Piecing Together the Puzzle: The Formative Assessment Activity in a Grade 8 Philosophy Class

by

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Abstract

Formative assessment is an activity whereby the teacher and students collaborate on an assessment task with the aim of developing the students’ mastery and the teacher’s practice (Ash & Levitt, 2003; Black & Wiliam, 2006). It has been linked to increases in students’ achievement, motivation, and growth of their metacognitive, self-monitoring and self-regulation skills. It is a complex, dynamic and highly nuanced activity that many teachers struggle to implement. There is little research on the voices of teachers who employ formative assessment in Social Studies classrooms. This study addresses that gap in the literature. It investigated the formative assessment activity in a Grade 8 Philosophy classroom, guided by the question, “What are the essential features of a classroom where formative assessment is being implemented?”

A qualitative interpretive case study design was employed to document the ways in which assessment was enacted in the classroom over five months. Activity theory guided the development of data collection and analysis, as it requires a holistic approach well suited to the complexity of formative assessment activity. This theoretical lens was focused on the roles of those involved in formative assessment, their tools, the rules that determined their actions, the community within which the assessment occurred and the outcome of the activity. Daily observations and interviews with the teacher and eight Grade 8 students provided the data.

The four themes arising from the data were theoretically and inductively generated. They revealed that the activity of formative assessment was strongly situated and relational. The first theme, “Piece of the Puzzle” represents the significant role of the teacher’s and students’ belief systems in shaping formative assessment activity. The theme “Aligning Motives” captured the disparity between the teacher’s and students’ motives, and the measures undertaken to align these motives. “Ownership” described the students’ roles as owners of their learning, and “Reciprocity” highlighted the reciprocal nature of the activity. This study offers insight into the activity of formative assessment. It brings to the fore the nature of formative assessment as a co-constructed rather than a teacher-directed activity. This study describes the role formative assessment plays in the development of a community of learners who learn together while assessing each other.

Keywords: formative assessment; activity theory; Social Studies; qualitative research; Philosophy; case study
In memory of my wonderful and beloved cousin
Aron Jameson Horrell
Acknowledgements

“I am not alone, I exist in community” Carla Kronberg

This sentence is the strand that weaves all aspects of my life together. My life and its fruits are a reflection of the community in which I exist. To me, this community is precious. It comprises a myriad of people, some of whom are involved in my life on a daily basis, others I do not have an intimate association with, but they have contributed to my well-being, and still others that have gone on, but have produced great ideas upon which my work draws. I thank you all. You have played a significant role in the completion of this project and to you I am grateful.

First, I would like to mention Mr. Benedict and the Grade 8 class. You welcomed me into your community without hesitation and encouraged my curiosity. To Ingrid, Alexandra, Evelyn, Brianna, Nathaniel, Arthur, James and Courtney, I offer thanks for sharing your stories with me. They were rich and wonderful. Your voices were powerful. You alerted me to the importance of students’ actions to formative assessment activity. I began this project with a teacher-centric view and I leave it knowing that assessment requires a teacher-student partnership. Mr. Benedict, thank you for your patience with my million and one questions. Your honesty was shockingly refreshing. Through your voice, I have a new and welcomed perspective on formative assessment. It is not about success or failure, but about embracing the struggle that comes with integrating activities that are messy, complicated but rewarding. I return to my classroom ready to go bravely on. For that understanding, I am eternally grateful.

To my supervisory committee, Dr. Lannie Kanevsky, Dr. Daniel Laitsch and Dr. Alyssa Wise, thank you for your support, advice and words of encouragement. Through your actions, I have come to redefine what it means to teach, as building a meaningful and sustainable relationship with the learner. Your mentorship was invaluable throughout the process. It was done with care for me, as an academic, teacher and person. Professionally, the journey with you has been beneficial. Your actions were instrumental in my coming to understand formative assessment and research. You made possible a shift in my identity: I am no longer I, the student who desires to be instructed on how to do it to get it right; I am I, the learner. I will be forever in your debt for that. I would like to
pay special homage to Lannie. Thank you for expecting and demanding more from me, for mentoring me, and for believing in me. I leave this process a better teacher, and a budding academic, and you have played a significant role in this. To Dr. Peter Grimmett, who began this journey with me, thank you. Dr. Natalia Gajdamaschko, you introduced me to Vygotsky, gave of your time and helped me to understand activity theory. For that I am thankful. To Dr. Kristi Lauridsen who said to me, “This is your story of formative assessment, do not be afraid to own it”, thank you for your guidance and your editorial skills. And to the Library Assistant, Catherine Louie, who taught me how to use the template. Thank you for your assistance.

