler et al. [2017] book that you might find interesting is Chapter 4, where we create a visual of goals we might have to take when fostering SRL. In there we try to weave in the SEL kinds of goals that we know are so important. We connect that with other goals that we have for self-regulating learners ... I can see ... how you are
really empowering learning on many dimensions in how you have designed your activities and supports. I'm just wondering how you're building supports for SRL on the 'learning' side of the house in what you are doing (you've definitely created the space to do that!). Just curious. (Refined Inquiry Plan, January)

These resources were not limited to readings but included recommendations to seek out connections with specific individuals (e.g., a local inclusion specialist). In other instances, the LF signaled to participants that an upcoming topic in an LT meeting might support their thinking in relation to what they were grappling with. To Christina, who had a goal of helping students develop strategies to "calm down when frustrated," the LF reflected back: "This is a great insight ... how can we dovetail supports for academics/learning with supports for SEL, which sometimes emerge and evolve in tandem? We'll chat about that more in January" (Draft Inquiry Plan, November).

In effect, assignments and written feedback represented a mechanism through which the facilitator could learn about participants' learning and practice-based contexts to make resource recommendations. What this shows is that through this CoI, participants were able to access resources and expertise that were based on where they were in their learning and what they were interested in.

Section Summary: Resources. In sum, participants were given opportunities to engage with a variety of resources to their professional learning. These opportunities to engage resources were coupled with supportive structures through which participants could actively grapple with them. Resources represented an opportunity for the LF to facilitate new learning that deepened and expanded participants' understanding of SRL. Across the span of the CoI, participants were given increasing space to take on a more active role in determining, and deciding how to engage
with resources. Further, across the year, resources were repositioned through structures (e.g., LF written feedback; resource sharing assignment) to more responsively address individuals' unique learning preferences. What this shows is that resources were positioned differently across the two contexts (i.e., summer institute and LT meetings) and over time.

When resources were recommended (either by the LF or colleagues), participants were able make choices about which resources they might take up, or not, strengthening the finding that participants had both a voice in determining how they learned in relation to resources while at the same time being supported to access relevant resources (e.g., through LF or colleagues' recommendations).

Taken together, resources and related supportive processes (e.g., small group discussions, reflective tools) played a key role in connecting multiple components of this inquiry-based professional learning initiative. Further, participants were expected to explicitly make connections between resources, practice, thinking and new learning thus positioning them as active constructors of new understandings.

**Written Facilitator Feedback**

A complementary support for engaging in inquiry was written feedback provided by the LF which appeared to individualize supports to participants' learning and bolster opportunities for their engagement in longitudinal and situated inquiry. My analysis of feedback revealed four overarching types of feedback with sub-themes within each. First, the overall tone of feedback was encouraging and supportive of participants' experiences and learning. Second, feedback highlighted participants' process of inquiring and surfaced their mechanisms for engaging in that process. Third, feedback fostered participants' opportunities for metacognitive understanding about their unique, complex learning trajectories. Fourth and finally, the LF provided feedback
that aimed to help participants build their understanding about supporting SRL in relation to the needs of the learners in their classrooms. Notable is that the LF was in the role of formal course instructor for those taking the course for credit. However, there was no discernible difference between her approach to feedback for the one participant (Alex) who was not taking the course for credit but who chose to submit assignments. The main difference was that, in cases where participants required a mark, the LF provided a grade.

Encouraging and Supportive. Overall, evidence suggested that the feedback provided by the LF was encouraging and supportive of participants' experiences and learning trajectories. One way in which the LF achieved this tone in feedback was by providing positive comments which I interpreted as also signaling to participants that the thoughts they chose to share were being heard by the LF. Phrases such as: “So key!” (Leah, Reflective Tool, February); “Great ideas!” (Alex, Celebrating Your Learning, September) were peppered throughout participants' written submissions. Comments representing a proxy for ‘listening’ to what was being ‘said’ were also paired with personal reactions of the sort that might more naturally occur in a synchronous discussion. This was evident when participants wrote a question and the LF provided a response. Often, the LF's responses seemed to establish common ground between herself and the participant by emphasizing their shared role as educators concerned for students. In my discussions with the LF, she described her approach to feedback as a sort of "thinking alongside the participants." For instance, in her ‘Reflection on Action’ Tool (January/February), Marianne had written that:

By keeping a reflective journal myself during the process I am consciously recording my observations of the students. The focus is more on the learning process and the learner as opposed to the ‘lesson’ I am supposed to be teaching.
To which the LF responded: "That’s really great! In my teaching I find it so powerful to be listening to students to see what they are making of things … that’s, for me … one of the most … interesting facets of teaching." Taken together, evidence showed how the LF created feedback that was a medium for a dialogic, positive and reassuring space through which she could respond in a conversational manner.

For participants taking the course for credit, the LF also provided feedback on the assignments themselves. When the LF provided this type of feedback it was positively framed, linked to transparent criteria, and constructive. Feedback here provided participants with evidence about the ways they were on track to satisfy assignment requirements and ideas for how they might build from a current assignment to improve for the next. For example, in Leah’s refined inquiry plan (January) the LF provided the following:

- This is a great combination of resources that you are pulling together to inform your thinking and learning ... As you move to the final report, [you can] link what you take away in the end to these different resources. You are already doing that here…by signaling how you took up an idea that you heard about in the summer institute and how you adapted that, and by describing in such rich ways what you are learning from your practice and students. In the final report, you can just add a bit on what you are taking away from your readings and other resources, too. You are well on your way on this again! So, that’s just the next step as we move forward.

Analysis of assignment specific feedback showed evidence of supports for learning and growth in these repeated (i.e., inquiry project, reflective tools) and cumulative (inquiry project) structures.
Support for Engagement in Inquiry Processes. Findings indicated that feedback reflected an effort to support participants' successful engagement in the inquiry process. Given that inquiry is a form of learning requiring one to create, and possibly adapt questions, grapple with new learning, and make connections to practice, participants might benefit from help to navigate their own unique, and possibly messy, process. To that end, feedback seemed designed to support participants as they navigated the process of inquiry. Feedback of this sort seemed intended to invite individuals to consider where they were at in their own inquiry process and how they might move forward in multidimensional ways.

For example, participants were asked to generate inquiry questions at the outset of participating in the CoI but were reassured that even this first phase of question generating might be complicated. Indeed, the LF alerted individuals to the fact that they might go through a few phases of the cycle and then work their way back to reimagine their questions. To many, she proactively offered reassurance that generating questions was not necessarily a fixed and stable act. For example, to Marianne she wrote:

This is a very nicely focused ... question. Don't hesitate to change up your question over time, if you want to, as we learn more about this together. I say that ... because [participants] sometimes worry that they have to stay with their initial question over time, even if they do want to change it up a little. So at the outset I like to emphasize that it is a normal part of an iterative, inquiry process for questions to shift over time. (Draft Inquiry Question, October)

Feedback such as this offered participants the opportunity to focus, and re-focus, their attention on their own process of inquiry related to their learning and practice.
As participants reflected on their classroom-based experiences, the LF provided feedback that seemed intended to help them to deliberately layer in professional learning to bolster what they were learning through practice. Here, the LF seemed to be encouraging conscious attention to the role of formal professional learning in inquiry-oriented learning. For example, to Alex she wrote:

As an inquiring professional what I see you doing here is following the inquiry cycle beautifully ... For this "class", we can add another layer to that, which is to zero in on how you are advancing your professional learning ... In our November meeting I highlighted a few kinds of possibilities. One that I see here is that you will be learning in/through what you are trying in practice ... That is at the heart of an inquiry project ... Other approaches that you are using, that you could build in more explicitly include learning with colleagues ... perhaps you are also attending other workshops ... Other choices can be to learn from resources/readings. (Draft Inquiry Plan, November)

Other times, the LF emphasized that the purpose of their learning through the CoI was for participants' own professional learning which could get lost as participants attended to multiple, competing foci. For example, the LF reassured Eleanor that the purpose of the CoI (and relevant activities) was professional learning rather than resolving all of the many questions Eleanor felt she had to solve in order to support the students she worked with:

I can appreciate that this might be a bit anxiety provoking! It might help to imagine that, for your proposal and project plan, you don't have to come up with the 'one thing' that you'll try to foster SRL in your context ... You can instead think of this as an opportunity to try out and refine your practices in ways that both support your student(s) and enhance your learning about SRL and how to support it. [The CoI] is about your learning
in/through practice coupled with a range of other kinds of learning experiences. (Draft Inquiry Plan, Nov)

Here, the LF highlighted that the CoI's approach was intended to foster participants' opportunities for learning over and above solving an overwhelming range of problems they identified as challenging for students. To do so, the LF highlighted the purpose (professional learning) for Eleanor and her role within it (i.e., what she could expect of herself). Doing so showed how the LF used feedback as a support for participants to help them in navigating the complexity inherent in practice-based professional learning as they considered their own role within the overall process.

**Support for Metacognitive Awareness.** Findings showed how feedback seemed deliberately designed to help participants develop an awareness of themselves as learners. Feedback of this sort had the potential to illuminate for participants the intricacies of their unique learning paths, potentially helping them uncover something about themselves as a learner that may not have been obvious to them. In debriefing conversations I had with the LF, she mentioned how she had hoped to develop participants' metacognitive awareness to support them to see themselves learning and bolster their capacity to take more deliberate control over their learning. In the following example, this is illustrated when the LF reflected back to Kit dimensions of her practice and learning processes she may not have noticed. To Kit, who was registered in the CoI for credit and also in an additional course with the LF as part of her Master's program, the LF wrote:

> It's great that you took up a topic from different perspectives ... you could focus on it in different ways, from different angles, in our two learning contexts. I'm glad the kind of
learning in each was a bit different ... which created different kinds of resources for you to draw on when thinking about this. (Inquiry Project Report, May)

Feedback of this sort drew attention to the specifics of a participant's unique learning process. It also provided participants with an opportunity to get a fuller picture of how the learning they were describing was tied to other learning outcomes (they might later anticipate). In other words, the LF helped surface a bigger picture view of the learning participants were engaging in. For example, to Alex, the LF wrote:

This is really such a dynamic approach to monitoring what is happening and making a difference. By doing this, you can make really strategic, responsive changes as you are working with learners. (Draft Inquiry Project Report, April)

Or similarly, feedback served to emphasize powerful aspects of a participant's learning process, strengthening the likelihood they might notice what it was they were doing and analyze whether and how it might be worthwhile to carry forward in the future. For example, the LF communicated to Christina that she was articulating a particularly powerful approach to learning through practice when she wrote:

The "Next time I'm going to ..." is such a powerful approach to this ... it bridges from 'what did I do' to 'what will I do' ... which is how you can have their learning spring forward into future activities. (Refined Inquiry Plan, January)

In sum, feedback was designed to help participants see themselves learning. This type of feedback seemed to be structured, in part, to develop their metacognitive understanding about their own, complex learning trajectories. In inquiry-based learning, where multi-dimensional experiences are at play for participants (e.g., practice, theoretical learnings, collaborative interactions), highlighting and surfacing the learning experiences had potential to help
participants notice those moments, and then leverage and build from them to propel learning forward.

**Support for Enhancing Learning about SRL.** Feedback also seemed designed to enhance participants' understanding about SRL in schools and how to support it. These feedback moments represented an opportunity for the LF to meet each participant where they were at in their unique learning journey and nudge their thinking forward in order to deepen understanding about SRL. To accomplish this, the LF enacted a range of feedback techniques from: (a) asking questions to which an 'answer' would require deepening thinking about SRL; (b) identifying aspects of practice in SRL-specific terms; and (c) making suggestions for shifting practice in ways that were SRL supportive.

One approach the LF took was to gently challenge participants' thinking by provoking them to consider how the ideas and resources they were exploring through the CoI related to SRL. In these cases, the LF asked questions that, when reflected on by participants, might support them to make connections between their practice and thinking in relation to what they were learning about SRL. For example, in her November reflective tool, Claire described co-constructing expectations with her students and choosing "a weekly goal and a class prize for reaching their goal" to which the LF responded:

A class prize can be a good way to focus students' attention. I wonder if the students also have a social responsibility sense underlying the rules you're constructing with them? Do they know why they are following these expectations from a classroom participation/respect perspective? Are they behaving to get the prize? Or, because they see that the expectations create a caring, productive classroom? Does that matter? Can those be compatible?
In a similar example, Alex described supporting her students' understanding of class-wide behavioural expectations related to their work time. She had written: "Whenever I assign work, I review with the class what the job is and what the expectations are. I refer to the anchor charts frequently throughout the day to reinforce expectations and help strengthen their use of strategies to stay in the 'Green Zone'." To which the LF wondered:

This is just great! I wonder if you have had an opportunity to extend this kind of approach to thinking about the 'learning' side of the equation, too? This is wonderful for helping them figure out how to work together and their behaviours. Could you use something similar to think about the learning about owl’s piece of the puzzle, too? What do they want to include on a poster, for example? What do you want to know about animals like owls? How will you judge if your poster is OK? The same kinds of strategies can be helpful when focused on all sorts of goals during activities. (Reflective Tool, January)

A second way in which feedback seemed to be designed to deepen participants' understanding about SRL was when the LF reflected back participants' words (e.g., report of actions, reflections) from an SRL perspective, or, similarly, when the LF detailed what participants were doing that was SRL supportive. I interpreted this approach as supporting participants to see their practice and students' learning from an SRL lens in very concrete terms. The LFs comments in this category seemed designed to bridge from participants' perspectives of their practice to more explicitly detailed moments of SRL in action. For example, Alex described debriefing a particular test experience with her students. In her comments, the LF highlighted the SRL supportive aspects of Alex's practice: "Nice here is how you were surfacing with them how they were feeling about and reacting to the test. This can really foster their development of
metacognition as well as strategic action" (Reflective Tool, February). Similarly, when Marianne described how she and her colleague were supporting students' storytelling and writing through story workshop, the LF reflected back the following connection between what she saw was working and why from an SRL perspective:

It's terrific to hear about the various supports for storytelling and writing that you built over time. These are so great on so many levels ... You are sustaining attention to a goal over time, which gives the children space to grow and learn as writers. You are focusing explicit attention to pieces of the process in the context of the whole, so that students can start to build awareness of the purpose ... and strategies they could choose. This is again a great way to balance supports with students' choice and decision-making, I could go on ... but overall my point is that I am seeing so many rich, SRL promoting practices embedded in what you were doing. (Inquiry Project Report, May)

Feedback of this sort likely helped participants make connections between aspects of SRL they were learning about and their own practice. SRL can be hard to conceptualize and then harder to concretize and feedback in this category seemed to close the gap between the two.

A third way in which feedback seemed to be designed to deepen participants' understanding of SRL was in how the LF made suggestions for participants to build from, and then refine, the SRL supportive practices they were trying out. In these instances, the LF built from participants' stated practices to elaborate her ideas about how to make SRL supportive principles more robust. For example, when Kit observed that some students were having difficulty independently self-assessing their work in relation to "learning targets," the LF proposed:
Opportunities to connect the idea of having learning targets with some of the other ideas we've been thinking about ... like co-constructing them with the children, and/or asking them to interpret back and give examples of the targets to you (when that can work) ...

Sometimes students need to be actively involved in creating or interpreting targets for them to understand and own them ... And then keep them in mind while working.

(Reflective Tool, April)

I interpreted these moments as having tremendous potential for participants to access support when they were having difficulty bringing SRL supportive principles to life because they had opportunities to see how they might adjust them from the lens of an SRL expert. At the same time, the LF could bridge from participants' experiences to help them build on practice-based experiences to learn more about supporting students' SRL. In these instances, the LF served as a sort of glue to bridging practice and theory as participants enacted practice-based professional learning.

These moments where the LF was challenging participants' thinking and practice required that she carefully suggest to participants the ways they might consider adjusting their practice and deepen their understanding through new learning (e.g., from a reading). At the same time, these moments represented opportunities for participants to persist in trying out new practices and may have led them to have a heightened sense to monitor what they were noticing about the ways their practice was intersecting with new and existing knowledge about supporting SRL. Feedback provided by the LF in pivotal moments (i.e., when a participant was struggling with a particular practice) may have been key for fostering sustained attention to SRL supportive practices. Thus, feedback that was designed to deepen participants' understanding of SRL was
also grounded in practice and fostered participants to sustain engagement to practice-based changes over time.

**Section Summary: Facilitator Feedback.** In sum, evidence showed that varied feedback was offered to support participants to sustain attention to inquiry processes and build up their learning about supporting students' SRL in their classrooms. Findings indicated that feedback was dialogic, encouraging and personalized, and could have communicated to participants that they were 'heard' by the instructor and had a supportive space to reflect together and advance their own learning. When focused specifically on assignment quality, feedback was aimed at emphasizing participants' learning and growth both as professionals and learners and included guidance on how to move forward. Feedback supported participants to navigate their own process of learning by helping support them as they navigated their engagement in inquiry as professional learning. It further seemed structured to help participants develop metacognitive awareness about themselves as learners. This process-based feedback was paired with content-based feedback that was deliberately structured to help participants deepen their understanding of SRL at the same time that they were grappling with the realities of practice and new learning about supporting students' SRL. Taken together, feedback was designed to support participants in an ongoing way and as close to participants' contexts as possible given the nature of an external-to-workplace professional learning structure.

**Chapter Four Summary: Supports for Learning in the CoI**

In this chapter I reported on evidence in response to my first research question: How was learning supported in this particular collaborative, inquiry-based professional development context? My analyses showed that, first, this CoI was premised on providing participants with a voluntary opportunity to engage in collaborative professional learning and make choices about
how to participate from the outset. Participants' opportunities to make decisions about how their learning unfolded were abundant throughout the CoI as they chose how to engage with the structural supports to their learning.

Second, collaboration was found to be a key structure through which participants were given opportunities to learn from one another as they built understanding about supporting students’ SRL. Analyses also revealed how collaborative interactions were grounded in individuals’ interests and inquiries related to supporting students' SRL. Further, participants were found to build from a variety of collaborative opportunities (both within and beyond the CoI) as they engaged in inquiry processes.

A third key finding was related to the structures that supported participants to engage in situated and longitudinal inquiry processes. These included both between- (e.g., inquiry project) and in-session (e.g., small-group discussions) supportive structures intended to foster participants' opportunities to bridge practice, learning, and theory over time and in relation to their contexts. Feedback from the LF represented a multidimensional source of support to situated and longitudinal engagement given its content- (i.e., SRL) and process-based (i.e., inquiry learning) emphasis.

A fourth finding was that resources were key for supporting participants' opportunities to deepen their learning about SRL. Resources were offered to build foundational understanding about supporting SRL in the summer institute and continued to be an important source for fostering opportunities for new learning throughout the year. Resources were positioned differently over time across the CoI's proceedings. Given the situated nature of inquiry-based learning, the LF had opportunities to offer resources that responded to participants' learning
needs. Further, participants were encouraged to select and share resources with others they found particularly relevant for their learning and practice.

A fifth key finding was that written facilitator feedback was an important mechanism for providing participants and the LF with a space to together reflect, and build on, individuals' learning experiences. In her individualized writing, the LF seemed to leverage the opportunity created through assignments to provide participants with ideas about how to engage productively in inquiry, develop metacognitive awareness of their own learning, and deepen their understanding of SRL supportive practices.

Finally, space for participants to exercise voice was evident in all aspects of the CoI when they had opportunities to decide if and how to engage in the learning opportunities offered. To that end, learning opportunities were also grounded in participants' interests and inquiries relevant to their contexts, goals for professional learning, and students' needs. While I found these features of the CoI's design to be supportive of inquiry-based learning opportunities, they were not without potential tensions. Specifically, this tension required that the LF to balance participants' opportunities to make decisions for their learning while still attending to the need to bring resources to the group to support their new learning (e.g., through focused discussions; recommended readings).