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<th>Description</th>
</tr>
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<tbody>
<tr>
<td>AfL</td>
<td>Assessment for Learning</td>
</tr>
<tr>
<td>BC</td>
<td>British Columbia</td>
</tr>
<tr>
<td>CAPITL</td>
<td>Classroom Assessment Project to Improve Teaching and Learning</td>
</tr>
<tr>
<td>CHAT</td>
<td>Cultural Historical Activity Theory</td>
</tr>
<tr>
<td>K to 12</td>
<td>Kindergarten to Grade 12</td>
</tr>
<tr>
<td>KMOFAP</td>
<td>King's-Medway-Oxfordshire Formative Assessment Project</td>
</tr>
<tr>
<td>IRF</td>
<td>Initiation Response Feedback</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PSS1</td>
<td>Public Secondary School 1</td>
</tr>
<tr>
<td>SD</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>TASK</td>
<td>Teacher Assistant Key Stage 1</td>
</tr>
<tr>
<td>TOC</td>
<td>Teacher on Call</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>ZPD</td>
<td>Zone of Proximal Development</td>
</tr>
</tbody>
</table>
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>The structure within which the subject and object merges together. It is the basic unit of analysis, through which one can understand the actions of the subject and the transformation of the object (Kaptelinin, 2013).</td>
</tr>
<tr>
<td>A priori</td>
<td>Used by Mr. Benedict to describe the assessment system in the classroom. It is a front-loaded process, whereby the teacher presents the assessment to students before instruction and instruction is tailored to meet the needs of the assessment.</td>
</tr>
<tr>
<td>Assessment</td>
<td>The collection of information generated from students that is used to evaluate students’ competency at a task or concept.</td>
</tr>
<tr>
<td>Broken academic</td>
<td>A term coined by Mr. Benedict to describe the student who is bored and uninterested in school, but has enormous potential.</td>
</tr>
<tr>
<td>Conductor</td>
<td>Used by Mr. Benedict to describe and identity the technique the teacher employs during classroom discussions to weave students' voices into one narrative. The conductor guides the conversation.</td>
</tr>
<tr>
<td>Criteria</td>
<td>The key features of an assessment task used by students to construct their assessments and by the teacher to determine the quality of students' submissions (Stiggins &amp; DuFour, 2009).</td>
</tr>
<tr>
<td>Feedback</td>
<td>Information provided to classroom participants on the quality of their submissions. Feedback identifies the strengths and weaknesses of the submitted piece and is used by classroom participants to refine their learning and development.</td>
</tr>
<tr>
<td>Fixable</td>
<td>Used by Mr. Benedict to describe simple errors in students' work samples. For example, mistakes in the title page, introduction, conclusion, or thesis statement that can be altered easily.</td>
</tr>
<tr>
<td>Formative assessment</td>
<td>An assessment task that is mutually beneficial to the teacher and student. It involves the teacher and student collaborating, internalizing and appropriating each other's knowledge, and in so doing, co-constructing new knowledge.</td>
</tr>
<tr>
<td>Happy</td>
<td>Used by Mr. Benedict to describe satisfaction about the quality of a work sample. When students and Mr. Benedict are happy with a piece, they stop working on it.</td>
</tr>
<tr>
<td>Negotiated space</td>
<td>Used by Mr. Benedict to describe a space in a classroom, where the teacher and student are “mutually responsible” for learning and work samples. It is a collaborative and co-constructed space.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
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</tr>
<tr>
<td>Organic</td>
<td>Used by Mr. Benedict to describe a classroom environment that is responsive to the needs and interests of the students. For Mr. Benedict, organic means changeable.</td>
</tr>
<tr>
<td>Ownership</td>
<td>Used by Mr. Benedict to describe students taking responsibility for their work and the ideas that they produce in their work samples, which reflect their original thoughts.</td>
</tr>
<tr>
<td>Pedagogical tool</td>
<td>Psychological or material products that mediate learning.</td>
</tr>
<tr>
<td>Process construct</td>
<td>Used by Mr. Benedict to describe a rubric based on Peter Segias’s work. It was constructed by the students and is used to guide students’ work samples; the assessment criteria.</td>
</tr>
<tr>
<td>Squishy amoeba</td>
<td>Used by Mr. Benedict to describe the wholeness of Mr. Benedict’s class. The class is a place where assessment and instruction are not distinct, but rather have been “morphed” into many shapes.</td>
</tr>
<tr>
<td>Struggle</td>
<td>Used by Mr. Benedict to describe the active search by the teacher for the best pedagogical practices. A desire to let learning control the teaching.</td>
</tr>
<tr>
<td>Student space</td>
<td>All learning activities where the students learn independently of Mr. Benedict.</td>
</tr>
<tr>
<td>Summative assessment</td>
<td>A final evaluation of students’ submissions. It is used to determine students’ level of performance on a task.</td>
</tr>
<tr>
<td>Unfixed</td>
<td>Used by Mr. Benedict to describe a student’s identity that emerges during the Angora Program, where students become disengaged from institutional structures, such as grades. Unfixed students engage in conversation with Mr. Benedict, about their work, without his prodding.</td>
</tr>
<tr>
<td>Zone of proximal development</td>
<td>The gap between what the learner can successfully complete independently and their “potential development” when assisted by an expert to complete a task (Dixon-Krauss, 1996, p. 15).</td>
</tr>
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Chapter 1.

Introduction

My experiences with formative assessment, as a student and as an educator, have been bittersweet. Over the years, I have come to realize how instrumental formative assessment has been in shaping my learning and development. At university, I benefitted greatly from its use during several courses. The feedback and questioning arising from activities associated with it have served, on several occasions, to reorient my focus and bridge gaps in my understanding of concepts and problems.