In this chapter I have described the ways in which learning opportunities were set up to support participants’ engagement in inquiry-based professional learning. In the coming chapters, I will build on this foundation to report findings related, first to how these opportunities were taken up by participants in this CoI (Chapter 5), and then to impacts on teachers' professional learning and practice (Chapter 6).
Chapter Five: The Process of Learning through Collaborative Inquiry

In this chapter, I report findings based on my analysis of the ways in which educators took up supportive structures in this CoI. Through this line of analysis, my goal was to focus on the process of learning through collaborative inquiry as educators were embedded in this CoI context. Given that educators were explicitly invited to advance their professional learning through inquiry by drawing, not only from reading and research-based resources, but also through practice and collaborative interactions (see Figure 5.1), I was sensitized to the ways these elements would factor into educators' learning processes. Thus, in this chapter, I first report on how opportunities for collaboration were taken up by educators as they moved forward with their inquiries within both the CoI and their practice settings. Second, I describe how educators built from supports to engage in longitudinal and situated inquiry-based learning. Finally, I outline how educators experienced agency as they leveraged opportunities through which they could make decisions in relation to their learning and practice goals.

Figure 5.1

Slide Shown to Prompt Deliberate Professional Learning
Educators’ Experiences of Collaborating

In Chapter 4, I detailed the ways in which collaboration was a feature built into the CoI very intentionally (see also Figure 4.1). In this chapter, I report on my analysis of educators’ descriptions of their experiences collaborating. First, I found that educators valued opportunities for collaborating during CoI sessions. Second, analyses revealed that educators were co-constructing knowledge and practice during CoI activities. Third, analyses revealed how educators collaborated, not only within the CoI sessions, but also within their practice contexts.

Educators Valued Opportunities for Collaboration

Findings showed, first, that educators valued opportunities to work collaboratively through the CoI and found them to be supportive of their learning and practice. They appreciated the time and opportunity available to work together and described the ways in which they benefitted from their shared experiences. For example, Christina described how: "Many of my practical experiences, as well as interactions with colleagues, have helped to develop knowledge that fueled my inquiry process" (Inquiry Project Report, May). Kit contrasted her participation through the CoI with other courses she was taking through the university as part of her graduate degree. She described working with colleagues from the same school district as adding:

a sense of familiarity because we are from the same school district, and often we have attended the same workshops or had access to the same materials and information from district resources ... that is not to say, however, that I would want to participate in a masters program consisting only of people from my school district. I think that course of action would be stifling in many ways ... Discussions with my [district] colleagues about the successes and challenges of [SRL] has been instrumental in helping me decide 'where to next' in terms of planning and teaching. (Sharing Resources Assignment, April).
Some educators described themselves as valuing collaboration because they perceived it as providing support to both their professional learning and well-being. For example, Leah was grateful for the opportunity to learn with, and receive support from, her school-based colleagues who were also educators in the CoI:

What I feel the most thankful for is that I have my colleagues (Alex and Eleanor) to help me through this process. It is wonderful to be able to brainstorm, problem solve and reflect through our conversations with each other. What a wonderful feeling to have someone there to help you refocus when you are feeling lost and unsettled. (Draft Inquiry Plan, November)

Leah went on to underscore how the CoI provided her with a supportive space to learn. For example, she described how a particular discussion "helped reassure me that all teachers have struggles. It is not just because I have made a change in my teaching path, but that it is quite typical for all teaching professionals" (Sharing Resources, April). Similarly, Eleanor reflected on how her individual thoughts were grounded in the communal context of the CoI, emphasizing the supportive experience of learning with one another:

Even though our class meets only once a month, we are a class of community learners. We are not individual students but rather a group working collaboratively together, supporting each other in our learning. We feel we are in an environment of trust and safety. I can't imagine our class without laughter, without sharing. Each of us sharing resources that we find useful and interesting. All of the resources that were shared brought different questions to mind. I enjoyed the opportunity to share, however, I really enjoyed listening to what others thought and what they questioned about different
theories and ideas. I continue to learn a lot from the sharing of experiences of others, even when those experiences didn't go quite as planned. (Sharing Resources, April)

In one case, Racquel described collaboration, at least at first, as anxiety provoking. She wrote that she was "very nervous about sharing my readings with our [CoI] colleagues, but as it turns out I was reassured with welcoming, kind and appreciative support" (Sharing Resources, April). Racquel's example shows how collaboration can be challenging for some, and further shows just how important a supportive environment is for collaborative learning to occur. While this sentiment was only articulated by one participant, it is possible that a range of emotions were also experienced by other educators with regards to collaborating.

Overall, some educators described how they valued opportunities to learn from, and with, colleagues while at the same time expressing how they benefitted from the emotional support available to them through the CoI. Further, educators' experiences underscored the importance of fostering a supportive space to set the stage for collaborative learning to occur.

**Educators were Co-Constructing Knowledge and Practice during Collaborative Activities**

A second key finding was that educators perceived their experiences with collaboration as supporting their knowledge construction and practice development. For example, findings showed how, through collaborating in the summer institute and LT meetings, educators were co-constructing knowledge about SRL and starting to think about how to mobilize that in practice.

For example, educators described how collaborating offered them the chance to grapple together with resources they accessed through CoI activities and think through implications. For instance, Claire valued how, in the summer institute, small-group discussions provided opportunities for her and her colleagues to imagine how they might take up the ideas presented by facilitators and transform them into practices suited to their contexts:
I got a lot out of working with my small group in [the summer institute] ... because a lot of the practical stuff like different strategies to try and different things to help our practice, that part I got a lot more form talking to other teachers and really having that time to collaborate. (Interview)

Educators also described instances when they together generated ideas about SRL-supportive practices through collaborative thinking on resources they were sharing with one another during LT meetings. In one example, Kit recounted how her group made connections across readings they shared with one another as they saw a pattern and together built understanding about principles of practice for supporting SRL:

Although the two articles discussed by myself and Racquel were very different, common features were evident in both ... My article [Perry et al., 2003] echoed the need to provide choices and nonthreatening evaluation practices, as did Racquel's article ... Within our group, we discussed how some ideas about SRL can appear in articles about seemingly unrelated topics, yet the crux of the meaning is paramount to what all of us are striving to do in our practices. (Sharing Resources)

To support their learning and practice development, educators also valued how, through their discussions, they were able to share practice examples with one another related to supporting students' SRL. Sometimes, educators described learning through hearing about one another's practice because of the usefulness of having insight into a different context (e.g., different grade). For example, Claire described how, in LT meetings, she learned through hearing about her colleagues' practice:

I thought there were many opportunities to learn [from others] ... having the chance to talk to the other teachers and to see what they're doing and to ... share the ideas with
similar grade groups. Or, even with different grade groups so you know, like 'A grade four teacher is doing this in their class,' so that kind of gave me an idea of like, 'Oh, if I want them to build up to that, what are some of the stepping-stones I can do in kindergarten so that they're ready for that in grade four?' (Interview)

She went on to recall how conversations with colleagues helped her perceive her students' strengths related to reflective journal writing rather than focus so much on their struggles:

Sometimes I feel like I'm kind of hard on myself or hard on my students ... and [I said] 'Oh my gosh, they're so good in their sharing circle but then once they get to the reflective journal they totally lose the point of it.' And ... one of the educators [said] 'Well ... you have to remember that they're only in grade one.' And that kind of shifted my thinking, too ... maybe reflection doesn't have to be on paper all the time?' (Interview)

These, and other, examples showed how, through collaborating, educators were deepening their understanding of supporting SRL by making practice-to-practice connections.

Taken together, evidence showed how collaboration during CoI activities facilitated knowledge co-construction in ways that had promise to inform and influence practice. When collaborating, educators could grapple together with resources and share their practices in ways that extended their thinking about SRL and how to support it in classrooms.

Educators Collaborated Not Only Within the CoI but also in their Practice Contexts

Findings showed how educators collaborated not only within the CoI, but also in their practice contexts. In the previous section, I described educators' experiences of collaborating within the SI and CoI meetings. In this section, I report findings related to how educators took up the invitation to learn through collaborating in their practice contexts. In this respect, findings
showed how CoI structures and processes supported educators to extend their collaboratively-based learning and practice development processes beyond the CoI meetings into their practice.

To show a range of the ways educators extended opportunities for collaborative learning from the CoI into their practice contexts, I provide three examples. To represent my findings, I first show how three educators (Leah, Alex, and Eleanor) bridged between collaborating within the CoI and their shared, school site. Next, I show how Alex was inspired by a reading from a core, CoI text to reach out to another colleague who could support her learning through practice. Following that, I show how Claire, a classroom teacher, worked with her school’s teacher librarian to use an inquiry-based approach that was influenced by her work in the CoI.

**Leah, Alex & Eleanor: Bridging Between the CoI and their Shared, School Site.** The example of how Leah, Alex and Eleanor worked together shows how, by coming together into the CoI from the same school, they were able to build collaboration across the CoI and their school site. They strengthened their opportunities to learn through collaborating not only by working together during CoI meetings, but also by co-creating an inquiry question to pursue together across the year. This enabled the three individuals to work together with a common focus through the LT meetings as well as when their students and contexts overlapped in their school. At the same time, they retained individual learning paths as they took up opportunities to engage in inquiry processes (on their shared topic) when their students and contexts did not overlap.

At the start of the CoI, Leah (K/1 Classroom teacher), Alex (Gr. 2 classroom teacher) and Eleanor (EA working with a grade 2 student) had already been working together in their school setting for three years. Leah and Alex co-taught by bringing their two classes together. Eleanor was an educational assistant (EA) who worked one-to-one with a student who spent most of his
time in a resource room setting with opportunities for "integration" into Alex's grade 2 class.

When Leah and Alex co-taught, this student was supported by all three adults.

Initially, Leah wanted to understand how to build a community of learning in which all learners could feel a sense of safety and belonging. Alex wanted to foster effective cooperative learning and students' independent use of SRL strategies within group work to promote her goals for a more inclusive classroom environment. Eleanor wondered how she could "assist students with special needs and challenges recognize their own ability to be self-regulated learners?" (Draft Inquiry Question, October). By November, the triad had revised their individual questions to focus on the following singular, communal question: "While focusing on those children who are most vulnerable, what strategies can I use to help students become self-regulated learners?" Alex described their collaborative creation of a shared question as both arduous and engaging when she wrote: "Together, after many comprehensive, crazy, exhausting and wonderful discussions, we have decided on the following inquiry question ... " (Draft Inquiry Plan, November). They came to this question based on their shared interest in supporting inclusion both inside their classrooms and during out-of-class time, particularly because they noticed how students with special needs were being excluded.

Through the year they pursued a common inquiry focus, and in their reflective assignments noted how they were key resources to one another's learning both during the CoI and at their school (e.g., while co-teaching or meeting informally). At the same time, each individual pursued, and reported on, their unique inquiry trajectory. For example, in January, Leah chose to reflect on a specific lesson she led with Alex and Eleanor (and their shared students) as they embarked on a new project together (Reflective Tool, January). In other reflective tools, she focused on lessons she conducted alone but, in one, articulated sharing her
reflections with Eleanor as she thought ahead to supporting a specific student's learning (Reflective Tool, February). All the while, she commented on the helpfulness of having Alex and Eleanor to learn with and "to help me through this process" (Inquiry Project Report, May). Leah also described how they met formally "during collaboration time or after school ... in addition, because we work at the same school, we are able to have spontaneous conversations as well ... to bounce ideas off of one another ... we can share our reflections and offer each other feedback" (Inquiry Project Report, May).

This example shows how there was room in this CoI for these three individuals to define how they collaborated both within the CoI (i.e., by formally co-inquiring) and beyond it in their school (e.g., co-teaching, meeting formally and informally). The three individuals were able to leverage the collaborative space created through the CoI as well as the structural supports to their professional learning (i.e., maintaining an inquiry focus) to pursue learning that was commonly meaningful to them both within and outside of their practice contexts.

**Alex: Building from a Resource to Generate Collaborative Learning.** Alex’s case provides another example, this time one that shows how at least one teacher was inspired by a resource offered through the CoI to generate an opportunity to learn through collaborating in her classroom context. Alex initiated a relationship with a district-level support teacher (ST) because she was inspired by a case study in chapter ten of the Butler et al. (2017) text. As a result, she asked the ST to come to her class and teach a lesson so she could observe a specific student: "I formulated this plan of team teaching with our [ST] after reading chapter ten ... [which] resonated with me as for the past five years I have had many wonderful Joshua's [the student described in the Ch. 10 case study]."
Alex detailed the ways in which she learned through this collaborative relationship and gained opportunities to work one-on-one with students during their time together. For example, Alex described how she and the ST started out with goals to each observe specific students: "I have asked her to teach some lessons while I do the observing and then we will switch as it is good to get feedback from a different person/perspective" (Inquiry Draft check-in, April, 2015). Alex detailed moving from focusing solely on her "Joshua" to then leveraging the opportunity to observe all her students. She and the ST were also guided by the “inspirational” example (LF’s language for describing practice examples) in the book to complete an SRL profile of another student they sought to better understand and design their plans to support all students’ SRL. Overall, this example shows how Alex bridged from a CoI-based resource to build on collaborative opportunities available in her context to address the goals she had for her students, practice and learning.

Claire: Adapting Inquiry Processes with a School-Based Colleague. Claire's case provides an example of how she built inquiry processes into her collaborative work with a school-based colleague as a way of extending her learning and practice development between the CoI and her work in schools. She started by working with the teacher librarian (TL) at her school on a science unit with her grade one class. Given that Claire's inquiry goal focused on supporting the growth of students' self-reflections, she described how "the [TL] and I have co-planned a series of lessons that will provide students with skills not only to conduct research, but also to work cooperatively as reflective learners and critical thinkers" (Refined Inquiry Plan, January). She described how she and the TL worked through inquiry processes by monitoring how their actions impacted students. Together they reflected on students' responses to their practice and then adjusted their approach. This example illustrates how, through collaborating, Claire was
able to maintain her overall focus on supporting students' self-reflection and deepen her thinking about that through collaborating with her school’s TL.

Over time, Claire shifted among inquiring alone, inquiring together with the TL, and getting feedback from colleagues in the CoI, all while pivoting between co-teaching and teaching alone. Through these mechanisms (i.e., inquiry processes on her own and with others) her learning and practice development were supported through collaboration in her school (with the LT) and in the CoI (with her peers) simultaneously. As Claire explained:

We [Claire and the TL] provided wonderful picture, non-fiction books to inspire ideas. However, as much as students enjoyed reading books, we realized that they didn't really know what to do with the information and they were unable to generate 'deep thinking' questions that would lead to meaningful research. We tried different ways to introduce the information, but each time, I felt disappointed with the results of our planning. After sharing our observations with each other, the TL and I had an honest discussion and discussed some of our 'hunches' - what went well and what could be improved in our planning. I realized that perhaps we were simply co-teaching, rather than engaging in true collaboration. I feel that collaboration enables the teachers to have a common focus or a common inquiry, and with this common goal, teachers can discuss different ways to meet students' needs ... the TL and I decided to focus on our own inquiry question as we continued with the animal research ... we created a google document, where we can document our observations and our reflections after each lesson. This provided us an avenue to ... stay focused on our main question ... as we noticed the needs of students, we would take the time to teach specific skills ... after each lesson with the TL, I would continue parts of the project in my classroom ... I quickly noticed that students needed
more support in the process of reflection. After some discussions with classmates from the [CoI], I revised their reflective journal entry... (Inquiry Project Report, May)

In this reflection, Claire reported on how their potential for success with inquiry-based learning was constrained because she stuck with her own question. She believed that she and the TL needed to develop an inquiry question together that was more situated in their collaborative practice. In this respect, Claire was bolstering opportunities for herself and the TL to really learn through collaboration and inquiry by invoking the very processes she was simultaneously engaging in through the CoI. What this showed was how the CoI was offering her ideas for structures that could support her collaboration with others in her/their efforts to mobilize what they were learning about students' SRL while also learning together through practice.

**Section Summary: Educators' Experiences of Collaborating**

In this section I have presented findings related to educators’ experiences of collaborating. Findings provided insight into the ways in which educators built from, and created, collaborative opportunities to engage in professional learning and practice development. Overall, educators valued collaboration and described it as an important aspect of their learning process. They also noted that it served as an emotional support to their learning journeys, for example, through opportunities to access others' insights which reassured them about their own learning paths. Further, findings showed how, in Racquel's example, collaboration could be anxiety-provoking which highlighted the importance of creating a space in which educators feel comfortable for professional learning to occur. Findings also showed that collaborative interactions that occurred during CoI sessions provided educators with opportunities to co-construct knowledge about student learning and supporting SRL, particularly when they had a
chance to explore different kinds of resources and one another's practices in small group
discussions.

Analyses also revealed that, as educators engaged in the CoI, they energized, fueled, and
structured collaborative interactions that extended into their work in situ. Findings showed a
range of ways that educators built out from the CoI to engage in collaborative learning
opportunities in practice. Leah, Alex and Eleanor's example showed how they together and alone
engaged in practice-based learning that was meaningful for each of them and spanned their
shared school context and CoI meetings. In the second example, Alex was inspired by a resource
offered through the CoI to reach out for support to a district-level support teacher. Further, she
built from the resource to guide their work together in support of students’ SRL. Claire’s example
showed how her inquiry-based work in the CoI influenced how she worked collaboratively in her
school to learn through practice and support students' SRL. Through these, and other, examples,
findings showed how educators in this CoI built up their opportunities to learn collaboratively
both within and outside of their practice contexts.

**Educators' Experiences of Engaging in Cycles of Inquiry**

In Chapter 4, I detailed the ways in which educators were supported to engage in cycles
of inquiry as an approach to furthering their professional learning. In this section, I report on
findings from my analysis of how educators took up opportunities to work through inquiry-
oriented cycles of learning. As I prepared to analyze data, I adapted a model of SRL depicting
how educators engage in cyclical inquiry (from Butler & Schnellert, 2012; Schnellert & Butler,
2014) to help me focus my analysis and conceptualize how theory and practice were coming to life in this CoI (see Figure 5.2).

First, Figure 5.2 highlights how educators bring unique experiences, assumptions, values, and senses of responsibility to a setting that shapes their engagement in inquiry. Then, the figure depicts cycles of inquiry at two levels that are reflective of both the goals individuals have for their learning and the practice-level goals they define. At the heart of both levels of educators’ cycles of inquiry in this CoI was their focus on supporting students’ SRL. One level of inquiry for participants was focused on teachers’ learning. At this outer layer, educators set goals for their own learning about SRL, made plans for deepening their understanding and practice, engaged in learning processes intended to inform their thinking on particular topics or issues, monitored by checking on their learning (e.g., what more do I need to know?), and adjusted how they approached their learning (e.g., by refining goals and making additional plans for professional learning). At the second, inner layer of the figure, participants engaged in cycles of inquiry that were directed towards their practice goals. At this practice level, educators created goals for their practice, made plans for how to achieve them, enacted specific pedagogical approaches, monitored their classrooms to see how enacted practices played out (e.g., by collecting student data; observing classroom contexts; considering their own affective experience), and adjusted their goals and strategies going forward.

Finally, Figure 5.2 also shows the importance of resources for all aspects of inquiry including the goals participants set, their plans for practice or learning, the strategies they try out,
the approaches they use for monitoring their progress, and the ideas they have about how to adjust other aspects of their inquiry process going forward.

**Figure 5.2**

*Cycles of Inquiry (adapted from Butler & Schnellert, 2012; Schnellert & Butler, 2014)*

In my analyses, I focused on how educators were working through cycles of inquiry as informed by their incoming perspectives and as supported by resources to their thinking and learning as described in previous chapters. Overall, my findings indicated that the two layers of inquiry (i.e., learning and practice) were deeply interconnected because participants' practice-based inquiry was entwined with their overall learning-level inquiry. The interconnection between the two layers was evident, for instance, when participants built from what they were learning from their practice-level inquiry processes to inform their learning-level inquiry cycles, or when they built from resources in the CoI to reshape their practice-level inquiry. Often learning through inquiry at both levels became intimately connected. For example, Kit described
how what she was learning through "scanning for SRL" in her classroom and the readings she was offered through the CoI combined to prompt her to adjust her goal for her learning and practice (Inquiry Project Report, May).

Further, overall, I found that educators worked through multiple practice-level cycles of inquiry throughout the year. Analysis of documents tracing educators' thinking revealed that they each completed between three and six full practice-level inquiry cycles. This, coupled with their year-long engagement in their learning-level inquiries (as documented in inquiry projects), showed how educators were engaged in their own unique inquiry paths in a sustained way over time.