In contrast, my involvement with formative assessment during my period of service as a secondary school Social Studies teacher was somewhat traumatic. The first time I attempted to incorporate it into my pedagogy was in 2004, after the Ministry of Education in Trinidad and Tobago had recommended its use in classrooms as a means to improve student learning. At that time, I was reading for my Master of Education degree and had just completed a course on formative assessment. The success stories I found within the literature, coupled with my limited experiences as a student with formative assessment, which were positive, made me eager to adopt this practice. I can recall feeling confident about its power to transform my students into critical thinkers and independent learners, and thus to provide them with new and meaningful learning experiences. And so, it was with great enthusiasm that I set out to make it an integral part of my classroom practice. Midway through the implementation process, reality struck me. I realized that while I had adopted many of the tools associated with formative assessment, such as feedback, peer- and self-assessment, and questioning, it was not creating the student success that the literature described. The students were not excited about formative assessment activity, their grades were not improving, and they were not developing into critical thinkers. I felt that I had failed professionally, and as a teacher, I have never forgotten the deep disappointment that ensued.
That experience left me uneasy with my practice. There came a sense of non-fulfilment. In part, that discomfort stemmed from my previously successful record. I felt as though I had lost my touch and that troubled me. After all, I had done everything right. I had followed the recipe and implemented formative assessment as prescribed, and yet, I had failed. It gnawed at me; I could not let it go. One question above all -- Where did I go wrong? -- complemented by a fervent desire to try again with the activity, inspired my search. Even in my failure, I still believed that formative assessment could transform my students into critical thinkers and independent learners. This belief shaped my desire to understand what had gone wrong, by exploring the practices of a teacher who was successful with formative assessment. Hence my research question: How does formative assessment unfold in a secondary school Social Studies classroom?

This study, my first research endeavour, inquires into the practice of a teacher, Mr. Karl Benedict, and his Grade 8 class, where formative assessment activity is practiced successfully. It explores the actions and experiences of the teacher and students in his classroom as seen through the lens of an activity theory framework. I was drawn to this framework because my experience in the classroom led me to see this space as complex and dynamic. As a teacher and a learner, I have come to know the classroom as a site where change occurs. Change in the classroom can sometimes be sudden. The classroom participants’ actions are never simple but are framed by societal needs. I required a theoretical framework that saw the classroom space and formative assessment activity as inextricably bonded. Activity theory met this requirement. Formative assessment, as seen through this lens, involves mediated action within a social, cultural and historical context. This theoretical framework does not propose a nicely packaged view of formative assessment, but it provides the tools to investigate formative assessment as an activity that is complicated, animated, context-specific, and relational; it is a reflection of the society within which the activity is enacted.

1.1. Background of the Study

Assessment plays an important role in the classroom. It accounts for a sizable chunk, at least one-third, of instructional time (Stiggins & Conklin, 1992; Torrance & Pryor, 1998). Included in this time are assessment activities where classroom
participants engage in formative assessment which, according to Popham (2008), is a “planned process in which assessment-elicited evidence of students’ status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning tactics” (p.6). Simply stated, formative assessment is seen as an ongoing activity, the object of which is to facilitate students’ learning and development (Bell & Cowie, 2001; Black & Wiliam, 2006; Crossouard & Pryor, 2008). Within this activity, the teacher employs data gathered from an assessment task to determine the level of students’ learning and development, and makes adjustments to instructional activity so as to facilitate students’ successful completion of the task and the development of their mastery (Ash & Levitt, 2003; Newman, Griffin, & Cole, 1989; Popham, 2008; Tharp & Gallimore, 1991; Torrance & Pryor, 1998). Formative assessment activity is not a performance. It is an act of learning; its sole purpose is to promote students’ learning and development.

From a sociocultural and activity theory perspective, formative assessment activity is defined as assessment tasks in which the teacher and students collaborate with each other with the aim of developing students’ understanding and transforming the teacher’s practice (Ash & Levitt, 2003; Black & Wiliam, 2006). At the heart of this activity is the relationship between classroom participants. Through interaction, the teacher and the student internalize and appropriate one another’s knowledge and in so doing, co-construct new knowledge (Ash & Levitt, 2003; Jones et al., 1998; Lund, 2008). Formative assessment centres on an expert internalizing the knowledge of a learner and evaluating it to determine the learner’s competencies and deficiencies, as well as potential areas for growth and improvement. As the expert discerns the quality of the learner’s knowledge and understanding, she or he reflects on her or his teaching and instruction and modifies it to develop and improve the learner’s conceptual understanding and academic achievement in the learner’s work (Bennett, 2011; Black & Wiliam, 2009; Cizek, 2010; Nolen, 2011).

Formative assessment activity is “unified” with instruction (Lund, 2008, p. 19); it occurs during, instead of at the end of instructional activity, and its processes are “cyclical” (Harlen, 2007, p.119) in nature. This process, on the whole, involves teacher actions, such as identifying and making explicit to students the criteria that frame the assessment task, employing the assessment to gather evidence of students’
understanding of the task, determining students’ level of mastery of the task, and adapting instruction so as to improve students’ learning. To accomplish this activity, specific assessment tools are used by the teacher and students. These include assessment criteria (Crossouard & Pryor, 2008; Harlen, 2007; Sadler, 1983; Torrance & Pryor, 1998), observation and questioning (Black, 2010; Hodgen, & Webb, 2008; McMillan, 2012; Popham, 2011, Swaffield, 2008), feedback (Hattie, 2012; Hattie & Temperly, 2007; Shute, 2008; Stobart & Gipps, 1997; Swaffield, 2008), and peer- and self-assessment (Black, 2010; Earl, 2012; McMillan, 2012).