For example, over time, Alex engaged in six practice-level iterative inquiry cycles, each one starting with a unique goal for her practice. Because of how she maintained a focus on a consistent overarching goal, each practice-level cycle, although unique, followed a consistent thread as she cycled from goal setting to planned and enacted practices. After monitoring and reflecting on her practice, she frequently identified changes she needed to make and followed up on them in subsequent cycles. For instance, in her first inquiry cycle, Alex’s goal was to create opportunities for students to work together in groups in "a caring, nurturing and non-threatening environment" (Reflective Tool, November). After this first cycle on her efforts at creating an inclusive space for students to work in groups, Alex observed that some students still struggled to work cooperatively and also identified the ways in which the class as a whole still struggled to collaborate. Thus her goal for her second cycle was to both learn more about the students who most struggled to participate by observing them and to offer a carefully scaffolded teaching approach before and during group sessions (e.g., explicitly teaching and modeling how to work
effectively; clearly laying out expectations; co-constructing strategies for meeting expectations; providing opportunities for students to practice).

In another example, Racquel engaged in three practice-level inquiry cycles. In her case, she did not follow a consistent and overarching path from which she could flow from one inquiry cycle to the next. Instead, she formed tangential paths to her learning and practice development by developing unique inquiry foci several times throughout the year. Nevertheless, Racquel’s inquiry process spurred her to generate new learning and practice continuously over time (see Chapter 6). These, and other examples, showed how educators constructed their own unique approaches to inquiry, engaging in multiple cycles longitudinally.

In addition to my overall findings that educators engaged in interconnected, sustained, and unique practice- and learning-based inquiry cycles over time, my analyses revealed more specific patterns in how educators’ inquiry unfolded. First, I found that educators set multiple goals for their learning and practice simultaneously that were grounded in their hopes for students and responsive to their experiences throughout the year. Second, analyses revealed that monitoring (e.g., observing students' responses to new practices) grounded educators’ active engagement in successive cycles of inquiry. Third, analyses revealed processes that spurred educators’ engagement in full cycles of inquiry.

**How Educators Set Learning and Practice Goals**

In this section I describe how educators set learning and practice goals. Drawing on the model of SRL in teacher’s professional learning depicted in Figure 5.2, I was sensitized to examine the ways in which educators set intentions for their learning and practice (i.e., in the two related layers of inquiry). Findings showed, first, that educators navigated multiple goals for their learning and practice simultaneously that were grounded in their hopes for students. Second,
educators adjusted their learning and practice goals dynamically in response to what they were experiencing through inquiry processes.

**Educators Navigated Multiple Goals Simultaneously.** Overall, findings showed how educators were navigating multiple goals simultaneously. More specifically, analyses revealed how educators set practice goals that were connected to the goals they had for their learning. Further, findings were that both practice- and learning-level goals were informed by the hopes participants had for their students.

Through the model of SRL I adopted to guide my analysis (see Figure 5.2), I conceptualized educators' goals for their practice as nested within goals they had for their learning. What I found was that, indeed, educators created practice-based goals that were interconnected with their goals for their own professional learning. For example, Christina articulated goals for her practice (e.g., to model strategic questions) to advance her understanding about how the use of strategic questioning might support students in her classroom to "become more confident as learners and help them persist when they meet with challenges" (Inquiry Plan, November). To address her learning and practice goals in tandem, she bridged between what she was learning through practice and ideas she gained through reading on the topics of anxiety, learned helplessness, the value of challenging students, executive function, and strategic questioning, thereby propelling her professional learning forward and enhancing her practice development (Inquiry Project Report, May). Her work is an example of how educators set goals for their learning overall which were then reflected in the questions they established for their practice.

Educators also underscored how the goals they established for both their learning and practice flowed from what they were seeing in practice as well as the hopes they had for their
students. For instance, Alex’s overarching hope for students was that they all "thrive, grow and feel good about themselves" in an inclusive classroom community (Draft Inquiry Plan, November). She described how her collaborative inquiry question (with Leah and Eleanor) was helpful for attaining that larger, overarching goal:

Our ultimate goal is to have a 'community of learners!' To foster this community, we need to teach strategies that promote [SRL] and help students become socially responsible. To achieve this goal, we need to teach strategies that move children from knowing what to do (reciting) to actually doing (taking action ...) therefore creating a classroom climate that is one of learning and caring. This was my original inquiry question and continues to be extremely important ... Our inquiry question is: 'What strategies can we use to support our children that are most vulnerable and help them become self-regulated learners?'

(Draft Inquiry Plan, November)

Similarly, Eleanor grounded her goals for supporting all students' SRL in her belief that the students she worked with (in her role as educational assistant) had demonstrated to her "that they have unlimited abilities to learn, to be kind, to have a friend and be one too." As she described her rationale for her goals, she contrasted this central belief with her frustration that:

Students with challenges are often forgiven for their behaviour or their inability to take turns or achieve academically ... [because] people think they have no ability to choose to act any other way or ... learn in a higher capacity. Ignoring or accepting this as a predetermined outcome doesn't help the child. It ... reinforces to others that this is what to expect from people with special needs. (Draft Inquiry Question, October)

Eleanor's example showed how her goals were influenced by her beliefs about all students' abilities to learn and their rights to be included in efforts at improving students' outcomes.
Eleanor also described how she hoped to focus on supporting a particular student's SRL through her inquiry process, but that she "was afraid to choose this student as he is very complicated" and she "can't figure him out." She went on to describe how focusing on supporting this student's SRL as part of her learning process "is scary for me. It questions my abilities, my confidence, my understanding" but that she felt supported in the learning environment created through the CoI "to feel confident and successful" (Draft Inquiry Question, November). Eleanor's example showed how choosing personally meaningful inquiry foci could also feel risky because, as she said:

I want this student to be successful, not for me but rather for him. I want him to feel good about himself ... for him to be a valued part of our school community ... I know that I will probably develop more questions than answers but this is part of that journey for the both of us. (Draft Inquiry Plan, November).

The examples in this section depicted how educators created goals for both their learning and practice. Evidence showed, first, how educators created practice-level goals that were entwined with their learning goals and that they navigated their multiple goals simultaneously throughout the year. Further, educators also established goals for their learning and practice that were grounded in the hopes they had for students in their contexts.

**Educators Adjusted their Goals for Learning and Practice.** Educators entered the summer institute already wondering about SRL and how to support it in their contexts which shaped the initial focus of their inquiries. As their experiences in the initiative unfolded from there, findings showed that educators adjusted their learning and practice goals in response to what they were experiencing both within and beyond the CoI. Throughout the year, they adjusted
their goals dynamically in response to: (a) supports offered through the CoI; (b) their experiences engaging in inquiry processes (e.g., cycles of inquiry); and (c) their learning beyond the CoI.

A first finding was that educators shifted their practice and learning goals over time in response to the supports offered through the CoI. For instance, through working on her inquiry plan with the LF’s feedback, Claire adjusted the questions she had about supporting students' SRL. In November, Claire had articulated two inquiry questions: "How do co-constructed classroom expectations change students' behaviour and reactions to behavioural prompts?" and "How can I encourage and develop reflective learners through co-constructed classroom expectations?" Through her written feedback, the LF prompted Claire to consider investigating the connection between students' behaviour and SRL: "As you move forward, I’d be interested in how you connect the dots between students' behaviours and reactions to behavioural prompts, reflective learning and SRL ... If you were to build SRL into your question, where/how would it fit?" (Reflective Tool, November). In January, Claire refined her question as she wondered how reflective journals might support students' "metacognition and growth mindset" which she had described as an interest of hers in September (above; Refined Inquiry Plan, January). This example illustrated how educators adjusted their learning foci, at least in part, in response to supports (e.g., LF feedback) offered through the CoI.

Educators also drew from other resources offered through the CoI, such as content-focused presentations and readings, to set and refine their practice and learning goals through the year. For instance, Christina described entering the summer institute already wondering about how to help students "reduce their anxiety surrounding a task". At the summer institute, she found it helpful to learn "more about the importance of the 'interpretation of the task'" because, as she wrote, "If children understand what is expected of them, then they will perform with less
anxiety" (Celebrating Your Learning, September). As she started considering her focus for inquiry, she built from her new learning at the summer institute as well as an inspirational visual example that was presented. In the fall, Christina was inspired to create her inquiry question from that example she had seen at the summer institute (Perry et al., 2015): "How will modeling the questions: What is my job? What do I need to do my job? Why am I doing my job? help with kindergarteners’ behaviours (effort/routines/expectations)?" Through written feedback, the LF invited Christina to consider, "how you might bridge from modeling these to having students take ownership over the questions?" (Reflective Tool, October). Christina showed how she took up the LF’s feedback and drew in new learning through their core, shared text as she further refined her goals. She wrote:

   As I was learning through my ... course and reading the book [Butler et al., 2017] I came across the term 'strategic questioning.' The great thing about an inquiry project is that as I come across new terms it becomes easier to define my original question through an SRL lens: How will using strategic questioning (specifically the three questions: What is your job, how do you do your job, and why do you do your job), help children to become more regulated with regards to learning behaviours and expectations? (Inquiry Project Report, May)

   These examples showed how educators built from the resources they were encouraged to learn from through the CoI to adjust goals for their learning and practice.

   A second key finding was that educators adjusted their practice and learning goals in response to the experiences they had engaging in inquiry processes. As I outlined in Chapter 4, structures and supports were offered to educators through the CoI that prompted them to initiate and sustain engagement in cycles of inquiry. As a result of their experiences with inquiry,
educators revised their goals for their practice and learning. Claire's case provided an example of how educators set goals, tried out new practices to address their goals, monitored students' progress, reflected on how it went (while bringing in new professional learning) and, in response, adjusted their goals going forward (see Figure 5.3).

**Figure 5.3**

*Claire’s February and April Reflective Tools*

<table>
<thead>
<tr>
<th>Inquiry Question(s):</th>
<th>How does self-assessment affect students' ability to reflect on their own learning? How can I empower students to take ownership of their learning, and to foster a growth mindset in my students?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stated Goal(s):</td>
<td>Goal: To foster a sense of reflective learning and to help students develop a growth mindset in my students?</td>
</tr>
<tr>
<td>What did you try?</td>
<td>Created and taught reflection chart (&quot;What is your job?&quot;; &quot;How well did you do your job?&quot;) After a week, students used a similar template for their reflective journals (related to science inquiry).</td>
</tr>
<tr>
<td>Observation: What happened?</td>
<td>Early on, many students rated themselves &quot;green&quot;, some had difficulty interpreting the task &quot;I didn't want to question what they had thought, so I used that as initial information.&quot;; over time students became more open to choosing yellow or red; some still choose green even though their progress doesn't show that. &quot;How can I help students who have assessed themselves as green to think about how else they could grow as a learner, or to recognize what else they could improve?&quot;; When students had difficulty discussing what they could do better next time they were not able to articulate specific feedback. &quot;Was this due to my word choice in my questions?&quot;</td>
</tr>
<tr>
<td>React and Interpret:</td>
<td>Realizing importance of anchoring reflection within the activity. &quot;Although I began the self-reflection chart as a visual and class activity, it is slowly becoming part of our reflective journal entries. Students are asked to assess their progress through an activity, and the reflective journal entries provide specific examples of what 'green' looks like. When I first introduced the self-reflection chart, I did not include specific steps. I quickly learned that effective self-assessment is built from scaffolding and explicit teaching of expectations ... this can be transferred to other teaching areas as well ... Butler et al. (ch. 9) suggest that building assessment for learning into classroom practice is a powerful way to foster SRL. I hope that the self-reflection chart can serve as a springboard for other ways I can support and foster SRL in my classroom. <strong>Figure 9.3 in Developing Self Regulating Learners provides a clear framework to make adjustments to the self-reflection chart I have created.</strong></td>
</tr>
<tr>
<td>Planned Next steps:</td>
<td>As conveyed in Ch. 9 of Developing Self Regulating Learners, regulation in metacognition happens when students monitor what they are learning, and use feedback to make adjustments. I feel that one aspect that is missing from the self-reflection chart and activity is specific feedback by and for students. After students assess their progress, many of them require prompts to state what they could do next time to make improvements or adjustments. I hope to engage students in Think-Pair-Share activities after their self-reflections to help them provide feedback for each other, in order to make adjustments and adaptations to the task. I am interested to see how students react to specific feedback from their peers, and how the practice of providing feedback can help students to monitor their own learning, while making adjustments based on what they notice. As I learned in the self-reflection activity, students require explicit instruction and scaffolding. I hope to use the video 'Austin's Butterfly' to inspire peer feedback, and I hope to provide students with more opportunities to provide feedback during self-assessment activities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inquiry Question:</th>
<th>Inquiry Question: How can I empower students to take ownership of their learning, and to foster a growth mindset in my students? How does peer feedback affect students' ability to engage in activities that support SRL?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stated Goal(s):</td>
<td>Goal: To use peer feedback as a way to promote and support SRL.</td>
</tr>
<tr>
<td>What did you try?</td>
<td>Engaged students in a lesson on how to provide peer feedback using the video Austin's Butterfly. Students then engaged in a drawing activity and gave one another feedback.</td>
</tr>
</tbody>
</table>
Observation: What happened?  
As we watched and paused video, most students were able to suggest feedback. Some had difficulty. One student said, "make sure you only use green light words so you don't hurt his feelings." Students recognized the importance of criteria-based words.

"Working in partners allowed all students to be able to interpret and understand their task before beginning ... Although I did not realize it at the time, I now recognize that strategic action was beginning to take place ... students helped each other in interpreting the task, planning what signs of Spring they will look for, planning how they would draw like a scientist, and how they would know if they have done a 3 start drawing."

React and Interpret:  
[made links to principles of supporting SRL from Butler et al. book]. Students were engaged and couldn't wait to provide feedback ... many students remembered that one of the criteria is to 'look closely and draw the details', many of their constructive feedback were 'draw more details', or 'look more closely' ... I wondered how I can help facilitate their discussion so that they could provide more specific details. Perhaps they needed more guidance in how to provide specific feedback...I asked them how we could provide feedback if we did it again ... [they came up with helpful ideas]. showed me that supporting SRL takes practice over time.

Planned Next steps:  
Our co-constructed criteria for writing were useful for students. Would like to build on this and expand by adding in peer feedback to other subject areas ... "In chapter 7 of the Butler et al (in press) suggest that activities that foster SRL are complex by design, and may take place over a long period of time. If I were to do this activity with my students again, how would their feedback evolve? How can I support them in their continued growth, and help them to become effective peer models to each other?"

Note. Figure 5.3 summarizes data relevant to findings being reported in the current section, extraneous data have been omitted for length; data relevant to this section in bold).

As can be seen in Figure 5.3, across two reflective tools (February and April), Claire described how she set out to foster students' opportunities for reflective learning. After inviting learners to self-assess their learning, Claire observed that some students had difficulty assessing their progress accurately (i.e., choosing "green when their progress didn't show that"), and still more students had difficulty specifying "what they could do better next time." She captured in a reflective tool her plan to address this issue by incorporating peer feedback into future lessons (citing Chapter 9 of Butler et al., 2017 as a resource to her thinking). At the same time, Claire went beyond thinking about practice changes to show how she planned to intentionally learn through reflecting on practice when she wrote: "I am interested to see how students react to specific feedback from their peers, and how the practice of providing feedback can help students to monitor their own learning, while making adjustments based on what they noticed."

Subsequently, Claire embedded her planned changes (i.e., incorporating peer feedback) into the goal she set for her practice: "To use peer feedback as a way to promote and support SRL."
In another example of the ways participants refined their goals in response to their engagement in inquiry processes, Racquel's case showed how she found her way to a meaningful goal while grappling with inquiring herself. Racquel initially struggled to determine an inquiry question that she felt was meaningful for her learning. So, she reached out to a district support teacher (ST) to better understand her role as a learner in the inquiry process. She explained, in her interview, how initially she had established goals she felt would demonstrate her competency in teaching. Through her observations, as she was scanning her classroom for SRL (which she documented in a reflective tool), Racquel came to wonder about a problem she noticed:

So, [the ST] said, from, from what I was telling her ... 'You're in this inquiry mindset. You don't realize it' ... And by actually opening myself up to someone who had more experience it gave me direction. And that led me to starting to look at the classrooms I was in in a different way. Because I, in the beginning of the course ... Came up with something great that showed what [the LF] wanted me to know. It wasn't about me coming up with a question for myself and then pursuing it ... So my initial question was about something I know ... I can prove it. But when I went to do it, I thought, no that's boring. It's not interesting to me anymore. That's not a question. And ... I know it works, right? It's neat and tidy and I know I can make it look great. But then I thought ... you know what's really bugging me? So, I went into one of the classrooms of one of the teachers I support in a grade four math classroom and he was spending hours ... teaching math to these kids. And they would all stand up at the end of the lesson and line up at his desk ... and I'd think: 'What is it? Like, he models it, he demonstrates it, you know, he shows them.' And then I realize, none of them were reading the instructions, highlighting it, trying it out, reading it outloud. And I thought, 'Oh my gosh.' (Interview)
Racquel’s interview excerpt showed how, as part of her involvement in the CoI, she persisted with her efforts to engage in inquiry-based learning and took on a reflective stance when observing a classroom. Her observations then propelled her to define a question that was meaningful for her ("you know what's bugging me?") and was linked to her goals for supporting students and her colleague. Her observations, coupled with her reflection ("Oh my gosh") further supported her to pursue a line of inquiry that she built from as she tried out new practices, monitored outcomes, reflected, and adjusted her thinking (i.e., engaged in cycles of inquiry). What this showed is how engaging in inquiry processes (e.g., scanning for SRL) influenced how Racquel defined and redefined the questions she created to spur her learning and practice momentum.

Third, analyses suggested how educators' learning goals were influenced by the professional learning they engaged in outside the CoI which they had been encouraged to draw into their inquiry-based learning. For instance, in the beginning of the CoI, Marianne grounded her inquiry question in the experiences she brought as a resource teacher who worked with classroom teachers, educational assistants and students who struggled to take ownership over their learning. After visiting a school in the United States as part of a professional learning opportunity offered through her district, she was inspired to build from what she had seen to develop an inquiry question that would allow her to infuse her inquiry with practices she observed at that school and which she determined were relevant for supporting students' SRL.

In this section I reported on findings that showed how educators set learning and practice level goals. First, findings were that educators navigated multiple goals simultaneously that were influenced by the hopes they had for their students. Second, I showed how educators refined their learning and practice goals dynamically in response to supports offered through the CoI,
including the experiences resulting from inquiry processes themselves. Third, findings also showed how participants drew from professional learning they were engaging in beyond the CoI to set and refine their inquiry questions.

**Monitoring Practice and Learning Processes Grounded Educators' Cycles of Inquiry**

Overall, findings showed how, in this CoI, educators' engagement in monitoring grounded their cycles of inquiry. Monitoring served as a sort of linchpin to multiple aspects of inquiry in that the information educators gathered through their observations on their practice and learning influenced the decisions they made. Monitoring influenced the goals they set and the practices they planned and enacted. For example, often educators deliberately gathered information about their students' needs to set goals for their practice-level inquiries. Educators also relied on information they were gathering by monitoring to respond adaptively and adjust their learning and practice going forward (see Figure 5.2).

Evidence (e.g., reflective assignments) suggested that, even before beginning the CoI, educators were monitoring students' needs and problems they identified in their practice to inform their goals. They also monitored their own professional learning needs. This was evident in how, early in the CoI, participants communicated what they already knew about SRL and what they hoped to learn through participating in the summer institute. For example, because she was taking her M.Ed. with a focus on SRL and had seen the two co-facilitators of the summer institute present at a district-level workshop series, Christina described herself as coming "into the summer institute with a fair amount of background knowledge on the topic [of SRL] ... searching for a larger understanding of ... SRL" and wondering "how I can implement it within my context in French immersion kindergarten?" (Celebrating Your Learning, September). She went on to describe how she was:
Excited to take part in another 'Spiral of Inquiry' with regards to SRL. I have already tried to help students develop a growth mindset and have had children self-assess work effectively. Now, I am looking to have children reduce their anxiety surrounding a task. I learned more [at the summer institute] of the importance of the 'interpretation of the task', and I aim to focus on that aspect of SRL in the coming school year ... I was excited to see [my school] colleagues [there], and I am hopeful that we can collaborate on ideas and lessons together. (Celebrating Your Learning, September)

Christina's example showed how monitoring her own learning and experiences with inquiry informed the goals she had for her learning and practice in the early stages of the CoI.

As another way in which monitoring influenced their inquiry cycles, evidence showed how educators built from the structures and supports offered to help them think about what they were observing in their contexts to plan and enact specific practices. For example, in her role as support teacher, Marianne had the opportunity to observe multiple classrooms across grade levels to deepen her understanding of students' opportunities for independent learning. Through engaging in systematic observations, Marianne noticed a pattern in which teachers and educational assistants were making choices for students with few opportunities for students to make decisions about their own learning. Partly because of what she observed, Marianne based her ensuing discovery-based, creative writing lessons on supporting students to have opportunities for more "choice and decision making" (Draft Inquiry Plan, November). Later, she noted that she had:

Learned that by keeping a reflective journal myself during the process I am consciously recording my observations of the students. The focus is more on the learning process and the learner as opposed to the 'lesson' I am supposed to be teaching. By listening to the
students, I can gauge where they are in the learning process and what their interests are. These observations will influence the direction I take in planning. (Reflective Tool, February)

In a similar example Racquel, a school-based resource teacher (RT), built from the space and time afforded by her role coupled with the invitation to engage in systematic observations to watch for SRL in classrooms in the fall. Later, she noted how "The observation time was invaluable for the classroom teacher and myself ... Our post-lesson discussion and reflections have helped us decide on a plan for targeted lessons for reading and understanding math questions" (Reflective Tool, November). From there, Racquel chose a new inquiry focus and plan for supporting students to read and interpret math questions. Racquel and the classroom teacher went on to implement this plan and Racquel pivoted between teaching the strategy, working to support students to take up the strategy when needed, and observing how students were responding to their ongoing approach and adjustments. Racquel's example showed how important her opportunities for monitoring (i.e., observing students to see how they were responding to classroom practices) were for her to generate reflections that were helpful to her in adjusting her thinking and practice.

Thus, a key finding was that educators monitored their learning and practice which influenced all aspects of their inquiry cycles. When participants monitored their practice and learning, they gleaned information that they reflected on to make decisions about the goals they set, the practices they planned and enacted, and how to adjust their goals and practices going forward. What this showed is how monitoring was a key aspect of in situ professional learning that seemed a requisite complement to all aspects of inquiry-based learning. Taken together,
findings showed how educators' engagement in monitoring nurtured their engagement in other aspects of inquiry.

**Processes that Spurred Full Cycles of Inquiry**

Findings showed that two additional processes (alongside monitoring and supportive structures established through the CoI) combined to propel engagement in fuller inquiry cycles. First, engaging in systematic reflection presented participants with opportunities to identify and grapple with practice tensions in their contexts. Educators reflected by taking a step back from their practice and considering the meaning of what they had experienced and observed in their contexts. Reflection was a mechanism that seemed to fuel educators' opportunities to identify tensions in their practice, for example, when they noticed something was missing in terms of supporting SRL, something was not working for a particular student(s), or there was an issue that was preventing them from achieving their goals. Second, when educators then drew in professional learning to address these tensions, they engaged in adaptive and innovative thinking that fostered their opportunities for full engagement in inquiry cycles.

To illustrate what it looked like when educators invoked these processes as they engaged in iterative inquiry-based learning, I present a vignette of Alex's learning experiences. In September, Alex reflected on how, prior to her involvement in the CoI, she had struggled to integrate new professional learning to promote successful cooperative group work opportunities for her students:

Meaningful group work that extends learning has been an area that I struggle with. I have gone to many lectures and workshops that addressed topics such as: multiple intelligences; differentiated instruction; assessment; appropriate feedback and motivation, all taught in isolation. I have tried a variety of activities to engage my students. However,
what I was doing wasn't as effective as I would have liked. I felt something was lacking.

(Celebrating Your Learning, September)

She further described coming into the summer institute already wondering "How do I move the students past 'knowing' (able to explain the strategy that would have worked) to actually 'doing' (using appropriate strategies to solve the conflict and/or difficulty with the task)?" In October, Alex's observations reinforced her worries that students in her classroom had difficulty working cooperatively and that, while students were able to articulate helpful strategies for working effectively, they struggled to actually use the strategies they put forth (Reflective Tool, October).

In the same month, Alex further reflected both on the dissonance between her goals and what she had experienced in her context (i.e., an identified tension): "I work hard to build a trusting and nurturing classroom. A classroom that includes everyone." She also worried that when cooperative group work had "worked" in the past, it was because students' "regulation came from teacher 'control' and their peers" which undermined her goals for SRL and inclusion (Draft Inquiry Question, October). In November, Alex made an effort to address these issues by supporting students to choose their own groups, thus helping them own an initial part of the cooperative group work process. She based this approach, in part, on new professional learning she had gleaned from an “enlightening” reading offered at the summer institute (Celebrating Your Learning, September). She also merged previous professional learning on the topics of multiple intelligences and universal design for learning to support her goals. These lessons were under the umbrella of a unit she had planned that was inspired by a reading from a core, CoI text (Butler et al., 2017), the 'Supporting Self-Regulation in School' handout provided at both the summer institute and an SRL workshop series she was attending within her school district led by
the faculty Co-F. Alex gauged her new approach as successful because she was "less of a 'police person' for two students and this is huge" (Reflective Tool, November). Overall, Alex described her new practices as much more efficacious for most students who were "enjoying" the activities, but she continued to identify students who struggled to be successful through them.

To address the identified students' needs, Alex made a plan to advance her professional learning so she could further her understanding about how to address the needs of particular students (i.e., "to read chapters six and ten of the Butler et al., 2017") as well as to reach out to a support teacher (ST):

I was very excited reading chapter ten especially about Joshua. I have a few in my class and this article gave me some awesome insight/strategy regarding what I can do to help them approach, stay focused and complete tasks. I am going to ask our mainstream support teacher [ST] to work with me on this. (Reflective Tool, November)

Indeed, in January, she described observing specific students while the ST taught a lesson. Based on their observations, Alex and the ST then created an SRL profile of a student who was struggling to learn and participate (Student A). Alex and the ST designed at least one subsequent math lesson with Student A's needs in mind (Reflective Tool, February).

Overall, Alex felt she was seeing tremendous gains in supporting students' opportunities for cooperative learning, which was evident when she wrote: "Group work is awesome. Twenty-three students can work together, learn and teach the teacher! [The teacher librarian] and I were amazed at how it all came together" (Reflective Tool, January). Even as Alex made strides in furthering her goals for supporting students' cooperative learning, she continued to hone in on what was not working for particular students and sharpen her attention to address their needs.

Her continual identification of tensions between her goals for students and what she was
observing seemed to catalyze her to consider how she could draw in, and build from, new professional learning which then propelled her into further cycles of inquiry.

Alex’s example illustrates my finding that, when educators monitored and reflected on their practice, grappled with a tension they identified and sought out, and drew in, new professional learning, they were fully engaging in cycles of inquiry. Inquiry seemed to be bolstered by points of tension identified during reflection that spurred a type of problem solving that required participants to build in professional learning. At the same time, their involvement in the CoI meant that professional learning was readily accessible to them for knowing how to move forward.

**Section Summary: Educators' Experiences of Engaging in Cycles of Inquiry**

In this section, I have presented findings related to educators' experiences of engaging in cycles of inquiry. Findings provided insight into the ways in which educators leveraged the structures and supports offered through the CoI to engage in their own unique paths of sustained and situated inquiry-based learning. Overall, educators engaged continuously in cycles of inquiry over the course of the year. To direct their learning, they navigated multiple goals for their learning and practice simultaneously. They also described their multiple goals as grounded in their overarching hopes for students in their contexts. Findings also showed how educators' learning and practice goals evolved in relation to what they were experiencing both within and beyond the CoI, particularly in relation to supports (e.g., LF feedback) and content-focused resources offered through the CoI, the experiences borne out of their participation in inquiry processes, and professional learning from outside the CoI that they were encouraged to draw into their inquiry-based learning.
Analyses also revealed that, as educators observed and monitored their own and their students' learning, they were stimulating and shaping other aspects of inquiry. Monitoring was influential in how educators considered the goals they set and the practices they planned and enacted. Further, educators' observations influenced their perception of how things were going and needed next steps for their learning and practice.

A third key finding was that the processes of monitoring to reflect on what they were noticing, identifying tensions in their practice, and drawing in new professional learning to address those tensions combined to bolster participants’ engagement in full inquiry cycles. Alex's example showed how, by continually reflecting on what was not working in her practice context and addressing the issues she identified by drawing in new professional learning, she was propelling herself through continuous cycles of inquiry. Overall, as represented in the examples presented in this section, and others not included, findings showed how educators in this CoI built from the supports and structures offered to them to direct their opportunities to learn through sustained and situated inquiry-based processes.

**Educators' Experiences of Exercising Agency**

So far in this chapter I have traced how educators in the CoI were engaged in collaboration and inquiry. In this final section, I turn my attention to how, across the year, educators were taking up opportunities to drive their learning and practice development (i.e., to exercise agency). To that end, my analyses focused on how educators were exercising their opportunities to have a voice in decisions about how they engaged in the CoI.

Overall, findings indicated that educators enacted agency in the ways they took up opportunities available to them in the CoI to drive their learning and practice development. Regardless of the learning activity set out for them, there were opportunities for educators to
exercise agency in terms of what they were working on, how they were working, and who they were working with. The result was that, although they were learning together in a community focused on a common, big picture goal (i.e., supporting students’ SRL), participants charted their own unique paths because of the decisions they made in relation to the supports and structures offered to them through the CoI.

While opportunities for agency pervaded the CoI, CoI structures and supports shaped participants’ learning, in part by defining the very opportunities participants could make informed decisions about. As a result, structures were both providing direction and offering room for agency and choice. For example, resources (e.g., a shared course text) were offered as supports for participants that directed their attention to their common topic of interest and provided shared language and concepts for talking together about SRL. Still, after reading the introductory chapters to the course text together, participants also had opportunities to choose which other chapters they wanted to read as a community, as well as to make choices about what they wanted to read for themselves. They also had opportunities to bring in other readings related to SRL to share based on their own and others’ inquiry foci.

As another example of how CoI supports and structures shaped participants’ experiences while still affording opportunities for agency, participants were invited to plan for, and reflect on, the relationship between collaboration and their learning. Further, as part of the CoI structures, participants were offered structured time for collaboration during the summer institute and LT meetings. In this respect, the CoI processes directed participants’ attention to collaboration as a productive approach to professional learning. Still, participants had many opportunities to exercise agency in how they took up opportunities to collaborate (i.e., deciding who to collaborate with; choosing how they wished to centre their conversations), in how they
extended those collaborations into their schools (as in the case of Leah, Alex and Eleanor) and in how they created new opportunities for collaborating with colleagues outside of the CoI (e.g., Claire and the teacher librarian in her school).

In terms of inquiry processes, there were robust supports for participants to engage in sustained and situated inquiry-based learning through the year, which also communicated the value of inquiry as an approach to professional learning. Still, at each turn, findings showed how participants were directing their engagement in inquiry processes because of how they chose goals, planned practices, monitored for outcomes, and adjusted their thinking and ideas about how to approach their learning and practice going forward. Findings also showed how some educators needed support, a sense of safety and time to understand inquiry as a professional learning process that involves teacher agency and ownership. For example, Racquel initially worried about showing her competence and interpreted her reflective tasks in terms of what she perceived the LF wanted. Slowly, as she grew to focus on how her learning was at the heart of inquiry-based processes, Racquel started to engage in more self-driven learning. Racquel’s example showed how it takes support for some educators to become comfortable with the process and embrace the freedom to direct their learning.

In sum, I interpreted findings as showing how the CoI infrastructure provided a platform that supported individuals to come together around a common focus that they had decided mattered for them. I interpreted that CoI supports were instrumental in furthering common opportunities for advancing understanding about supporting students’ SRL. At the same time, participants were able to leverage the flexibility offered to them to learn in unique and rich ways and to contribute their diverse perspectives and experiences to their own, and one another’s, understandings about supporting SRL.
Chapter Five Summary: The Process of Learning through Collaborative Inquiry

In this chapter I reported on evidence related to the ways in which participants in this study took up supportive structures in this CoI to engage in the process of learning through collaborative inquiry. Through my analysis, I hoped to gain greater understanding of the ways in which educators experienced the CoI in an effort to see what their learning looked like. Findings indicated that, overall, educators worked collaboratively to further their learning, engaged in multiple cycles of inquiry longitudinally, and exercised agency as they charted their shared and individual learning trajectories.

My analyses showed, first, that, consistent with the value on collaboration communicated within the CoI, some educators described their appreciation for collaborative opportunities because of its importance for both their learning and emotional well-being. Collaborative processes became a mechanism through which educators engaged in co-constructing knowledge about supporting students’ SRL. Further, educators described engaging in collaborative relationships both within and beyond the CoI.

Second, educators were found to build from CoI supports to engage in longitudinal and situated inquiry-based learning. They each engaged in multiple practice-level inquiry cycles throughout the year. As they did so, their goal setting processes were grounded in their priorities for their students and prompted them to navigate multiple, intertwined practice and learning goals simultaneously. Further, educators’ goals for their learning and practice were dynamically responsive to the experiences they had and new learning, in part, because of their inquiry-based learning process. Findings also showed how educators built from supportive structures to engage in monitoring which was found to be key for linking inquiry processes. Further to that, educators' participation in reflecting, through which they identified tensions in their practice and learning,
catalyzed their decisions about how to move forward in their professional learning and engage in full cycles of inquiry.

A third finding was that, throughout their engagement in the CoI, educators exercised agency by making decisions that impacted how their learning opportunities unfolded. At the same time, the choices they made to direct their learning were in relation to their shared focus (i.e., supporting students’ SRL) and the resources and structures available to them. What this showed is that the supportive parameters of the CoI shaped participants' opportunities to chart their own learning pathways within them.
Chapter Six: Impacts Associated with Educators' Participation in the CoI

In this chapter, I report findings related to my third research question: How was teachers' learning and practice (separate or together) impacted through participating in this CoI? Analysis of data suggested that impacts went beyond educators' learning and practice and could be captured in four overarching themes. First, educators described shifting their thinking and practice related to SRL. Second, educators perceived benefits to students that they related to their goals and shifts in thinking and practice. Third, educators described impacts to their own professional learning. Finally, educators described a 'rippling out' effect given how they impacted their colleagues' learning or practice.

Table 6.1

Overview of Findings with Document Sources

<table>
<thead>
<tr>
<th>Finding</th>
<th>Leah</th>
<th>Claire</th>
<th>Alex</th>
<th>Marianne</th>
<th>Kit</th>
<th>Christina</th>
<th>Racquel</th>
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Note. September Celebration of Learning = Sep CL; October Reflective Tool (RT) = Oct RT; October Draft Inquiry Question = Oct IQ; November RT = Nov RT; November Draft Inquiry Plan = Nov IP; January Refined Inquiry Plan = Jan IP; February RT = Feb RT; April RT = Apr RT; April Sharing Resources Reflection = Apr Res; May FIP = May Final Inquiry Plan = May FIP; Post-Interview = Post-Int.; Supplementary documents = Supp.
Table 6.1 provides an overview of evidence related to each of these four themes for each educator as reflected in different kinds of data sources over time. With just one exception (Eleanor on rippling out), all teachers reported impacts for each of these themes. Impacts on shifts in their thinking and/or practice were consistently evident throughout the year of the study (from September through the post-interview). Benefits for students and rippling out effects appeared even in the first term for some then extended through the year. Educators most often described impacts on professional learning starting in the second half of the school year. Taken together, these findings suggested that teachers were engaged in ongoing learning and practice development throughout their experiences in the CoI (springing from the summer institute). In the sections to come, I provide more detail on the kinds of impacts reported in each of these thematic areas in turn.

**Shifts in Thinking and Practice Related to SRL**

Overall, findings suggested that educators learned more about SRL through their participation in the CoI and linked what they were learning to their practice. More specifically, a first key finding was that educators appeared to benefit by being able to view existing practices through an SRL lens. Second, educators described building up their SRL-related knowledge. Third, educators described developing broader insights into learning. And fourth, evidence suggested ways in which educators shifted their teaching practices in their efforts to support students' SRL.

**Seeing Existing Practices through an SRL Lens**

One way in which educators described benefiting from their participation in the CoI was in how they were able to see their existing practices through an SRL lens. Their descriptions
showed how, in doing so, they validated what they and others were doing. They were also able to see connections between seemingly disparate ideas from the vantage point of SRL.

For example, educators sometimes described how learning about SRL was validating for them because they were noticing the ways in which they had already been supporting SRL. For instance, Kit described in February how she was already supporting SRL "in many ways but I had not thought about it as 'supporting SRL'" (Scanning for SRL). In her follow-up interview, Claire also described how she saw the teachers she was talking to as already "trying to foster [SRL] in the classroom in different ways."

Learning more about SRL seemed to provide an organizing framework for educators to see practices in a new light because of how it offered them the opportunity to connect multiple educational theories and practices. For example, Claire described instances of overlap between ideas she was exploring within the collaborative professional learning opportunities she engaged in outside of the CoI and the work on SRL she was doing through the CoI. For instance, through her school-based book club she had read the book *Mindset* (Dweck, 2006) which was connected to the growth mindset resources offered through the CoI "and kind of just tied everything in together." In another example, Alex described how she was:

Making connections between the different workshops I have previously attended. I am now blending multiple intelligences, differentiated instruction and universal design for learning in a smooth and meaningful way into my lessons. They are no longer separate entities but pieces of the puzzle that fit together nicely. (Inquiry Project Report, May)

Overall, seeing existing practices through an SRL lens seemed to offer educators the opportunity to both validate practices they were already using and make connections across different educational theories and practices.
**Building SRL-Related Knowledge**

Findings also suggested that educators benefited by building SRL-related knowledge through their participation in the CoI. As can be seen in Table 6.2, evidence showed how the knowledge and practices educators were building were consonant with fundamental principles of SRL as described in resources they were accessing in the CoI. More specifically, all educators described building conceptual knowledge about SRL. Educators also described building knowledge about how to support SRL in their contexts, most often by making efforts at establishing safe and supportive learning environments, designing activities to foster SRL, providing supports for SRL, designing assessment and feedback to nurture SRL, and motivating and engaging learners (see Table 6.2).

**Table 6.2**

*Educators' Knowledge Gains Related to SRL and How to Support It*

<table>
<thead>
<tr>
<th>Example Insights</th>
<th>Core Knowledge</th>
<th>Leah</th>
<th>Claire</th>
<th>Alex</th>
<th>Marianne</th>
<th>Kit</th>
<th>Christina</th>
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<tr>
<td>Definition of SRL</td>
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<td>Interaction between individual, learners, context</td>
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<td>Cycles of strategic action</td>
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<td>Importance of creating safe and supportive learning environments</td>
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<td>Role of participation structures for enabling active learning and SRL</td>
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First, all educators described building conceptual knowledge about SRL. More specifically, educators reported building greater understanding about definitions of SRL, its key dimensions, and the relationship between individual learners and the context in which they are learning. They also reported gaining understanding about how cycles of strategic action figure in SRL, the relationship between SRL and SEL and the importance of fostering student autonomy and ownership. For example, after the summer institute, Leah described learning that "[SRL] is a process. It is not just about the strategies themselves but rather about how the students were navigating through the process of self-regulation. The integrative model of self-regulation ([citing] Figure 1-2 in chapter one) made all the difference for me" (Celebrating Your Learning, September).
Second, Table 6.2 also outlines how educators grew in their knowledge about how to support SRL in their contexts. For example, most participants described building greater understanding about the importance of establishing safe and supportive learning environments by making connections between students' sense of safety and their willingness to take risks, and by recognizing the role of participation structures in enabling active learning and SRL.