Over the past decades formative assessment has emerged, in the minds of researchers, as a transformational activity in the educational system (Popham, 2008; Sadler, 1998; Shepard, 2005; Torrance & Pryor, 1998). It has been identified as a teaching activity that can facilitate student success. That is, it can develop students into critical thinkers, decision-makers and problem solvers, who are creative, innovative, socially responsible and technologically savvy collaborators with strong communication skills (Andrade & Cizek, 2010; Ash & Levitt, 2003; Bell & Cowie, 2001; Black & Wiliam, 1998; Brookheart, 2007; Crossouard & Pryor, 2009; Elwood, 2006; McMillan, 2011; Nolen, 2011; Popham, 2008; Sadler, 1998; Shepard, 2005; Torrance & Pryor, 1998).

A substantial body of literature has developed to support these claims. This literature includes evidence that formative assessment increases student achievement (Beckett, Volante & Drake, 2010; Black, 2010; Black & Wiliam, 2003; McMillan, 2007). Students who are engaged in formative assessment activity can improve their achievement scores by as much as two standard deviations (Black & Wiliam, 1998; Hattie & Temperly, 2007; Lysakowski & Walberg 1982). An increase in student achievement occurs, even in those students identified as underachievers, as a result of their engagement in formative assessment, since it generates “greater equity of student outcomes” (OECD, 2005, p. 23). Its impact is weighty; student achievement that is attributed to formative assessment is “among the largest ever reported for educational interventions” (Black & Wiliam, 1998a, p. 61). The increases in students’ achievement that it appears to generate surpass those of a reduction in class-size or improvements in teachers’ subject discipline knowledge (Wiliam & Thompson, 2007).
Formative assessment has also been linked to increased student motivation (Brookheart, Moss & Long, 2008; Nolen, 2011; Pellegrino et al., 2001), and the development of students’ metacognitive and critical thinking skills (Hagstrom, 2006; Shepard, 2005; Shute, 2008; Stiggins & DuFour, 2009), self-regulation and self-monitoring (Clark, 2012, Macfarlane-Dick & Nicol, 2006; Naji & Ramdani, 2015). As a consequence of its benefits to students’ learning, researchers such as Andrade & Cizek (2010), Bell & Cowie (2000), Black and Wiliam, (1989, 2006), Black et al. (2007), Gipps (2002), McMillan (2007, 2011, 2012), Popham (2006, 2008, 2011), Sadler (1998, 2010), Torrance and Pryor (1998; 2001), and Stiggins (2005, 2007, 2009) have advocated for its use as a teaching and learning activity in the classroom. This call has not fallen on deaf ears. Throughout the world, Ministries of Education have included formative assessment in their policies, including Canada. The Organization for Economic Co-operation and Development (OECD) study on enhancing learning through formative assessment and the expansion of teacher repertories Canadian report (2005) noted that Canada has been in the process of using evidence based recommendations (e.g., Black & Wiliam, 1998; Stiggins, 1999) as a means of guiding new policies and procedures to optimize student academic achievement. Many Canadian educational researchers and personnel consider formative assessment to be a key component of student learning. (p. 12)

Despite its benefits, there are concerns about formative assessment’s potential to develop students’ mastery. Torrance and Pryor (1998) argue that formative assessment is “inevitable” (p. 6). It is “inevitable” in the sense that learning is involved in assessment, including summative assessments and other assessments that were not designed to produce learning. They are not alone when they suggested formative assessment may but not always results in “good” classroom activity (p. 6). There is a growing body of literature that suggests a shaky connection between formative assessment and increased student achievement. Reasons for formative assessment’s inability to produce student learning as envisioned include the absence of a cohesive and unambiguous definition of formative assessment (Dorn, 2010; Dunn & Mulvenon, 2009; Torrance, 1993); the situational and complex nature of teaching and learning (Crossuard & Pryor, 2009; Filer & Pollard, 2000); the difficulty in altering teachers’ beliefs and attitudes about, and roles and practices during assessment (Black, 2010; Lock &
Munby, 2000; Stiggins, 2007); and the demands and constraints placed on teachers by
the curriculum and external testing (Dorn, 2010; Goika, 2009; Shepherd, 2007). Given
its importance and the time spent on formative assessment activity in classrooms,
researchers have been exploring possible ways to make the connection between
formative assessment and students’ achievement more robust and consistent.

One of the ways that researchers have sought to address these concerns has
been to provide teachers with a number of “quick fixes” and models (Elwood, 2006, p.
228). These fixes implied that following the “recipe” exactly would guarantee student
success. However, these interventions proved to be ineffective because the classroom
is an ambiguous, complex, and dynamic site, and adopting the “letter” of formative
assessment, following the rules exactly, did not provide solutions for the unexpected
(Derrick et al., 2008; Marshall, & Drummond, 2006). Another method employed by
researchers has been to acknowledge the complexity of formative assessment as an act
of pedagogy and describe the activity in its fullness, warts and all (Beckett, Volante &
Drake, 2010; Crossuard & Pryor, 2009; Elwood 2006; Filer & Pollard, 2000; Goika, 2009;
Marshall & Drummond, 2006; Willis, 2009). This research paints a picture of formative
assessment as complicated: “neither its processes nor its outcomes are straightforward
or transparent, but neither are without positive possibilities and consequences”
(Torrance & Pryor, 1998, p. 20). It paints a picture of formative assessment that is
vibrant, complex and authentic (Lock & Mundy, 2000) and it suggests that formative
assessment “is a very demanding task” which teachers “find pretty scary” (Wiliam, 2011,
p. 363), and as a consequence they experienced little success with the activity (Frey, &

As a means of increasing teachers’ success with formative assessment,
researchers recognized a need to collaborate with teachers. They argued that this
collaboration would be beneficial to both parties. The teacher would receive support and
guidance from experts in their field, whilst researchers could collect data on the practice
of formative assessment and use it to build theory (Black & Wiliam, 2006; Willis, 2007,
2009). As Willis (2007) explained:

When teachers are supported to introduce AfL [Assessment for Learning]
practices, changes occur in teachers’ roles and subject knowledge, teacher beliefs, teacher and student relationships and the roles and
identity of the student. Partnerships between teachers and researchers to support long-term change that combine the insights of theorists and practitioners have the potential to bring beneficial and meaningful change. (p. 8)

Researchers such as Torrance and Pryor (1998) in the Teacher Assistant Key Stage 1 (TASK), Black and Wiliam (2003) in the King’s-Medway-Oxfordshire Formative Assessment Project (KMOFAP), Sato, Coffey, and Moorthy (2005) in the Classroom Assessment Project to Improve Teaching and Learning (CAPITL) and Crossouard and Pryor (2008) in the New Jersey Project, have all collaborated successfully with teachers to improve their formative assessment activity. Unfortunately, this type of research has had a limited impact, as very few teachers have been or are presently provided with the opportunity to collaborate with researchers. In reality, the vast majority of teachers who employ formative assessment in their classrooms do so without the aid of researchers to facilitate their implementation. There is a need to explore the actions of these teachers, to inquire of them, How does formative assessment activity unfold in your classroom? and What actions are involved in producing student success from complicated activity? It is my belief that engaging in such an inquiry is beneficial to teachers; it investigates more realistic examples.

1.2. Rationale, Purpose and Significance of Study

The literature mentioned above suggests that formative assessment is a worthwhile but complicated practice in which few teachers succeed independently. But, as just noted, one of the main pathways to success, collaboration with researchers, is not available for the vast majority of teachers who want to use formative assessment in their classrooms. Given this, as well as the position taken by many educational policymakers throughout the world, including in Canada, that formative assessment is an important intervention, there is, without doubt, a need for continued exploration into formative assessment activity, undertaken without extensive ongoing support as it can provide realistic for teachers.

Clearly this problem has personal significance for me. I was one of many teachers who followed policy mandates to integrate formative assessment into my
practice; I was one of many teachers who were unsuccessful. To understand my failure, I explored one of the exceptions in this study, a teacher who has successfully integrated formative assessment into his classroom activity. My attempt with formative assessment was framed by the notion of success, as I had perceived it to be described in the literature. That is, success at formative assessment meant an improvement in students’ academic achievement. The following beautifully articulates reasons for my decision to observe a teacher’s practices in its entirety and inquire about what I observed:

Most of the teachers and administrators in our longitudinal study had a strong working knowledge of, and a philosophy consistent with, the best practices recommended in assessment research/policy. These teachers and administrators shared insightful stories of formative assessment practices from which other jurisdictions may benefit. By sharing stories of best assessment practices with colleagues, administrators and teachers built network communities that created a positive assessment environment and led to professional accountability. (Beckett, Volante & Drake, 2010, p. 45)

These authors based this conclusion on their study of the assessment conceptions and practices of 20 teachers and 18 administrators in two school districts in Ontario. I concur with the findings of the authors. I believe that listening to the voice of another teacher offers me the opportunity to engage in reflection on my own experiences with, and beliefs about, formative assessment, in order to explore the reasons for my failure and to envision a new practice with the activity. Accessing another teacher’s story not only facilitates a better understanding of my practice; it also enables me to integrate this activity into instruction.

I believe that studies which seek to understand teachers’ assessment practices are a great tool for those teachers, like myself, who want to understand the activity of formative assessment. These studies can serve as “practical and contextualized guidance,” providing teachers with the requisite tools to implement formative assessment or to affirm their practice (Willis, 2007, p. 59). Black and Wiliam (1998) acknowledged the value of studies that focus on stories of formative assessment to teachers: “What they [teachers] need is a variety of living examples of implementation, by teachers with whom they can identify and from whom they can both derive conviction and confidence that they can do better, and see concrete examples of what doing better
means in practice” (p. 15). This study does that. It explores the successes of a teacher in an activity that is notorious for failure.

Studies that highlight the experiences, activities, and voices of teachers not only add to the literature on the topic, but also provide a robust and authentic picture of assessment. From an activity theory perspective, this is important because studies that focus on life in the classroom “make visible the way that students and teachers together construct knowledge and curriculum” (Cochran-Smith & Lytle, 1993, p. 43). Studies that give eminence to the voices and experiences of teachers are key for the production of conceptually robust and credible theory that is accessible to teachers, bolstering the likelihood that it will be adopted in the classroom (Little, 2012; Willis, 2007, 2009). I am confident that accessible stories can engender a connection between theory and practice. I see teachers’ experiences as a powerful resource that can be used to discern the complexities of this, and all other types of assessment practice, and I also believe that through teachers’ stories about their negotiations with formative assessment, researchers will find that it is not simply a “straightforward implementation of techniques within an existing classroom repertoire” (Willis, 2009, p. 1), but rather a complex, dynamic and situational phenomenon. This has been the finding of such formative assessment researchers as Bell and Cowie (2001), Black and Wiliam (2003), Crossouard and Pryor (2008), and Torrance and Pryor (1998), who use the data collected in classrooms to develop their theorizations of formative assessment.