Evidence also showed that nearly all participants reported building understanding about how to design activities to foster SRL. For example, Claire described insights she gained about the types of activities that foster SRL and the importance of weaving supports for SRL into activities themselves. When thinking about the changes she had made to help students feel connected to their inquiry-based science project, Claire described how:

I realized that students became much more interested and engaged in learning about their animal. Having a choice in what animal to have as a pet generated interest in the project. This aligns with the strategic cycle, where students must first understand the purpose of the task. By providing autonomy in the choice of topic, resources and work space, students gained a sense of ownership and pride in their work. Ultimately, my goal is that students make choices for themselves to benefit their own learning. However, in order for SRL to occur, teachers should also provide instrumental supports and scaffold students' learning. For example, we co-constructed criteria for choosing a workspace and partners to work with. (Inquiry Project Report, May)

Claire's example showed how she was working towards her goals for students to make "choices for themselves" both by being deliberate about the types of tasks she was designing as well as in how she was supporting them to become more independent over time.
Many other educators also described growing in their understanding of how to deliberately build supports for SRL into the learning opportunities they were designing. For example, they described gaining new insight into the influential role that social forms of regulation can play for individual students' SRL. Marianne's case is an example of how educators were conceptualizing the role that co-regulation plays in students' SRL. When thinking about how teachers and EA's play an integral role for helping students build to independence, Marianne described how:

'Co-regulation has been defined as one individual ... providing support that is instrumental to the development of effective forms of self-regulation by another individual’ (Butler, Schnellert & Perry, 2017). It is important for the education assistant and teacher to recognize that building self-regulating learners requires strategic scaffolding of support. One cannot just expect the student to do everything on his own to show independence. The teacher and education assistant must introduce technology to provide organizational support, develop an environment that encourages and supports 'risk taking' and that it's okay to make mistakes, and provide reasonable choice and ownership to the student. (Refined Inquiry Plan, January)

Marianne's example illustrates a recurring theme in which educators described learning about how fostering individual ownership of learning required them to deliberately put in place along-the-way scaffolds for students to become more active, independent learners. In these ways, and others, educators were developing an understanding of how to support SRL.

Many educators also reported learning about how to design assessments and feedback to foster SRL. For example, they described growing in their understanding of the relationship between assessment and SRL and specific qualities of feedback that support SRL. Finally, all
educators described building understanding about the topic of motivation and engagement. For example, after attending the summer institute, Christina reported thinking differently about motivation:

During [the faculty co-F's] presentation on motivation, she mentioned that many teachers say, 'This child is not motivated', when a child seems unwilling to do work. She then stated that the child is motivated, just in a different way. She opened my mind into realizing that every student has motivation and that motivation is now a switch that goes on and off. This was a large 'aha' moment, that I will take with me into practice. I have said, 'This child does not care about school,' and 'This child is not motivated' before in previous years. It is very interesting to think about the 'why' when a child seems 'unmotivated', and to try to figure out what this child is motivated towards. The concept of being able to possibly help transform motivation is exciting. If motivation is always there, I want to be able to positively transform motivation for learning within most, if not all, of my students. (Celebrating Your Learning, September)

Building from this epiphany, Christina focused her inquiry on how stresses that young students experience because of perceived threatening situations (e.g., not understanding what is expected of them) might be alleviated by SRL-supportive practices (e.g., strategic questioning), thus extending her opportunity to learn about how to engage and motivate students to participate in classroom routines.

Overall, evidence showed how educators wove together what they were learning from resources and reflections on their practice contexts to generate meaningful understanding about SRL. Marianne's case provides an example of how educators were learning by drawing in
information from resources offered through the CoI, practice-based observations, and observations they made about students' learning outcomes:

From readings, my observations, and the [student] questionnaire, I now know that choice and decision-making influence independence and self-regulation however many factors are involved. Namely, setting up an environment that supports SRL, the growth mindset of both the teacher and the EA, fostering a growth mindset in students, “emphasizing challenge over success” ([citing] Dweck, 2006), focus on the learner learning and the teacher acting as facilitator, the use of strategic questioning, and time for reflection.

(Inquiry Project Report, May)

In linking theory and practice, educators in this CoI showed how they built understanding both about the conceptual basis for SRL and how to support it in their contexts. Further, educators' learning was reflective of the ideas they were invited to think about through their participation in the CoI.

Despite gains educators reported for understanding key concepts related to SRL, Leah and Alex expressed how SRL could be challenging to understand both in concept and practice. At their joint follow-up interview, Alex described still struggling "with the difference between SEL and SRL." Leah reported that when she entered the summer institute, she "thought SRL was self-control." She suggested "making the difference [apparent] at the beginning of the summer institute and then again at the end because sometimes you don't take everything in at the beginning and then the information comes to you and then you're still taking in a whole bunch of information." Alex agreed that in the summer institute "there were a few of us who struggled ... and it would be nice to get that out of the way so you're not worrying about, 'But I really don't know what the difference is' [between SRL and SEL or self-control]." Leah and Alex's
experiences showed how understanding SRL itself can be difficult and sheds light on how educators were grappling with the complexity of SRL in an ongoing way.

Overall, findings were that educators in this CoI described building up their knowledge about SRL and how to support it in their contexts. Examples in this section further illustrated how educators were linking theory and practice as they made connections between the resources they were thinking about and the practices they were enacting.

**Broader Insights into Learning**

In addition to building understanding about SRL and how to support it, evidence also suggested how educators were developing broader insights into learning. First, educators described gaining insight into just how important it was for them to consider students' needs, interests, and perspectives when approaching their teaching. Second, educators described how their efforts at supporting SRL helped them to achieve more inclusive learning environments.

First, some teachers described recognizing the importance of knowing students' perspectives and centering their teaching on students' needs and interests. For example, Marianne described the significance of listening to students before making assumptions about them. She described how active listening can provide teachers with opportunities to better understand students and, at the same time, provide students with opportunities to take on more active roles in their learning:

> When we take the time to listen and observe we can learn a lot from our students and where they are at with their learning ... We are well-intentioned, however, we too often 'rescue' our students before giving them the opportunity to try something, fail and try again. (Inquiry Project Report, May)

Similarly, Leah emphasized that it is "essential to know your students" and how she:
Learned how quickly teachers (including myself) can jump to requesting a child do something differently just because it is what we think they should do. I need to remember to talk with the child about what is happening BEFORE I jump in. (Reflective Tool, April)

Educators also sometimes described how, by reflecting on themselves as learners within the CoI, they extended their understanding of students' experiences as learners. For example, Racquel described how "getting insight into my own struggles with executive function ... allows me to understand the ... students I'm working with and adults, too ... and then I can give the kids examples of that using my own experience and they love that" (Interview). Christina made a connection between her goal for her students to feel capable as learners and her own "fixed mindset" and how "it has just been recently, through learning about mindsets, that I have been able to have more of a growth mindset. If I can change now, the children I teach can definitely change" (Inquiry Project Report, May).

Some educators recognized how, by focusing attention on the needs of particular students from an SRL point of view, they were developing more inclusive strategies that would reach the entire class. For example, Leah found that, "What benefits some children will benefit many or even most of my class" (Inquiry Project Report, May) because of the impact she noticed classwide based on her efforts at reaching students who struggled to engage in effective forms of learning. Alex described how completing SRL profiles on four students "has helped me determine strategies that would be best for them on their journey to becoming self-regulated learners (as well as benefitting the rest of the class)" (Inquiry Project Report, May).

Educators also made connections between how their efforts at supporting SRL classwide were effective for supporting learners who might otherwise struggle to participate in the learning
opportunities set out for them. For example, when Marianne observed a highly engaging writer's workshop session she taught (open-ended, hands-on, choice- and discovery-based), she noted that there were "no arguments" and "no behaviours." She went on to reflect on her experience:

I actually didn't know that a couple of the students had behaviour problems regularly in the classroom as they didn't exhibit any behaviours during this time and were actually very engaged and were making up stories with the materials. (Reflective Tool, January/February)

Taken together, evidence showed how educators extended their understanding about learning more broadly as they reflected on their efforts to learn more about SRL. First, educators deepened their focus on students' needs and interests. Further, when trying out practices they hoped would support SRL, they learned about fostering more inclusive learning environments.

**SRL-Related Shifts in Classroom Practice**

In addition to building new knowledge about SRL/learning and how to support it, evidence also suggested how educators were shifting their teaching practice in their efforts to support students' SRL. More specifically, all educators described engaging in practices reflecting key principles underlying SRL that they were learning about in the CoI, such as supporting students to be active learners, fostering opportunities for students to experience growth over time, engaging students in cycles of strategic action, centering practices on student voice, building metacognitive awareness, fostering opportunities for students to co-regulate, and fostering a learning environment students might perceive as safe (see Table 6.3).
Table 6.3

*Educators' Shifts in Practice to Support SRL*

<table>
<thead>
<tr>
<th>Example Practice Shifts</th>
<th>SRL Consonant Principles</th>
<th>Leah</th>
<th>Claire</th>
<th>Alex</th>
<th>Marianne</th>
<th>Kit</th>
<th>Christina</th>
<th>Raquel</th>
<th>Eleanor</th>
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<tbody>
<tr>
<td>Inquiry-based learning</td>
<td>Supporting students to be active learners</td>
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<td>Discovery-based learning</td>
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<td>Repeated tasks (with clear expectations)</td>
<td>Fostering opportunities for students to experience growth over time</td>
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<td>Meaningful feedback</td>
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<td>Mistakes as learning opportunities</td>
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<td>Explicit support for task interpretation</td>
<td>Engaging students in cycles of strategic action</td>
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<td>Emphasizing learning process over product</td>
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<td>Adults &quot;actively listening&quot; to students</td>
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<td>Students co-constructing criteria</td>
<td>Centering practices on student voice</td>
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<td>Student self-assessment</td>
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<td>Student self-reflection journaling</td>
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<td>Offering choice</td>
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<td>Exploring own strengths and weaknesses</td>
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<tr>
<td>Reflecting on learning; Self-assessing</td>
<td>Building metacognitive awareness</td>
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<td>Building understanding about brain and how to 'grow' it</td>
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For example, some of the ways in which educators reported fostering active learning were to engage students in inquiry-based learning, discovery-based learning, and co-operative groups. All educators were centering on student voices by actively listening to them about their interests, co-constructing criteria with students, involving students in self-assessment and reflection, and/or offering them choice in how they took up learning opportunities.

Alex's case provides an example of how educators' practices were fostering students' opportunities to experience growth over time. Alex’s practices included engaging students frequently in discussions about learning from mistakes and reinforcing "the process of learning" rather than the "end product" (Inquiry Project Report, May). To support her goals, she wove in opportunities for students to learn about how to move from having a "fixed mindset" to a "growth mindset" (Dweck, 2006) by teaching them about how brains have the potential for change and the related power of learning from "mistakes" (Inquiry Project Report, May). To involve students in experiencing growth, Alex shifted to providing more meaningful feedback in real time (e.g., during one-on-one conferences) and involving students in self-assessing their...
learning. For example, Alex built from the idea of a self-assessment anchor chart depicting a flower and using the terms not-yet-meeting, approaching, meeting, and exceeding as benchmarks for student achievement. She then went on to describe how she adapted the rubric after attending a workshop during which she:

Received an assessment rubric handout, which used a canoe. I liked the language. I feel the language is kinder and I believe more meaningful and positive (emerging, developing, applying, and extending) ... As a class we discussed the words and the pictures ... After I showed the first canoe picture, I did a visualisation activity where I had the students close their eyes and imagine what the next picture would look like.

She recounted that when she told the students of her plan for them to draw and label the four-canoe picture a student asked if they must use the canoe picture. She replied no and "asked him what he had in mind. He told us that he liked to bike ride and could see the four steps clearly ... another student then asked if she could do it with horseback riding" (Reflective Tool, February). In her follow-up interview, Alex described how she and her students continue to use the canoe self-assessment "on a daily basis and that it has made a huge impact with the kids."

Still, even though Alex utilized practices that she thought were making a difference for her students, she nonetheless continued to plan for how to improve in the upcoming year. For example, while Alex put in place shifts for her students that she felt met their needs and her own goals, she also described later in her follow-up interview, how:

Some of this stuff [new practices] didn't work this year because of the needs of the kids and that's just a typical thing. You know. And what can I do different, and you know, what can I put in place for next year knowing that I'm going to keep most of my kids?"

(Interview)
Alex's example shows how she made tremendous gains for her practice and how, in the year following her participation in the CoI, she grappled with how to successfully implement practice changes over time. At the same time, knowing she would be teaching many of the same students the following year, she wondered how she could adjust her practice going forward.

All educators in the CoI described developing practices that involved engaging students in cycles of strategic action. For example, Marianne described how she was deliberately involving students in cycles of strategic action through a supported story workshop structure:

They were already familiar with 'Interpreting Activities and Tasks' from working with the materials in Story Workshop and having the mandatory time for writing added. They were familiar with 'Choosing and Using Strategies' by sharing examples of both classroom stories (the students had written) as well as listening to different authors’ stories where time was allotted to reflect on strategies used. Our next step was to add in the 'Story Conferencing' with a criteria checklist. This would reinforce, 'Monitoring and Adjusting' to help make sure they had the elements necessary in a story (i.e., beginning, middle, end; a ‘juicy’ word, etc.). This gave more ownership to the students in the process of assessment. Students sharing stories with one another/ working at stations with one another 'When students have opportunities to learn with and even 'teach' others, they are more likely to take, be, and feel in control over learning and performance. ([citing Butler et al, 2017]; Reflective Tool, April)

This example shows how Marianne saw herself supporting cycles of strategic action when she wove together what she was reading about strategic action and reflecting on how what she was reading related to what she was trying out in practice.
All of the educators also explicitly created practices that were designed to foster metacognitive awareness. For example, Racquel engaged students in co-constructing a tool for reading and understanding math questions. As part of this, students were "encouraged to use metacognitive prompts to verbalize their thinking when sharing the steps they use to read and understand math questions. For example, 'I thought about ...', 'I tried ...', 'I wonder ...' (Inquiry Project Report, May).

Most educators also described fostering opportunities for students to engage in co-learning which was evident in how they supported peer-modelling, co-operative group work, and peer-feedback. For example, both Christina and Claire explicitly modeled the provision of productive feedback and engaged students in sharing their ideas about how to do so. Christina chose to focus on fostering students' use of peer feedback to support them in learning how to be more strategic and also to help them self-monitor their progress. She started out by showing students a video of children providing feedback to one another and engaged students in a "discussion about what the kids in the video did and said, and what happened." She then went on to "pretend to be a kid" and asked students to provide her with "specific feedback to help with my job." In a subsequent lesson, Christina "showed three examples of kids' work" and asked the students to provide supportive feedback. Finally, she engaged students in their regular morning activities while she circulated and "observed how the groups were helping each other." Rather than having students come to her and say they were finished and "me asking how they think they did, I had children around me give feedback to them" (Reflective Tool, April).

Finally, aligned with their descriptions of what they had learned about supporting SRL through participating in the CoI, all educators also described many ways in which they were intentional about their attempts at fostering safe learning environments, for example, in how they
deliberately aimed to create a community of learners, provided supported opportunities for risk taking, and fostered opportunities for students to experience participation structures in ways that were accessible and supported. Many of the examples provided above also showed how educators were working to provide students with a safe space to grow and learn in their contexts. For example, in fostering opportunities for students to experience growth over time, educators were empowering students to engage successfully in repeated learning opportunities in ways that were non-threatening and encouraged growth and risk taking. So, too, were educators creating opportunities for students to feel capable when they deliberately engaged them in cycles of strategic action with explicit support for students to understand, first, what was expected of them, and next, how to achieve goals strategically. In their efforts to build up students' metacognitive awareness, educators helped students feel valued by inviting them to consider and bring their unique perspectives to their learning. By fostering opportunities for students to co-regulate their learning, educators were supporting students to work as a community of learners and experience one another as vital supports to their learning.

Taken together, evidence showed how educators were shifting their teaching practice in their efforts to support students' SRL. Their practice shifts reflected key principles underlying SRL that they were learning about through their participation in the CoI. They also aligned well with how educators were describing their learning about SRL and ways to support it, as described earlier (see Table 6.1).

**Section Summary: Shifts in Thinking and Practice Related to SRL**

In this section I have presented findings related to educators' shifts in thinking and practice related to SRL. Findings provided insight into the ways in which educators built from opportunities offered through the CoI (and beyond) to shape how they were thinking and
teaching in relation to what they were learning about SRL. As early as September and throughout the year, educators reported thinking in new ways about SRL, teaching and learning as they made connections between theory and practice. For example, educators began seeing their classroom contexts from the vantage point of SRL which provided them with an opportunity to validate their existing practices and make connections between different educational approaches they could bring together under the umbrella of SRL.

Analyses also revealed that educators were constructing knowledge both about SRL principles and about how to support SRL in their contexts. Evidence converged to show that the knowledge they were building was consonant with the principles they were learning about through the CoI. Evidence further showed how educators were connecting theory and practice as they wove together what they were learning from the resources they were thinking about and the practices they were enacting. At the same time, in their joint interview, two educators underscored the complexity of SRL and how in addition to gains for their learning they also grappled with coming to a clear conceptual understanding.

In addition to more SRL-specific understandings, educators also reported gleaning new insights about learning more broadly, in how they better recognized the importance of surfacing and building from students' perspectives as well as how their efforts at fostering SRL supported inclusion in their contexts. Finally, evidence reported in this section showed how educators were bridging between learning about SRL/learning and shifting their practices in ways that reflected the key principles underlying SRL that they were learning about through participating in the CoI.

**Benefits for Students**

Findings showed how, as they were enacting SRL-promoting practices in their contexts, all teachers perceived benefits for students, starting in late Fall and throughout their time in the
CoI (see Table 6.1). First, educators perceived that their students were taking more ownership over their learning. In part, this was evident in how they described students as more deliberate and independent when approaching their learning. Second, educators relayed how students were engaging more frequently in strategic action. Third, educators saw their students developing metacognitive awareness and increased motivation and positive emotions. Finally, educators reported increased inclusion because of how students who previously struggled became more able to participate in the learning opportunities set out for them. Educators often explicitly connected these outcomes to their practices and resources to their thinking. While, overall, educators reported positive benefits, some felt their students had not made the gains they had hoped for. They were often spurred by those observations to plan their professional learning or imagine what they could keep trying to be more successful in the future. To elaborate on these findings, I describe three cases to show how educators perceived student learning outcomes and how they connected outcomes with their goals, practices, and learning.

Racquel's case showed how she perceived students as becoming more strategic and expressing more positive emotions. In her role as resource teacher, Racquel had observed how a subset of students in a particular class lined up at the classroom teacher's desk immediately after his lesson. She was concerned that these students were not even attempting to work through the math problems set out for them. As a result, she and the students co-constructed a tool with the intention of empowering students to be more strategic when approaching math problems. Racquel found that students made meaningful contributions to the co-construction of the tool, and that in subsequent sessions, students were able to "identify and share which strategies they had been using." She also commented that the learning environment felt "calm, respectful, and enjoyable" and that students' "energy was more relaxed and not as anxious" which she attributed
to their opportunities to be agents in their learning (Reflective Tool, February). In March/April, she noted that "1/3 of students used the tool automatically" and that others needed some redirection to use it (Reflective Tool, March/April).

In a one-on-one session Racquel had with a student who was disappointed with a test result, she engaged him in a conversation that was informed by her understanding of the core dimensions of SRL as well as the integrative model of SRL (Butler et. al., 2017). She showed the student the diagram of the core dimensions of SRL and they discussed his perception about his emotions and motivation, as well as his beliefs about his strengths and challenges. She noted that "when we talked about strategic action, we learned that he had not used the tool for reading and understanding instructions." The student "was excited by the opportunity to write the test again" and after using the tool "was overjoyed and very excited to inform me the strategy had worked." Racquel reported that:

The student experienced the joy of working towards a deeper understanding of his own learning ... was engaged and motivated by having control and ownership over the process and the re-test provision gave him the success he knew he was capable of. (Reflective Tool, April).

What Racquel's example shows is that she attributed student gains (i.e., more strategic; positive emotions; developing metacognitive awareness) to the practices she enacted which were deeply connected to her goals for students and learning she was enacting through the CoI.