This study also adds to the literature on formative assessment within the Canadian context and in Social Studies. At present, there is a paucity of such literature on the activity of formative assessment in Canada (Beckett, et al., 2010). The OECD (2005) report entitled Enhancing Learning Through Formative Assessment and the Expansion of Teacher Repertoires found 22 studies conducted in Canada during the period of 1985-2004. The authors concluded that although “Canadian educational researchers and personnel consider formative assessment to be a key component of student learning … Canada has currently provided little empirical evidence regarding the effectiveness of formative assessment in classrooms” (p. 12).

This investigation also contributes to the research within the discipline of Social Studies, and the subject of Philosophy in Secondary Education. The literature suggests
that formative assessment is not a universal practice, but rather that variations in the activity occur across disciplines. Disciplines are “subcultures characterized by differing beliefs, knowledges, norms, and practices that affect teachers’ work” (Grossman & Stodolsky, 1995, p. 5). Social Studies as an area of specialized knowledge, a subculture, has its own distinct formative assessment activity (Gallavan & Kottler, 2012). Knowledge within this discipline tends to be “meandering and organic,” and as a result formative assessment activity cannot easily be “mapped on” to it, as with other subject discipline areas (Marshall, 2007, p.137). Within the range of investigations on the practice of formative assessment at the secondary school level, there is a substantially greater volume of research within the subject areas of Science, Mathematics and English than in Social Studies, and usually when research is conducted within this field, it is in conjunction with other subjects (Black & Wiliam, 2003; Marshall, 2007). This study improves our understanding how formative assessment unfolds when the content area does not readily facilitate the implementation of the activity.

This investigation explores how the enactment of formative assessment shaped learning and teaching in a secondary Social Studies classroom in British Columbia (BC). Specifically, it documents formative assessment activities in a Grade 8 Philosophy class. It inquires: How does formative assessment unfold in a secondary school Social Studies classroom?

I employed a qualitative case study design, based on the assumptions that knowledge is constructed from meaning-making processes and is situated within a particular social, cultural, and historical context. With this design, I explored the activity of formative assessment. It is an intentional action though which learning is achieved (Kaptelinin, 2006; Leontiev, 1974). It is an activity that is co-constructed from the teacher’s and students’ understanding about teaching, learning and assessment. The co-construction is framed by the context within which the activity was enacted and by the persons who participated in the activity. Through an activity theory lens, this study focuses on formative assessment as an activity that is both contextually specific and relational.

In addition, this study examines formative assessment activity that occurs in a classroom where there is no expert researcher to provide assistance to the participants.
As previously noted, the difficulties faced by teachers who attempt to implement formative assessment successfully in the classroom have led researchers such as Black and Wiliam (2009), Willis (2007) and Crossward and Pryor (2009), to suggest the need for collaboration between researchers and teachers. The teacher in this study, Mr. Benedict, like the majority of teachers, practices formative assessment unaided by researchers, is a source of inspiration for me as a teacher who failed to integrate formative assessment activity into my classroom. I have discovered that I am not alone in my failure; that other teachers have struggled as I have.

1.3. Organization

This investigation is presented in six chapters. In Chapter 1, a brief description of formative assessment has been given and the rationale for the study provided. Chapter 2 presents the literature relevant to this study. Here, the varying conceptions of formative assessment, including a sociocultural understanding, and studies conducted on teachers’ formative assessment practices, are identified and explored. Chapter 2 also introduces activity theory and discusses its utility as a conceptual framework from which to understand formative assessment. The methods employed to answer the research question are described in Chapter 3. The design of the case study, the selection of participants, the procedure for the data collection, the analysis of data and the measures undertaken to ensure the credibility of the study are also discussed. Chapter 4 describes the context in which the study occurred, participants and site, and assessment events that occurred during data collection. In Chapter 5, the findings, as they relate to the research question, are put forward. Four themes, “Piece of the Puzzle”, “Aligning Motives”, “Ownership” and “Reciprocity” are discussed. In the last section, Chapter 6, the discussion of the findings is presented. This discussion draws heavily on sociocultural and activity theories. It acknowledges the limitations of this work and provides some recommendations for examination and for future studies.
1.4. Summary

The purpose of this research was to explore how formative assessment activity unfolded in a secondary school Social Studies classroom. In it, I sought to document the experiences and negotiations of classroom participants as well as their successes and failures with formative assessment. I employed activity theory as a theoretical lens because this framework provides for a systematic and complete analysis of pedagogy (Rust et al., 2005). It makes possible the documentation and analysis of formative assessment in its entirety, including the social, cultural and historical context of the activity, the tools used and teacher-student collaboration and interaction during formative assessment moments (Crossouard & Pryor, 2008; Yamagata-Lynch, 2010). In all, this study offers, in rich detail, an account of formative assessment activity in a Social Studies class, and in doing so, it adds to the existing literature on formative assessment system.
Chapter 2.

The Literature Review

2.1. Introduction

This chapter presents a discussion of formative assessment activity within the classroom. It is organized into four sections: (1) definitions of formative assessment; (2) the literature on the connection between formative assessment and student success; (3) the literature on the practice of formative assessment; and (4) activity theory as a theoretical lens.