Eleanor's case showed how, even though she expressed anxiety when choosing her initial inquiry focus (Draft Inquiry Plan, November), she perceived greater inclusion for diverse learners in her context, which was a goal of her inquiry through the year. Given her role as an educational assistant, Eleanor worked with students who were not always included in the
learning opportunities offered to their same-age peers. As a result, she sought to "raise the profile" of marginalized learners to be seen as "active learners that ought to be engaged in learning and feel the pride of success" (Celebrating Your Learning, September). One way in which she did this was by fostering opportunities for the students she worked with to be included in classroom activities in a meaningful way. She hoped that they would feel a sense of belonging and freedom to take risks while contributing their insights. In October, Eleanor tried to support a student she worked with to actively participate when a firefighter visited their classroom. The visit did not go as she had hoped, and, in her October reflective tool, she wrote about many ways she "should have" approached supporting the student differently. She built from her experience of struggling to realize her goal, and later took up a more active approach to "preloading" a small group of students by engaging them in a mock experiment they would be taking up with two (combined) classes. The experiment was an active, hands-on, open-ended activity which was inevitably highly engaging. Eleanor gave the students she worked with an opportunity to "practice the task ahead of time with me in our classroom in a protected environment, they trust me and feel free to make mistakes." She reported that, when it came time for them to engage with the group outside their own, they took risks with their learning by contributing ideas and questions. Moreover, she saw "acceptance from their peers ... other students were listening to ... my students who are usually on the fringe of learning and participating." She also found that, "by focusing on those students who are more vulnerable and guiding them to success it helped all the students in the class to be a community of learners" (Reflective Tool, November). Later, in her inquiry project report, Eleanor reflected on the idea that "this past year has helped me understand the importance of allowing the student the opportunity to take risks and try." What Eleanor's example showed is how, by effortfully fostering opportunities for the students "on the fringe of
learning and participating" to actually engage with learning and participate, she was able to impact the learning opportunities for the full class community. It also showed how she linked her practice changes (i.e., preloading; standing back and facilitating) to benefits for students.

Kit's case showed how she did not see her students attaining all of the gains she had hoped for but how she, in turn, emphasized gains she made in her own professional learning. She also described how her experiences spurred her to make plans for her future practices and professional learning. In her efforts to build up practices that would help her students understand "what it is they are being asked to do, and their ability to track their progress towards achieving the goal" she tried out implementing "learning targets" (Inquiry Project Report, May; [citing Moss & Brookhart, 2009]). She implemented learning targets so that students could "become 'more capable decision makers who knew where they were headed and who shared responsibility for getting there' (Moss & Brookhart, 2009, p. 67)." Along the way, Kit observed some benefits for students. For example, in February, she noticed that when she introduced the learning targets:

There was a collective 'oh' which was encouraging. I used the example of a GPS on a road trip (borrowed from C. Moss and S. Brookhart) and things became even clearer ... A few of the more independent learners flourished by becoming even more autonomous. Students who are not risk-takers are learning to look at the board first and at least think about what they can do next instead of either coming immediately to me or sitting idly ... I think to some degree students are initiating SRL, but it is a slow-going process.

(Reflective Tool, February)

However, in April, she observed that students had difficulty understanding how to independently bridge from learning targets to inform their deliberate efforts to improve their writing. Towards the end of the CoI, Kit felt that she had not met her goal for students to take
deliberate control over their learning. Through her final inquiry project report, Kit showed how she was interrogating resources on assessment and SRL to better understand why there was a gap between where students were and where she hoped they would be. As a result of what she had read about task interpretation, Kit determined that part of the issue was that students did not have a clear understanding of what was being asked of them. She drew on feedback literature to make plans for addressing the issues she saw for her practice and her students going forward. What Kit's example shows is how, consistent with taking up an inquiry-oriented stance, she was able to build from what she felt were disappointing student outcomes to focus on her learning and make plans for achieving better outcomes for students in the future.

Findings overall suggested that educators perceived a range of gains for students in line with supporting students' SRL (i.e., students' ownership, strategic action, metacognitive awareness, motivation, positive emotions, inclusion). The case studies presented in this section illustrated how educators related the gains they observed for students to the goals they had for their students, the practices they were trying, and their own professional learning. In Kit's case, where she did not see all of the gains that she had planned for, she focused on what she could learn from her experiences and how to direct her efforts in the future.

**Impacts on Professional Learning**

Findings showed that, as they were participating in the CoI, all participants were creating plans for new professional learning that were grounded in new insights about professional learning processes (see Table 6.1). First, educators described how they planned to continue creating collaborative opportunities to further their learning and reflect with others. For example, in her follow-up interview, Claire described how collaboration was a key aspect of the CoI that made a "big difference" for her learning. In the year after the CoI, she was regularly co-teaching
with a particular colleague and linked back to how the CoI had influenced her ideas about the power of collaborating:

Collaboration with you guys, the LF with the other teachers in [the CoI] made a big difference because, you know, often teachers are so busy ... But ... having that time set aside to talk about your practice and to do that reflection is really important. And I think that is now built into our day. Umm, and that kind of has inspired us to build it into our day. (Interview)

Like others, Claire highly valued the opportunities for collaboration she had experienced, increased her understanding about the power of collaboration as a professional learning process, and planned to continue engaging in collaboration to advance her professional learning and practice.

Second, educators valued the inquiry processes they were engaged in as part of the CoI, recognizing the positive impact on their learning. Many hoped to continue engaging in a type of inquiry-based learning focused on specific problems of practice (or students’ needs) and/or questions they continued to think about. For instance, in her inquiry project report, Leah described her plans to:

Continue to ask myself similar questions to my students: "What is my job? Did my teaching make a difference? How do I know? What else can I do?" I need to take time to pause and reflect. I am excited about my continued journey. (Inquiry Project Report, May)

Similarly, Christina described feeling:

Excited for the future with regards to this inquiry project. I can continue to see myself building on it (as I have for another inquiry project), and I can also see myself co-
regulating and modifying it with suggestions from peers and colleagues around me.

(Inquiry Project Report, May)

Taken together, these findings showed that, in addition to learning about SRL and practices to support it, educators developed insight into the professional learning processes they were experiencing. In particular, they valued opportunities to engage in collaboration and inquiry. Their plans for on-going professional learning were resonant with the professional learning processes they experienced through the CoI.

Rippling Out

In this chapter I aimed to answer my third research question: How was teachers' learning and practice (separate or together) impacted through participating in this CoI? Thus far, I have outlined how teachers' learning and practice were impacted primarily in relation to students' learning. I have also described how they gained insights and new practices related to their own professional learning. In this last section, I report on findings that showed how educators were seeking to impact the thinking or practice of their colleagues. What I found was that all but one educator described working with others in ways that evoked a 'rippling out' effect (see Table 6.1). For example, the impact CoI participants were having on peers was evident when Claire described engaging in inquiry-based processes with colleagues outside of the CoI. Claire had brought the scanning tool used in the CoI to a group of colleagues engaged together in investigating a new curriculum. She recounted how they structured their collaborative meetings using a similar format to LT meetings.

Other educators showed how they were aiming to impact their colleagues in how they were drawing on their learning through the CoI to lead change in their contexts. For example, Leah and Alex explicitly taught preservice teacher candidates in their school about how to
support students' successful start-ups in September using SRL-promoting practices. Claire and her colleague also shared their ideas about supporting SRL with others in their district. In her follow-up interview, Claire described how they had presented:

To other teachers in the district as well. Like we've had many visitors, we've been part of a couple parent information nights to talk about how SRL can help promote the core competencies in the redesigned curriculum. So, we're sharing it that way a little bit.

As another example of the 'rippling out' effect spurred by CoI participants, Christina shared posters she had made to support SRL in her classroom with colleagues at her school, and at their request, created lesson plans that would support them in trying out her ideas for supporting SRL. She also hosted a luncheon during which she invited her colleagues to share what they were doing in their classrooms to support SRL. Throughout the year that the CoI ran, Marianne aimed to support educational assistants and classroom teachers to provide the space and support needed for their students with special needs to make decisions for their own learning. She also worked with her colleagues to build up their capacity to give students time to think about the questions they were asking in an effort to spur the students' opportunities for thinking. Further, when she and her colleagues were designing students' individual education plans (IEPs), she urged them to give students a voice in plans. In her follow-up interview, Marianne recounted how, in a new but similar role at the district-level, she continued to work with others to build up opportunities for students to have an active stake in formulating their IEPs. In addition, she shared her learning on SRL in a district-level blog post with others.

Educators sometimes reported seeing uptake of the processes they engaged in with others and the ideas they shared for supporting SRL. For example, Marianne saw that educational assistants (EA) and classroom teachers (CT):
Were making sure choices were provided for all students; the EA was no longer just making the choice for the student but having the student involved in some of the decision-making ... The EA and the [CT] were asking more open-ended questions instead of just supplying the answers.

In her follow-up interview, Marianne saw this growing trend as nurtured by overlapping interests and priorities in the district. She described how the district's support for the CoI and a dinner series as well as other SRL-related professional learning initiatives and offerings were helpful for growing interest in student-centered practices:

It's just been more discussion around it and then at the same time, like, we've been having a lot around that in workshops ... so there was more, umm, language and discussion and people were at kind of a baseline of it. So, when [I'm] talking about it it's not something necessarily new to everybody.

Overall, findings showed how educators were not only building new knowledge and practices in their classrooms based on their experiences in the CoI for the benefit of their students. In addition, they were bridging from their experiences within and outside of the CoI to work with and influence others in their practice contexts. They described how they were instilling a 'rippling out' effect given how they aimed to impact their colleagues' learning or practice.

**Chapter Six Summary: Impacts Associated with Educators' Participation in the CoI**

In this chapter I reported on evidence related to the impacts associated with educators' participation in the CoI. Findings indicated that, overall, educators reported learning about SRL and SRL-promoting practices. They also reported benefits for their students, impacts to their own
professional learning, and a 'rippling out' effect as they were sharing their learning with colleagues.

My analyses showed that, first, educators shifted their thinking and practice in relation to SRL. They built understanding about what SRL looked like in their own contexts when they re-examined their practices from an SRL lens. In doing so, they seemed to validate some of their existing approaches to teaching and paired other educational approaches with SRL (e.g., inquiry learning, assessment for learning). The content of the knowledge they were building spanned conceptual to practical dimensions of SRL. Educators also constructed broader insights into learning in how they generated key takeaways about the importance of focusing first on students and also on the reciprocal relationship between their efforts to support SRL and inclusion. Further, educators evidenced shifts in practice that were correlated to their new learning. Educators’ shifts in thinking and practice reflected key principles underlying SRL that they were learning about in the CoI.

A second key finding was that educators perceived that they were impacting students' learning through their shifts in practice. First, they described students as taking more ownership over their learning. They also perceived their students as developing their metacognitive awareness and as being motivated and expressing positive emotions in the face of learning opportunities. They reported, too, that students who had in the past struggled to participate became more engaged in the learning opportunities set out for them. At the same time, Kit struggled to realize the goals she had hoped for by the conclusion of the CoI. In that case, she emphasized her plans for her own learning and practice going forward.

A third key finding was that all educators came away thinking about their plans to engage in professional learning going forward that seemed grounded in the collaborative, inquiry-based
experiences they had through the CoI. Collaboration, reflection, and inquiry processes figured prominently in educators' plans for their future professional learning.

Finally, and consistent with their recognition of the power of both SRL-promoting practices and the professional learning processes in which they had participated, educators aimed to impact the thinking and practice of their colleagues evoking a 'rippling out' effect to others beyond the CoI. Some educators brought inquiry-based processes to colleagues they were learning with. In addition, educators shared what they were learning about supporting students' SRL with others including teacher candidates, teachers, and EAs.
Chapter Seven: Discussion

In this research, I set out to advance understanding about how to support teacher learning through collaborative, inquiry-based professional development. I first built from existing research to outline how collaborative, sustained, and situated professional development, as well as conceptualizations of knowledge construction and agency, can inform generative forms of professional learning. I outlined literature that is instructive for furthering understanding about the need to support collaboration, full cycles of inquiry, and the provision of supports and resources useful for fostering meaningful learning while preserving teachers' agency. I also defined and analyzed three prominent models of CI and showed how, in taking up Butler and Schnellert's conceptualization of CI, I am extending from a program of research focused on the importance of what teachers bring to their learning, the relationships between practice- and learning-level cycles of inquiry, the positioning of agency within CI, and how structures and resources can be combined to influence learning. To address my research questions, I used a case study research methodology to capture the complexities of situated learning in a particular community of inquiry (CoI) in which educators came together to develop their learning and practice related to self-regulated learning (SRL; Butler & Cartier, 2018). I investigated how learning was supported in that professional learning context, the process of educators' learning, and the impacts that were associated with participants' involvement in the CoI. Specifically, my data analysis aimed to address the following research questions:

1. How was learning supported in this particular collaborative, inquiry-based professional development context?

2. How did educators take up opportunities for learning as constructed in the CoI?
3. How was teachers' learning and practice (separate or together) impacted through participating in this approach to professional development?

Summary of Findings

In order to set the stage for an in-depth discussion of insights derived from this research in relation to the literature, in this section I provide a succinct summary of the key findings related to my three research questions. In Chapter 4, I reported the results of my analysis related to how the CoI was structured to support educators’ professional learning. Consistent with the lead facilitator’s (LF) goal to engage participants as active learners through iterative cycles of CI, a first finding was that the CoI was predicated on the notion that participants could choose if and how to participate in ways that were suited to their priorities for their learning. A further finding was that collaboration was a key feature of the CoI and its utility for professional learning was made transparent to participants. Participants were invited, and supported, to learn through collaboration to deepen their understanding of how to support students' SRL, grounding their collaborations in both their individual and shared interests. As CoI sessions progressed, participants were encouraged to consider how they might serve as resources to one another’s learning. The CoI was also structured to support participants' engagement in longitudinal inquiry in part by inviting participants to maintain a focus on questions they had through a macro-level inquiry project which was paired with in-person supports. Participants were invited to conceptualize their own inquiry process as a spiral of inquiry (Halbert & Kaser, 2013) which may have caused confusion because of its overlap with cycles of strategic action, a concept they were learning about as they considered how to support students' SRL (Butler et al., 2017). Participants' cumulative and dynamic inquiry projects were also supported by reflective tools which provided opportunities for them to make practice-theory connections.
In relation to how the CoI was structured to shape and facilitate participants’ learning about SRL in particular, I further found that the CoI was designed with careful attention to the role that resources play in professional learning. Participants were offered a variety of resources coupled with opportunities and supports to grapple with them during, and in-between, CoI sessions. Evidence showed how the LF worked to balance the need to provide participants with resources to their thinking while at the same time giving them opportunities to take on an active role in selecting and deciding how to engage with resources. Finally, I found the LF’s written feedback to be a support given how it seemed designed to encourage participants to engage in inquiry and deepen their understanding about SRL. I further interpreted that the LF's feedback was offered to help participants surface their learning processes and provided them with opportunities to bolster their metacognition.

In Chapter 5, I reported on findings that showed how participants experienced the CoI, with a particular focus on how they took up opportunities created in the CoI to advance their learning and practice development. First, I found that participants valued opportunities for collaboration during CoI sessions which they perceived to be supportive of their knowledge construction and practice development. At the same time, at least one participant initially expressed some anxiety about collaborating. In the environment created by the LF and her peers, she ultimately became more comfortable taking risks and talking about her learning with colleagues. Findings revealed how participants both collaborated within the CoI and also extended their CoI-inspired collaborations to their practice contexts.

In terms of how they engaged in inquiry processes, I found that all participants took up multiple, practice-based inquiry cycles in a sustained way over time. Participants' practice-based inquiry cycles were interconnected with their overarching learning-level inquiries which required
them to navigate multiple goals that were grounded in their hopes for learners. Further, participants adjusted their goals in response to the professional learning supports offered through the CoI, the experiences they had engaging in inquiry processes, and the professional learning they engaged in beyond the CoI. More specifically, when analyzing what seemed to propel participants’ sustained engagement in successive cycles of inquiry, another key finding was that monitoring served as a sort of linchpin across inquiry cycles; educators’ observations and interpretations of their experiences were consequential for how they engaged in all aspects of inquiry. I further found that when participants reflected on, and identified, tensions in their practices, and correspondingly drew in new professional learning, it helped them know how to proceed with their learning and teaching which enhanced their engagement in full inquiry cycles.

Coupled with other in- and between-session supports for engaging in inquiry processes (e.g., collaborative discussions and LF feedback), findings showed how participants took up key supports to their learning to engage in full inquiry cycles.

Overall, I found that participants’ learning and practice was shaped by their shared focus on SRL as well as the resources and structures available to them as learners. Still, educators consistently were taking up opportunities to be active agents in choosing how their learning unfolded in unique, situated, and personalized ways. At the same time, findings also suggested that participants needed support and time to become comfortable driving their own learning.

In Chapter 6 I reported on participants' perceived impacts on their thinking and practice in relation to their involvement in the CoI. I found, overall, that educators learned more about SRL. They also described how they were engaging in practices reflecting key principles underlying SRL that they were learning about in the CoI. In this respect, the impacts they described showed how they were connecting theory and practice as they wove together what they
were learning from the resources they were thinking about and the practices they were enacting. Participants were also planning for their future professional learning in ways that reflected new insights they gained through the CoI about professional learning processes. In addition to reporting gains in their own learning, educators also reported observing benefits for their students. Finally, participants reported on the ways they sought to impact the thinking and practice of their colleagues, evocative of a 'rippling out' effect from their own learning and practice development.

**Discussion**

In this section, I discuss the contributions of this research by highlighting connections from across my three research questions. I begin by foregrounding findings about how the CoI was structured in relation to participants' experiences, perceived impacts, and relevant literature. Next, I highlight how teachers' engagement with CoI structures advance understanding about the processes of teachers' professional learning. Finally, I outline how positive impacts to teachers' learning and practice development could be linked to the CoI's structures and educators' learning experiences, with the potential effect of generating future positive outcomes for students, themselves, and others.

**Structure of the CoI**

Overall, analysis of evidence from this study responds to calls for understanding how CI can be structured to support meaningful change in teachers' professional learning and practice development (DeLuca et al., 2015). Findings extend the related research base on professional learning by analyzing educators' experiences within and beyond this CoI as well as impacts to their teaching and learning.
First, this study contributes to the professional development literature by showing how educators can be provided with learning opportunities that both allow them to enact agency (Ketelaar et al., 2012) by taking "deliberate control" over their learning (Butler, 2021, p. 672), and at the same time access supports to learn through the opportunities in which they engage (Bergmark, 2020; Butler, 2021; Butler & Schnellert, 2020; Butler et al., 2013; de Jong et al., 2019; Harper-Hill et al., 2022; Schnellert, 2011; Wallen & Tormey, 2019). On one hand, educators in this study had the opportunity to exercise agency from the outset of their involvement in the CoI because they grounded their inquiries in questions they deemed relevant for their own practice contexts and that reflected their professional learning needs (Hargreaves, 2019; So, 2013; Trabona et al., 2019). In shaping their own goals, participants had opportunities to work from their sense of responsibility for students, which has been shown to support educators’ motivations to learn (Appova & Arbaugh, 2018). Still, Racquel’s case illustrates how participating in professional learning that emphasizes agency can prove difficult as individuals grapple with how to prioritize their own learning (Brodie, 2021), in part because opportunities for ownership do not guarantee that teachers will own the learning process (Philpott & Oates, 2017) especially when educators may be more familiar with professional development that is other directed and/or short term.

On the other hand, findings reported here also showed how structures (e.g., LT meetings, reflective tools, inquiry projects) and other supports (e.g., LF feedback) can both shape opportunities for agency and provide assistance to educators as they navigate the complexity of inquiry-based processes to grow their own learning (Butler & Schnellert, 2020; Perry et al., 2018; Schnellert, 2011). Indeed, educators in this CoI made decisions about their learning at each turn in the inquiry process and persisted through ongoing, cyclical inquiry, while bridging from
supports along the way. As a result, findings showed how participants were empowered to take on increasingly active roles in owning learning processes (e.g., by selecting and sharing resources), responding to calls for deepening understanding about how collaboration with "informed facilitators" can support teacher agency over time (Philpott & Oates, 2017, p. 330). At the same time, the LF emphasized teachers' contributions and voices (Onrubia et al., 2022) while also building from their questions, priorities, and perspectives to shape CoI offerings (e.g., readings, focused discussions), thereby effectively grounding them in educators' experiences, learning needs, and authentic practice contexts.