I begin with the definition because a clear picture of formative assessment facilitates an understanding of the theory and practice of the activity. The literature on formative assessment, like its practice, is complex and dynamic. Beginning with a definition of formative assessment assists in resolving the complications of its practice.

The second section focuses on the importance of formative assessment, as posited by the literature. The majority of the literature presents formative assessment as a “good thing” that improves students’ achievement (Torrance & Pryor, 1998, p. 6). It is my intention that by the end of this section, the reader will have a clear understanding of why formative assessment is identified by some researchers and policymakers as one of the most successful learning “interventions” in the educational system (Black & Wiliam, 1998, p. 61). I also problematize this literature by presenting the “chinks in its armour”, which have led many to conclude that formative assessment is not as simple and effective an innovation as was presented in this literature.

In the third section, I focus on the research that describes the practice of formative assessment and in doing so, I examine the complications inherent to the
activity. I make a case for this study by exploring the knowledge gained about the nature of the activity from studies that highlight voices from the classroom.

The fourth section presents the study’s theoretical framework, activity theory. This theory frames formative assessment as an activity mediated by tools and embedded within a particular context. Here, I also explore the activity system, the principles of historicity, contradictions, multi-voicedness, and intentionality, as well as the utility of these tools for investigating activities that are complex and situated.

In the final section I synthesize this literature highlighting the gaps that create a need for the work undertaken in my investigation.

### 2.2. Defining Formative Assessment

Black and Wiliam (1998) described formative assessment as:

> all those activities undertaken by teachers -- and by their students in assessing themselves -- that provide information to be used as feedback to modify teaching and learning activities. Such assessment becomes formative assessment when the evidence is actually used to adapt the teaching to meet student needs. (p. 140)

This may be the most widely used definition of formative assessment. In it, the four constitutive elements of formative assessment are identified. These are: It is an information gathering process; it is teacher-directed; it encourages student engagement, and it fosters student motivation.

The oldest and perhaps the cornerstone feature of formative assessment is that it is an activity used to gather “information about the learning process” (Brookheart, 2007, p. 44). This notion was introduced by Scriven (1967), who has been identified in the literature as the founding father of formative assessment (Brookheart, 2007; Cizek, 2010; Dunn & Mulvenon, 2009; Popham, 2008). In his conceptualization of formative evaluation as the ongoing appraisal of a program with the specific intention of improving its functioning, that element was employed to establish a connection between formative assessment and instruction, so that formative assessment emerged as an activity that was process-based or ongoing, with its purpose being to improve students’ learning. I
identify this element as the cornerstone of formative assessment because subsequent theorists and researchers have included this feature in their definition of formative assessment (Black & Wiliam, 1998; Bell & Cowie, 2001; Bloom, 1969, as cited in Guskey, 2010; Brookheart, 2007; Crooks, 1988; Crossouard & Pryor, 2008; Natriello, 1987; Sadler, 1983; Shavelson, et al. 2008). This aspect of formative assessment incorporates all activities intended to facilitate students’ learning. That includes what Popham (2006) and Shavelson, et al. (2008) identify as formal formative assessment, or intentional teacher-directed activity, as well as informal formative assessment or "teachable moments that unexpectedly, arise in the classroom" (Shavelson, et al. 2008, p. 297). It limits the definition of formative assessment to only those activities that facilitate learning (Popham, 2006).

The second definitional element is that formative assessment is a teacher-directed activity. This characteristic was contributed by Bloom in 1969 (Brookheart, 2007). Bloom, like Scriven, also used the term formative evaluation. Over the years, this term has been replaced with formative assessment (Wiliam, 2006). Bloom argued that formative evaluation is teacher-directed in two main ways. These are: (1) the teacher provides feedback to students on the quality of their work so that they can improve it, and (2) the teacher uses correctives during instruction, or adapts instruction, to address any learning deficiencies that the student may have (Cizek, 2010; Guskey, 2007). These points emerged as a result of a study conducted by Bloom in 1969 on the relationship between student achievement and instructional methods. He undertook this investigation in the hope that he would develop a teaching tool which would reproduce similar results in student achievement as did one-to-one tutorials between a teacher and student (Brookheart, 2007; Cizek, 2010). This aspect featured strongly in Bloom’s definition of formative evaluation. Bloom argued that formative evaluation, which “we tend today to call assessment” (Wiliam, 2006, p. 283) was:

the use of systematic evaluation in the process of curriculum construction, teaching and learning for the purpose of improving any of these processes ... in formative evaluation one must strive to develop the kinds of evidence that will be most useful in the process, seek the most useful method of reporting the evidence and search for ways of reducing the negative effects associated with evaluation – perhaps by reducing the judgmental aspects of evaluation or at least by having the users of the

Bloom identified the teacher as playing a central role in formative assessment activity. Sadler (1983, 1985, 1987, 1989), in a series of articles, explored teachers’ actions associated with formative assessment. He perceived formative assessment to be a process that involved teachers making “qualitative judgments” (1987, p.192) on the quality of students’ work, based on assessment criteria. These criteria were the “expected outcomes” (1985, p. 293) which informed students of “appropriate” responses (p. 290). Many researchers highlighted this element of formative assessment. One of them, Popham (2008), defined formative assessment as an activity that is undertaken by the teacher through which the student gains knowledge and understanding and, as a result, is able to complete a learning task successfully. In this activity, the teacher discerns a student’s understanding of and progress with a task. The teacher then employs feedback and adjusts his teaching to ensure that the student learns to successfully complete the teacher-directed task. To Popham, formative assessment is a teacher-directed activity, in the sense that the teacher initiates the activity, gathers evidence of student learning, judges the evidence and adapts instruction. Since Bloom’s (1969) definition of formative evaluation, the concept has evolved. Today, the emphasis on formative assessment as a teacher-directed activity, like its original name, has been replaced. Formative assessment is perceived to be a collaborative activity rather than a teacher dominated one.