In terms of understanding educators' experiences in this initiative, it should be noted that features of the larger context (i.e., district, province, country) influenced opportunities for participants to exercise agency (Butler et al., 2015; MacNeil et al., 2021). In this context, these features created a space within which educators did have freedom to make decisions for their learning in their practice contexts. For example, participants could choose goals they valued for their learning and practice development, select practices they hoped might address their goals, and decide how to monitor (or assess) students' progress. In addition, within this context, educators’ efforts to learn and improve their practice through engaging in CI were explicitly supported and encouraged by the school district. At the same time, individuals could also influence structures by leveraging their own agency and positive experiences of enacting change to affect their settings and develop increased capacity to act (Durrant, 2019). While much literature is focused on how contexts influence teachers' opportunities to exercise agency for learning and change, future research might extend studies such as this one to show how educators' agency and successes can shape the very structures that influence them (Datnow, 2020).
Second, the research reported here also showed how, beyond advancing teachers' agency for, and opportunities to, prioritize their learning, the CoI was designed for educators to learn how to learn through inquiry. Therefore, this study adds understanding about how to enhance learning through professional development that is "premised on practitioners possessing the capacity to engage collaboratively and reflectively with new knowledge and ideas" (Brown et al., 2021, p. 2). Features of this CoI supported participants' capacity building for learning given how they engaged in repeated, cumulative, and supported (e.g., paired with feedback) learning structures which gave them opportunities to practice how to learn through inquiry. Further, the LF fostered opportunities for participants to cultivate metacognitive awareness of their own learning processes, which can contribute to educators' potential for developing and enacting adaptive expertise for learning and practice in context (Butler, 2021; Butler & Schnellert, 2020; Duffy, 2005). Participants were also encouraged to create plans for their professional learning, consider how their learning unfolded, and adjust how they approached their learning, responding to calls for educators to learn how to engage in key features of professional learning as they build up their awareness about how those features contribute to their learning (de Jong et al., 2019; Kager et al., 2022; Sjoer & Meirink, 2016).

This study also advances understanding about how resources can be positioned to support knowledge construction in a way that addresses the tension between educators' agentive needs, the provision of knowledge-building resources, and the role content-area experts occupy in connecting both within CI. While much literature on CI has centered on the promise of well-designed learning environments that emphasize collaborative- and inquiry-based processes (DeLuca et al., 2015), less has been articulated about how knowledge-building resources can be positioned within them and how to support educators to make connections between useful ideas
and their practice contexts. More specifically, findings from this study showed how relevant resources were injected into CoI sessions (e.g., focused discussions; presentations), offered to participants (e.g., choice of readings) and coupled with structures that supported them to grapple with ideas to (co-) construct meaning while being "immersed in goal-directed cycles of inquiry" (Butler & Schnellert, 2012, p. 1217). By showing how resources can be positioned with attention to support for grappling with them, as well as opportunities to act with agency in making decisions about when and how to draw from them, I have offered a rich case study example of what learning looks like through supported CI. My findings showed how participants were engaging in CI processes at the same time that they were taking up resources for their learning (e.g., readings, reflective tools, facilitator feedback). My study, and representation of learning in CI (Figure 2.5), extended Butler & Schnellert's (2012) and Schnellert & Butler's (2014) models by showing how it was possible to foster fuller cycles of inquiry through a form of supported CI that included the provision of reflective tools and feedback (both from the LF and CoI members) that were designed to offer participants' opportunities to make connections between what they were learning, noticing, or experiencing in their practice. Importantly though, through CoI activities, participants had access to new or relevant learning and were supported to draw them in, which fuelled ongoing cycles of inquiry. And throughout, they were offered supports to navigate and sustain their engagement in generative CI processes. In these ways, this study advances understanding about how to support more robust engagement in key inquiry processes over time.

More specifically, in the CoI studied here participants were invited to build foundational knowledge early on (e.g., through the summer institute), while also, throughout the year, having increasing opportunities to make decisions about which resources to access, thereby providing
them with opportunities to "take ownership over their learning and push their thinking forward over time" (Schnellert & Butler, 2021, p. 101). Findings showed how resources were not only conceived of as a source for content learning (i.e., the what) but were also positioned with attention to how they might be leveraged to enhance learning (e.g., differently over time; chosen by LF or participant; complemented by supports for grappling with them). In addition, because of her role as an expert on SRL, the LF herself was a source for content knowledge from her outsider perspective, allowing her to build from teachers' learning needs and reflections to support them in expanding their perspectives (Kyza & Agesilaou, 2022). Indeed, the research reported on here advances understanding about how experts can move beyond disseminating practices and theoretical principles to engaging educators in co-constructing knowledge that is relevant and meaningful for them (Schnellert, 2011). Taken together, this study sheds light on the work of educator-researchers/boundary crossers/hybrid educators who have expertise and resources to share (Grifenhagen & Jones, 2022; Onrubia et al., 2022; Risan, 2022) but who are at the same time responsible for supporting educators' agentic meaning making (Butler et al., 2013; Koffeman & Snoek, 2019; Schnellert, 2011).

Consistent with prior research, findings from this study also highlight the importance of creating spaces where educators feel comfortable for meaningful collaboration to occur (Ciampa & Gallagher, 2016; Cordingley, 2015; Vangrieken et al., 2017) and learning to unfold (Bryk & Schneider, 2003; Cranston, 2011; MacNeil et al., 2021). In the context studied here, participants valued the focus on learning, for example, through LF feedback, cumulative and supportive assignments, and opportunities for peer support. The establishment of a learning-focused community aligns with the need to foster opportunities for participants to feel trust with one another, in themselves, and with facilitators when taking on the risks associated with practice-
based learning (Gibbons et al., 2021). This relates to Datnow and Park's (2019) work on professional collaboration and the importance of establishing environments where educators are supported to explore, experiment, and feel comfortable learning from mistakes. Further, establishing an environment focused on educators' learning processes over outcomes builds on research that has shown how, even when educators feel positively towards SRL and engage in professional learning on the topic of supporting students’ SRL, actually shifting practices in their classrooms can be difficult (Spruce & Bol, 2015). Thus, the supports for risk taking and learning from mistakes were especially needed in this SRL-focused, practice-based inquiry group. Indeed, participants expressed feeling positively towards their learning and the CoI itself, which shows how efforts at establishing a learning environment in which educators felt comfortable with one another and in taking risks for their learning may have been particularly productive because educators’ positive emotions have been found to correlate with engagement in professional learning and reflection (Gaines et al., 2019). In this respect, findings reported here deepen understanding about how to promote educational change (i.e., the goal of professional learning) because of how the establishment of an environment focused on learning processes can free educators to focus on student needs and engage in generating positive change (Louis, 2007; Tschannen-Moran & Gareis, 2015).

In sum, CI commonly involves educators in dialogical sharing, trying out new practices, continuous reflection, and supported access to new professional learning (DeLuca et al., 2015). But research has identified challenges in fostering generative forms of learning deeply through CI (e.g., because of surface-level collaboration; partial inquiry cycles). The current study builds on CI literature by showing how dimensions associated with fostering professional learning could be brought together in one supported CI initiative (see Figure 2.5). First, the CoI under
study showed how educators could be invited to participate in learning opportunities that built from what they brought to learning. It also showed how they could be supported to learn collaboratively, not only within a CoI, but also how productive CI processes could spread to teachers’ collaborative work in schools. This study also showed how educators could take an active role in defining how they engaged in CI processes because of how they had opportunities to make decisions about how their learning unfolded. At the same time, educators engaged in fulsome and ongoing practice- and learning-level inquiry cycles by making connections between new learning and practice as they identified tensions and took up feedback and knowledge-building resources along the way.

**Experience of the CoI**

Overall, analyses of evidence from this study respond to calls for understanding how learning is experienced by educators within professional learning initiatives (Webster-Wright, 2009). Findings advance the current state of research because, through data collection and analysis centered on the complex and holistic experience of learning in a collaborative, inquiry-based, and situated context, they detail the complexity of situated professional learning (Webster-Wright, 2009).

For example, this study adds to the tremendous literature base reporting on the influence of collaboration in professional learning (e.g., Lysberg, 2022; Rytivaara et al., 2019) by responding to the need to better understand how participants experience collaborative professional learning opportunities (van Schaik et al., 2019). Findings from this study showed that collaboration was hugely valued by participants, contributed to their experience of well-being, and fostered both their knowledge construction and practice development. Participants had opportunities to collaborate with one another in relation to their shared focus (i.e., supporting
students’ SRL; Brown, 2019; Lysberg, 2022) and individual interests/practice contexts (van Schaik et al., 2019), extending previous research showing how collaboration that is closely connected to individuals’ practice can bolster opportunities to learn through practice (Schnellert & Butler, 2021).

Still, while CI is premised on the notion that collaboration is key for supporting knowledge construction and learning, the supported nature of the CoI under study here aligns with research showing how collaboration in and of itself may be insufficient for supporting professional learning, and that collaborators may benefit from skillful support along the way (Assen & Otting, 2022; Brown & Poortman, 2018; Charteris & Smardon, 2015; de Jong et al., 2019; Nelson, 2009; Nordgren et al., 2021; Trabona et al., 2019). Indeed, in this study, findings showed how collaboration could be daunting, suggesting that successful collaboration does take effort (Rytivaara et al., 2019) and that individuals may require support to effectively collaborate (Ciampa & Gallagher, 2016; Sjoer & Meirink, 2016).

The opportunities participants had to collaborate with those who were in different practice contexts (e.g., different grade, school) provided territory for them to think about their own contexts in new ways. This finding extends research citing the value of including diverse perspectives (Schnellert & Butler, 2021) from cross-school collaborations and professional learning networks (Gore & Rosser, 2022; Poortman & Brown, 2018; Schnellert et al., 2015; Schnellert et al., 2018; van Schaik, 2019). Indeed, that this CoI was not school-based enabled a diversity of perspectives (e.g., most participants came from different schools in one district; one participant worked in a different school district) and for participants to work as "boundary crossers" because of how they extended their collaborative work from the CoI to their school sites to "[transcend] traditional structures and boundaries [and enable] ... expanded
understandings" (Schnellert et al., 2018). While much literature has focused on how researcher-educators act as boundary crossers or "research brokers" (Malin & Brown, 2020, p. 9) in teacher professional learning (e.g., Grifenhagen & Jones, 2022), this study showed how educators in the CoI brought collaborative, inquiry-based ways of working to their professional relationships outside of the CoI, enhancing the potential spread of theory-practice learning opportunities (Boom-Muilenburg et al., 2022; van Schaik et al., 2019).

Another important finding was that the CoI was designed to make participants' learning processes visible to them, and that they showed an increased awareness about how collaborating was key for their learning. This was evident, for example, when participants planned to collaborate as part of their future, deliberate efforts at learning, responding to calls to support educators in understanding how collaboration can contribute to their own learning (de Jong et al., 2019; Sjoer & Meirink, 2016). Educators' opportunities to build up their capacity for collaborative learning has the potential for sustaining collaborative learning going forward.

A focus on inquiry processes also played a key role in this research and sheds light on what learning can look like in CI (Butler & Schnellert, 2020; Perry et al., 2018; Schnellert, 2011). To that end, a key finding was that participants engaged in continuous, practice-based inquiry cycles over time as anchored in their learning-level inquiries. This aligns with Butler and Schnellert's (2012) model of CI that envisages practice- and learning-focused inquiry as interconnected. Further, findings showed how these learning- and practice-focused inquiry processes were dynamically entwined, as in how participants set goals for their learning that were responsive to what they were experiencing within their practice, for example.

While CI is premised on the notion that participants engage in cyclical inquiry processes (DeLuca et al., 2015), research has shown how inquiring educators can struggle to engage in full
cycles of practice-level inquiry which require them to move from monitoring and reflecting on students' responses to then adjusting their thinking and approaches (Brownell et al., 2014; Butler & Schnellert, 2012; DeLuca et al., 2017). In contrast, findings reported here identify how resources and supportive structures were helpful for fueling educators’ engagement in full cycles of inquiry. Educators in this CoI were explicitly invited to be deliberate in learning through spirals of inquiry (Halbert & Kaser, 2013, 2022) and supported to do so (e.g., through LF feedback on how to engage in inquiry processes). They were also guided to reflect on their practice experiences, identify successes and gaps, and decide where to go next by drawing on helpful resources (e.g., conversations, readings, focused discussion, LF feedback). These facets of learning could be linked to deliberately designed features of this CoI, thereby advancing understanding about how participants were supported to fully engage in inquiry cycles (DeLuca et al., 2015), maintain a focus on students (Butler & Schnellert, 2012; Schnellert et al., 2018), and persist in their learning and practice changes over time (Franke et al., 1998, 2001). Further, analyses showed how engagement in cycles of inquiry were in alignment with conceptualizations of CI processes as iterative and non-linear (Butler & Schnellert, 2012), as in Racquel's example, which showed how learning did not require her to neatly move from phase-to-phase of inquiry cycles.

Findings from this study showed what it looked like when participants were constructing understanding about where to go next and forging connections between their professional learning and actual impacts on their thinking and practice. In this way, findings here advance understanding about what it can look like for educators to develop their capacity for adaptive expertise (Butler, 2021; Duffy, 2005; Le Fevre et al., 2016; Michaelsky, 2020; Perry et al., 2017; Timperley et al., 2017), which is "the ability to apply meaningfully-learned knowledge and skills
flexibly and creatively in different situations" (Dumont et al, 2012). Educators were demonstrating (or developing) adaptive expertise in how, through inquiry processes, they were practicing being intentional about identifying and responding to students' learning needs in context (Butler, 2021; Michalsky, 2020).

In contrast with research showing how professional learning initiatives can leave educators on their own to grapple with new ideas in practice after the conclusion of professional learning offerings (De Lisle, 2015), findings from this study showed how CI can support sustained learning opportunities when educators are supported to make ongoing theory-practice connections (Butler & Schnellert, 2008). At the same time, participants in this study integrated knowledge from outside the CoI (e.g., from a workshop or inspiring school visit; Butler et al., 2015), suggesting a CoI’s potential for optimizing other forms of professional learning that are not designed with the same support for sustained and situated learning.

Finally, space and support for participants to step back from their practice and make meaning of their experiences were integral for stimulating all facets of inquiry-based learning. In some forms of practice-based professional learning, there may be the assumption that enacting practices and observing students (e.g., in lesson study) will result in opportunities for educators to connect learning, practice, and student responses. However, findings from this study emphasize that there are benefits to pairing educators’ in situ actions (e.g., new practices; student observations) with space and support for them pause to think about their experiences and draw in resources to their thinking. This finding speaks to the notion that practice-based thinking need not occur only in practice contexts but can also spread to professional learning contexts (e.g., small-group discussion in LT meetings; Ball & Cohen, 1999; Butler & Schnellert, 2020; Luna et al., 2004; Schnellert & Butler, 2021). Reflective opportunities were further extended because of
how tools offered a sort of liminal space between practice and CoI sessions through which participants systematically reflected on their experiences, often with LF support. This finding shows how structures and supports designed to stimulate reflection can help overcome the difficulty others have noted in efforts at fostering critical reflection on practice (Luna et al., 2004; Nelson, 2009). While much research has emphasized the power of professional learning that is closely linked to educators' practice contexts for constructing knowledge and generating theory-practice connections, the research reported on here shows the importance of carefully supporting in situ professional learning (Butler & Schnellert, 2020).

Throughout this dissertation, I have highlighted the ways in which agency was a part of the CoI and participants' experiences of learning through it. Here I offer a summary of what this study contributes in terms of advancing understanding about agency in professional learning. First, this study showed how positioning teachers with agency to make decisions for their learning can be balanced with opportunities for others (in this case facilitators) to offer expertise and support for both navigating CI processes and accessing knowledge-building resources. Thus, this study has important implications related to how facilitators can support teachers' knowledge construction beyond facilitating their engagement in learning processes. At the same time, findings showed how opportunities for exercising agency could feel daunting for some and that supports for navigating learning processes could foster increased agency over time as participants assumed greater responsibility for their learning. Part of the support offered through the learning experiences outlined in the current study were opportunities for participants to build awareness of how they were, and could, learn effectively through CI processes. Building their understanding of how they were learning offered the potential for participants to assume more control over their engagement in the present and future professional learning. This study also
showed how, through their engagement in inquiry processes, teachers paid close attention to how students were learning and responding to their teaching approach. In particular, I found that teachers were deeply engaged in monitoring, which was a key process that influenced teachers' decision making about all aspects of inquiry (e.g., what goals to set, practices to try out, how to adjust going forward). The result is that this study suggests how, through deliberate reflection, teachers can strengthen their voice in defining key inquiry processes. At the same time, by carefully attending to students' learning experiences, participants could make links between their shifts in practice, positive student outcomes and the goals they valued for students. In this way, participants appeared to build up their self-efficacy for achieving the changes they hoped for. Indeed, some participants in this study reported feeling an increased capacity to meet the learning needs of all students when they reported achieving more inclusive learning environments. Further, in their effortful attempts at sharing their own learning about how to engage in effective professional learning as well as how to support students' SRL, participants in this study showed how they were positioning themselves as agents of change.

**Impacts of the CoI**

Overall, analysis of evidence from this study responds to calls for understanding how CI can impact educators' learning and practice development (DeLuca et al., 2017). Findings from this study advance the current state of research because connecting the CoI's impacts to its structure, and educators' experiences within in it, allows for a more comprehensive understanding about the relationship between collaborative, inquiry-based professional learning and real change (Lysberg, 2022).

For example, all educators in the CoI grew in their understanding of SRL and how to support it, which, given its conceptual complexity in theory and practice, can be difficult to
achieve (Porter & Peters-Burton, 2021). This finding suggests that content resources (e.g., readings; focused discussions), coupled with collaborative and inquiry-based processes, were integral in how participants grew in their understanding about key ideas they engaged with through the CoI (see also Butler & Schnellert, 2012; Butler et al., 2013; Cartier et al., 2010; Schnellert, 2020). Similarly, participants made practice changes that reflected the learning they were engaging in through the CoI that were linked to their goals for themselves and students. This finding responds to the need to build understanding about how to facilitate professional learning that bridges gaps between theory and practice (Perry et al., 2015). For example, participants bridged from "inspirational examples" to try out new practices they read about in shared readings (e.g., Butler et al., 2017) and heard about in the summer institute (e.g., strategic questioning; examples for students' involvement in self-assessment) when doing so served their goals for their learning and practice. This finding is consonant with research showing that educators find real-life practice examples helpful for bridging from professional learning offerings to their contexts (Haug & Mork, 2021; Xu & Ko, 2019). At the same time, new understandings and practice examples participants generated in practice became resources to the CoI as participants engaged in a form of "teacher-to-teacher" support (Perry et al., 2018, p. 306), showing the promise of CI for bolstering participants' capacity for enhancing one another's learning opportunities.

Given that the CoI was designed to support educators in observing and reflecting on how their students responded to the learning and practice changes they were making, participants had opportunities to identify gains for learners in relation to their efforts. Indeed, participants in this study perceived benefits for their students that were consonant with SRL principles as well as the learning and practice changes they described for themselves. Correspondingly, this study extends
research on the relationship between CI and self-efficacy, or "people's beliefs about their
capabilities that effect their own lives" (Bandura 1989, p. 1175), because educators’ perceptions
of positively impacting student outcomes have been found to nurture their self-efficacy (Bruce et
al., 2010). This is important because increased self-efficacy can then fuel educators’ engagement
in strategic action (Bandura, 1993; Butler & Schnellert, 2012, 2020; Butler et al., 2015; Butler &
Winne, 1995) and innovative approaches to teaching (Klaeijsen et al., 2018).

Participants in this study asserted that they were more able to meet the needs of all
students in their contexts, showing how CI and a focus on SRL are also promising for supporting
educators to achieve more inclusive practices (Butler & Schnellert, 2015; Perry et al., 2017;
Perry et al., 2018). This was evident when Alex, for example, attributed gains for her students
overall that were linked to her practice changes, and then moved forward with successive cycles
of inquiry to meet the needs of students who were struggling to engage effectively in SRL (see
also Butler & Schnellert, 2020; Perry et al., 2018). Alex's, and others', examples contrast with
research in which teachers displayed lower self-efficacy for working with struggling students
following a professional learning initiative on SRL and, instead, were more confident supporting
higher-achieving students' SRL (Cleary et al., 2022). In this study, participants' enhanced sense
of being able to meet diverse students' needs suggests that CoI structures and supports, coupled
with attention to students' SRL, may help educators to move beyond "viewing student
diversity ... as a problem, but instead as a generative foundation for instructional planning,
assessment, and curriculum development" (Schnellert et al., 2015, p. 226).

In addition to identifying benefits for students, participants also described benefits to
their own professional learning which were resonant with features of the CoI. Throughout their
time in the CoI, participants were deliberate in their efforts at professional learning which were
coupled with the LF’s supports for them to see themselves learning. Together, these intentional processes appeared to enhance opportunities for participants to prioritize their own learning and be metacognitive about themselves as learners. This considered focus on professional learning processes may have emboldened participants to (further) develop an inquiry stance (Cochran-Smith & Lytle, 2009b), advancing understanding about how collaborative, inquiry-based professional learning opportunities have the potential to support ongoing, systemic educational change (MacNeil et al., 2021). Indeed, participants in this CoI felt empowered to impact the practice of those around them, evoking a rippling out effect from their learning. This finding responds to calls for effective professional learning that contributes to educational change on a broader scale (Stoll, 2020).

**Limitations and Considerations for Future Research**

When considering the potential contributions of this research as outlined in the previous section, it is important to recognize the ways in which this study was limited and how it contributes to considerations for future research. First, while my study benefited from the select sample of educators who had willingly chosen to come together into a professional learning initiative, there were voices missing from the current data set. For example, three individuals who were participating in the CoI for non-credit did not submit written assignments during their time in the CoI, nor did they sit for follow-up interviews. These three participants took up supportive structures offered during CoI meetings (e.g., focused discussions; collaborative conversations) but did not formally reflect on their learning throughout the year or at its conclusion by completing reflective assignments and the inquiry report. Learning more about their experiences in the CoI, given how they chose to participate, could have shed light on how their learning unfolded and may have enriched my understanding about how structures and
supports connected with learning and practice changes. It should also be noted that, while I did not ask participants to identify demographic information about themselves, the sample appeared to be entirely female and Caucasian. Given that there did not appear to be much diversity in the sample, future work would benefit from understanding a CoI with more diverse representation.

Missing also are the perspectives of the faculty co-facilitator (Co-F) from the summer institute and LF throughout the year. The contents of the debriefing conversations the LF and I had throughout the year during and after LT meetings became part of my data set. However, future work would benefit from more formally incorporating facilitators’ perspectives as research participants. For example, both the Co-F and the LF were refining their professional resource book on supporting students’ SRL at the time of the study (Butler et al., 2017) and incorporated participants’ learning and practice examples into their book. The learning that the Co-F and the LF co-constructed with participants would be interesting territory for exploration in future studies to further complicate current understandings of the researcher-educator role in professional learning (Perry et al., 2020). Including district- and university-level stakeholders who were instrumental in creating and supporting this innovative university-school district partnership could also have provided an expanded understanding of educational change processes within the context in which this study occurred (see MacNeil et al., 2021; Stoll, 2020).

Students' voices were also missing from this data set given how participants centered their learning on student needs and learning experiences. Future research in this area would benefit from including students' perspectives on how their own learning unfolded given their vital status in professional learning initiatives. The research reported here would also have benefitted from linking the current data set to student outcomes. In the current study, conclusions generated about student learning outcomes were based on participants’ perspectives. Student data
would bolster the claims made here about the success of the CoI. At the same time, the merits of educators’ perceptions should not be undermined by calls for more objective student outcome reports given how participants in this CoI were empowered to build from what they determined were relevant and important for gauging students’ (and their own) successes. Emphasizing objective measures may have constrained participants' growing self-efficacy for enacting learning and practice changes related to their goals.

In future work, it would also be interesting to interrogate how different ways of participating (e.g., for course credit or not, at the undergraduate or graduate level, summer institute only) influenced individual and group learning processes. In the current study, all but one participant who was also a data source (or embedded case) participated for course credit. As a result of the weighted sample (i.e., seven participants taking the CoI for credit and one not), there were no efforts at comparing participation style in light of findings. Including data from all participants regardless of their participation choice would strengthen studies such as this one given the unique design of this professional development initiative.

While results reported here suggest some of the ways the CoI under study might have contributed to ongoing systemic changes (e.g., participants’ leadership roles in relation to colleagues outside of the CoI), a lengthier look into how learning and practice changes played out would deepen understanding about the vitality of the impacts associated with the CoI. Further, expanding the time frame of future studies like this one would illuminate how a professional learning initiative is influenced by, and influences, the context in which it is embedded.

Findings showed how the CoI was designed to support a learning environment participants might experience as safe, but the research methods used may have limited their
comfort in sharing what was not working for them throughout the CoI. Some participants chose to share when they had difficulty engaging in CoI processes, and participants who sat for interviews were asked by myself and my graduate school peer (as a research assistant) to share the changes they would suggest for future CoI. Interviews were also held well after the CoI had completed. However, given my relationship with the LF, a university-based expert on SRL and formal course instructor for most participants (i.e., for credit students), it is unknown how comfortable individuals were in sharing tensions they experienced about how the CoI was designed and implemented during our interviews. Future research in this area would benefit from complementary data collection that invites participants' anonymous contributions about how they are experiencing a CoI as it unfolds.

A final consideration is in how my experience as a student (K-12, undergraduate, and graduate) in the same province in which the current study was conducted as well as in my role as a K-12 educator, coupled with my more recent role as graduate student, participant, observer (in this study) and researcher, influence the way I see and understand teaching and learning. These experiences are my own and I value them as assets to my research process. At the same time, they lend to my subjective interpretations of my findings. Future research, including my own, would benefit from incorporating participants as research partners (Bergold & Thomas, 2012; Coburn & Penuel, 2016) throughout the process to more richly tell the story of how learning unfolds in a CoI.

**Implications for Practice**

This research has the potential to inform how CI initiatives are offered, structured, and supported by educational institutions and individuals (e.g., in educational leadership positions). First, educational leaders and institutions can offer flexible pathways to participation so that
educators can choose whether and how to participate in ways that are aligned with their personal and professional realities (DeLuca et al., 2017; Hardy, 2014; Kennedy, 2016). Inviting educators with diverse perspectives (e.g., different practice contexts) that also share an interest around a common topic can stimulate opportunities for individuals to grow in their thinking and understanding (Schnellert et al., 2018). Further, giving educators agency at the outset and throughout is promising so they can make choices in response to the priorities they establish for their students and their own learning, which can increase the likelihood they will persist with their learning efforts (Brodie, 2021).

This research also suggests the promise of establishing partnerships between educational institutions. Through partnerships, each institution can bolster their resources, supportive infrastructures, expertise, and spaces to offer effective professional learning opportunities more likely to meet educators' needs. Universities can offer educational programs anchored in the field and advance efforts at connecting research and practice. School districts can extend professional development offerings to universities, expanding their community of educational leaders invested in making real change for public education. Together, they can partner in offering unique ways for teachers to advance their credentials. At the same time, such partnerships offer educational leaders in their respective institutions greater opportunities to achieve their own aims in supporting their broader educational goals (Gomez et al., 2020).

Collaborative, inquiry-based professional learning initiatives are premised on the value of both collaboration and inquiry processes for helping educators generate new understandings and practices. But engaging in productive forms of each is complex work. In order for educators to realize their full effect, it is important to create robust structures that can foster educators’ opportunities for meaningful engagement in them (see also Nelson et al., 2009). For example,
findings suggested that providing opportunities for repeated collaborative interactions that deliberately situated conversations in practice and were paired with thinking about new learning enhanced participants’ opportunities for meaning making and practice development. Similarly, structuring educators’ opportunities to engage in inquiry processes that are grounded in their practice contexts and stimulate new professional learning with opportunities for reflection and dialogue (e.g., with colleagues, outside facilitators) can enable educators to see their practices in a new light and advance their understanding about how to address students' needs and their own professional goals. While the structures can be established by an educational leader hoping to support educators' productive engagement in CI processes, it is important that educators have opportunities to make choices about how they engage in those very processes (Ciampa & Gallagher, 2016; DeLuca et al., 2017).

In addition, deliberately structuring opportunities for educators to choose relevant and diverse resources (e.g., expertise of outside facilitators, professional readings, presentations) as they engage in the processes fundamental to CI is key for their opportunities to grow in learning about a given topic. What this means is that thoughtful attention to how expertise and resources are offered and integrated into CI structures is needed to enrich opportunities for educators to deepen their thinking about both shared (e.g., readings and presentations in common) and individualized (e.g., LF feedback on written reflections) resources (Butler & Schnellert, 2020; Schnellert, 2011; Schnellert & Butler, 2021). This can be a dynamic process and requires that educational leaders think carefully about their role in providing resources as they encourage educators to engage with specific resources together (e.g., foundational resources upfront) while also creating structures that open up spaces for educators to have a voice in selecting and sharing resources that they think might be helpful to themselves and/or others (Butler & Schnellert,
2020; Schnellert, 2011; Schnellert & Butler, 2021). Relatedly, it is important to anticipate the challenge that may arise when resources and example sharing are contrary to what is being discussed.

In addition to having robust structures such as LT meetings and reflective tools laid out for educators to springboard from as they collaborate and inquire, results from this study suggest that more dynamic support for educators is also beneficial as they engage in CI processes (Bergmark, 2020; Butler, 2021; Butler & Schnellert, 2020; Butler et al., 2013; Ciampa & Gallagher, 2016; de Jong et al., 2019; DeLuca et al., 2017; Harper-Hill et al., 2022; Schnellert, 2011; Wallen & Tormey, 2019). Throughout CI processes, it is important that facilitators also support opportunities for educators to grapple with the expertise of others (e.g., authors) and each other to generate new understandings about how to support students in their individual contexts. In the current study, it was a university-based researcher-educator (i.e., the LF) and collaborators within the CoI who provided just-in-time support for participants as they engaged in CI processes. At the same time, it is important to keep in mind the challenges involved in bringing educators together from within a school district where there may be influential power dynamics at play. Similarly, the LF may be perceived as occupying a position of power, potentially undermining an environment designed to prioritize educators' learning.

Facilitators can also support engagement in CI processes (Nelson & Slavit, 2008), first, by establishing conditions for educators to feel they can prioritize their own learning (DeLuca et al., 2017). Further, facilitators can play a key role in supporting educators to surface an awareness of how their own learning is unfolding, thus keeping professional learning at the forefront of all aspects of a CI. Facilitators are also key for supporting educators to learn how to engage in learning processes and to persist in engaging with them over time as they grapple with
the complex work of bridging practice-based experiences with new theoretical understandings. Further, facilitators and colleagues alike can both lend their own perspectives (and expertise) to enhance opportunities for all participating educators to deepen their thinking on a shared topic of interest (Nelson & Slavit, 2008). While key structures of CI (e.g., reflective tools) can provide educators with opportunities to reflect on their practice in relation to new learning, facilitators can extend reflective opportunities when, for example, they provide just-in-time suggestions for furthering learning (e.g., by drawing in a reading or connecting with a local educational leader in their area of interest). At the same time, facilitators can play a role in supporting educators to ground their engagement in their interests and experiences, thereby enhancing opportunities for educators to engage in meaningful and agentive professional learning (Lysberg, 2022).

**Concluding Remarks**

I began this research with a belief that participating educators came to this CoI voluntarily and out of a sense of professional responsibility for their students. But I also had questions about how to support educators in growing in their understanding about teaching and learning given the demands of their daily work and the complexity inherent in supporting learning. The initiative reported on here was based on the assumption that participants brought valuable expertise, opinions, and experiences to the table, but that they needed space, structures and support to deepen their learning. I noticed how this CoI was designed to address participants' needs for support as they worked hard to further their learning, but also how that was not the same as characterizing professional development as needing to rectify deficits in educators' knowledge. Rather, CoI such as this one attend to the complexity of teaching and learning through supportive structures from which participating educators can build up their understanding and agency in a pedagogical area they value. As a result, the research reported
here has the potential to inform how professional learning generally, and CI specifically, can be constructed to foster educators' professional learning and practice development.

This study provided a window into a professional learning initiative which emphasized support for educators to focus in on their own professional goals as informed by their students' learning needs. By uncovering how the CoI was structured and how its participants experienced learning and practice development through it, this dissertation sheds light on how to establish effective supports for professional learning to occur. Overall, I uncovered an emphasis on teacher learning that was supported in multidimensional ways and with thoughtful attention to fostering theory- and practice-informed knowledge construction. The processes of collaborating and inquiring were key for providing participating educators with opportunities to sustain their focus on the theory-practice connections they were making both for themselves and with colleagues in and beyond the CoI. Perhaps the most significant conclusion of this study is that educators within the CoI were driving their own learning trajectories and that their opportunities for learning were simultaneously shaped by CoI offerings, LF support, *in situ* application, and collaborative interactions. By highlighting participants' learning processes and impacts to their learning and practice development, this study suggests *how* CI can be designed and supported so that educators have the opportunities for learning that they desire as they work hard to fulfill their sense of responsibility for student learning.
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Information Age Publishing.


Appendix A: CoI Proposal

An "Inquiry Hub" on Self-Regulated Learning
Faculty of Education, University of British Columbia
Version December 2, 2013

Overview: Supporting Inquiry-Based Learning about Self-Regulated Learning

Across BC, educators are being engaged in “inquiry-based” professional development. In this approach, teachers work together in communities of inquiry (e.g., learning teams) to advance their learning and practice development around particular issues. Examples are the facilitated learning teams foundational to the province-wide Changing Results for Young Readers initiative, the learning teams fostered through BC's Networks of Inquiry and Innovation, and the many inquiry-based learning teams established within school districts (e.g., Coquitlam, Delta). Effective in that context is to support teachers to access “resources” that help them in reflecting on and advancing practice in ways that are informed by important research and theory. A key goal of this "inquiry hub" is to support educational leaders and inquiring learning teams interested in advancing knowledge and practice related to self-regulated learning.

Why Focus on Self-Regulated Learning (SRL)?

Across North America, self-regulation is being associated with the kinds of "21st century learning skills" that schools need to foster, if today's learners are to experience success from primary grades through the adult years. Self-regulation is critical because it entails learners' adaptive engagement in activity within particular environments (e.g., students' successful navigation of academic work in schools). Models of self-regulation describe how "metacognition" (e.g., understanding oneself as a learner), motivation/emotions, and strategic action combine to ensure success in learning. Research suggests that these models provide a powerful framework from which educators can build to better understand challenges/successes in students' learning and engagement, and for constructing practices that foster students' development as empowered, strategic learners.

Goals of the "Inquiry Hub"

A first goal of this "inquiry hub" is to support educators interested in integrating supports for SRL into their classrooms, for example by:
- facilitating meetings of learning teams
- supporting access to resources that can inform inquiry-based learning on SRL

A second goal is to build capacity in districts to lead learning and practice focused on supporting SRL, for example by:
- building capacity among district-based facilitators (of inquiry into SRL)
• sharing resources with other educational leaders (formal/informal) involved in promoting professional learning and practice within a given district

A third goal in this [redacted] is to create multiple, flexible “pathways” for participation that work for individuals in different kinds of roles and positions and with different kinds of educational histories and needs.

**Structure**

**Launching summer institute**
Can include educational leaders, facilitators, & educators. Introduces SRL & inquiry processes.

**Facilitated learning team meetings**
Co-facilitated by [redacted] “instructor” and district- based facilitators. Designed to facilitate inquiry, support access to resources, and build capacity within districts to support inquiry on SRL

**Culminating event**
Designed to create a space for sharing learning across participants through inquiry projects (as a final course assignment).

**A Flexible Learning Initiative: Pathways for Participation**
Participants in this initiative can be leaders (e.g., of change initiatives), facilitators (e.g., educators wishing to build capacity to support LT), and/or educators (e.g., wishing to engage in inquiry). Participants can just attend the launching summer institute, and/or participate in a “course” that unfolds across a year that includes the summer institute, learning team meetings, and a culminating event. This course can be taken for credit at either the graduate or undergraduate level. It can be taken as a non-credit option. With prior approval, learners in [redacted] programs (or in other BC institutions) may be able to take this course as part of an existing program (e.g., as an elective).

**The SRL [redacted]: A Partnership with [redacted]**

**Summer Institute**
First week of July (tentative)
3 days X 6 hours per day
Roughly 60 participants
Tuition: $315/person
[OR included as part of the full course]

**Full Course (Credit or Non-Credit, Undergraduate or Graduate)**
Includes 18 hour Summer Institute (August)
  Plus 5 x 3 hour LT meetings (Oct, Nov, Jan, Feb, Mar)
Plus a 6 hour culminating event (April)
Modeled based on two learning teams of 10 (total: 20)
Tuition: Tuition paid by students based on relevant UBC course fees, plus $250/person from the district to create a cohort version

_Cohort Version_
Benefits of a district cohort are that (a) it can be site-based (vs at UBC); (b) the district can reserve space (for the full summer institute and/or just the full course); and (c) it creates the opportunity to build capacity across roles and responsibilities (leaders, facilitators, teachers).
### Appendix B: Scanning and Reflecting Tools

#### Developing Inquiry: Scanning for SRL in Classrooms

<table>
<thead>
<tr>
<th>Your Name</th>
<th>Grade</th>
<th>Subject</th>
<th>Activity</th>
<th>Date</th>
</tr>
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<tbody>
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</tbody>
</table>

**Inquiry focus?**

**Context:** What was your plan for locating SRL in classrooms? What did you do? (point-form is fine. If you used specific resources, list them.)

**Observation. What happened?**
What did you notice, see, hear? Were there opportunities for SRL? Did students take up the opportunities? Did students initiate SRL?

**React and interpret:** What did you learn? What did you think and feel: (a) about locating SRL in classrooms; (b) about supporting SRL in your classroom in the future?

**Reflect and Plan:** What’s next? What are your questions now? Briefly note the reasons for your choices/decisions.
<table>
<thead>
<tr>
<th>Inquiry question</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context:</strong> What was your goal? What did you try? (point-form is fine. If you used specific resources, list them.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observation. What happened?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What did you notice about the students' reaction and learning (e.g., emotional reaction, engagement, comprehension, metacognition, self-regulation, confidence)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>React and interpret: What did you learn (a) about promoting SRL; (b) about teaching and learning generally?</th>
</tr>
</thead>
</table>

| Reflect and Plan: What will you try next? Briefly note the reasons for your choice/decision. |
Appendix C: Interview Protocol

1. What were your goals at the outset of the [CoI]?

2. Have you participated in inquiry-oriented learning in the past?
   i. If so, how has this experience been similar and/or different?

3. What did you take away from the SRL institute in July that helped you address your goals? What did that experience contribute? What was "missing" (or needed as a "next step" to inform your learning or practice?)

4. What aspects of the [CoI] learning team were particularly interesting or supportive to you in reflecting on, and making shifts to, your thinking and practice?
   i. What about (if not covered in their open-ended response)
      1. collaboration?
      2. the focus on inquiry?
      3. feedback from the instructor and/or peers?
      4. the thinking tools and assignments?

5. How would you describe the "resources" to your learning provided through the entire inquiry hub (summer institute; learning teams). What helped? What was missing? What more could have been added?
   i. What about (if not covered in their open-ended response)
      1. the readings you had access to, were they enough to inform you?
      2. opportunities to learn with/from others in the group?
      3. opportunities to interact with the instructor?
      4. the thinking tools and assignments?

6. Were there resources and supports that you drew from that were found outside of the [CoI] that were helpful to you?
   i. If so, how did those relate to your work in the [CoI]?
   ii. Was it hard or easy to make connections, or pull things together?

7. Aside from the collaborations in the [CoI] itself, were there any other collaborative relationships you engaged in in order to foster SRL supportive practices in classroom/school contexts?
   i. If so, what were you focused on there? How did those emerge?
   ii. Were those influenced in any way by your experience in the [CoI]? How?
8. What made the biggest difference, in terms of your experiences in the [CoI], to your understanding of how to foster SRL in your classroom/school context?

9. What impact do you feel you have had in terms of promoting SRL supportive practices:
   i. For your students?
   ii. For your colleagues?

10. Based on your experience in the [CoI], what have you been doing that is new or different and effective? What do you plan to try in the coming year? (Would you be able to "show" us?)

11. What more do you have to learn?

12. We’re have a new [CoI] starting again this year (summer institute plus learning team), what advice would you give us?
   i. What should we keep doing?
   ii. What could we do differently?