The third definitional element of formative assessment is that students can actively engage in the activity to “improve their performance” (Brookheart, 2007, p. 44). Sadler (1983) claimed that formative assessment promotes students’ agency. He believed that formative assessment was not “something done to the learner” (Crossouard & Pryor, 2008a, p. 4), but rather that the learners were actively engaged in the process. Their engagement spurred their “critical” thinking development (Sadler, 1983, p. 65) and resulted in the transformation of their work. Black and Wiliam (2006) have also emphasized this feature of formative assessment. They credit it with producing active learners, who can identify the gap between their current performance on the task and the expected performance and take steps to narrow that gap. Brookhart (2006) argued that the addition of this element has been instrumental in the ongoing
transformation of the concept. It incorporated students’ actions as part of formative assessment activity and in doing so, produced it as a collaborative activity.

The final definitional element can be found in the works of Black and Wiliam (1998), Brookheart (1997), Crooks (1998), and Natriello (1987). These researchers propose that formative assessment activity is one in which students are self-motivated. Through engagement in the activity, they come to see the “value” of knowledge; they learn “how to learn” and feel “capable of learning” (Harlen, 2007, p. 75).

The definition provided by Black & Wiliam (1998), with its four elements, in many ways, presents the official and ideal conceptualization of formative assessment activity (Baroudi, 2007; Black & Wiliam, 1998; Brookheart, 2007; Scriven, 1967). In theory it is a process intended to facilitate students’ learning. It involves the teacher assessing students’ progress on an assessment task with the objective of recognizing the needs of the learner so as to be able to adapt classroom instruction to meet these needs (Clark, 2010; Otero, 2006). However, this definition is by no means intended to present a static picture of formative assessment. As the literature in this section demonstrates, the practice of formative assessment is complex and dynamic.

The concept has undergone several changes since its introduction by Scriven (1967) and Bloom’s (1969) additions. The scope of formative assessment has been “broaden[ed]” to identifying it as a “collaborative process” (Cizek, 2010, p. 5). Today, it is seen as involving “a social practice mediated by a number of social (coordination of views), material (criteria, guidelines), and contextual (historically and culturally valid knowledge) means” (Lund, 2008, p. 34). Formative assessment has emerged as a learning process whereby the teacher and students collaborate on an assessment task with the aim of developing the students’ mastery and the teacher’s practice. It involves determining the strengths and weaknesses of the learner’s current understanding, as well as the identification and adoption of activities that help the learner address these deficiencies (Ash & Levitt, 2003; Black & Wiiliams, 2006; Cizek, 2010).

The practice of formative assessment has been described as a “unified activity” (Lund, 2008, p. 19), in which assessment and instruction are fused to produce success in an assigned task (Bennet, 2011; Gipps, 2002; Gordon, 2008; Torrance, 2012). It
occurs during and after instruction and as a consequence of this, all the activities employed during instruction mediate formative assessment practice. However, classroom participants employ several specific formative assessment activities to develop the students’ mastery and the teacher’s practice. These include learning and teaching activities: specifying assessment criteria (Crossouard & Pryor, 2008; Elwood, 2002; Filer, 2000; Sadler, 1985, 1983, 1997, 1989), providing feedback (Elwood, 2006a; Havnes et al., 2012; Mustafa, 2012; Sadler, 1985, 1983, 1997, 1989; Wiliam, 2011); employing peer- and self-assessment (Crossouard & Pryor, 2008c; Elwood, 2006b; Sadler, 1985, 1983, 1997, 1989), and questioning and instruction (Fontana & Fernandes, 1994; Sato et al., 2005; Sullivan & Clarke, 1991; Sullivan & Liburn, 2004).

2.2.1. Activities Specific to Formative Assessment

While five learning and teaching activities specific to formative assessment have been identified, there is a general consensus, among theorists and researchers, that specifying criteria and giving feedback are the most fundamental and necessary elements of formative assessment. Specifying criteria involves identifying and making explicit the rules employed to judge the “quality” of a students’ work sample during its construction and after its submission (Crossouard & Pryor, 2008a, p. 6). The identification of the task’s criteria is one of the first actions undertaken by the teacher during formative assessment activity. The teacher ensures that the criteria are explicit and understood by the students (Dargusch, 2014; Harlen, 2007; Black, et al. 2004; Torrance & Pryor, 1998). Crossouard and Pryor (2008a) argued that a “central place is accorded to understandings of the task and quality criteria” because they determine the success of all the other steps and teacher actions in the assessment activity (p. 15).

Providing feedback is another of the most important features of formative assessment (Black & Wiliam, 2006; Hattie & Timperley, 2007; James & Pedder, 2006; Sadler, 2010; Shute, 2008). It consists of didactic moments among the classroom participants, in which the assessor intentionally draws the learner’s attention to a gap between the learner’s performance on the task and the expected performance (Sadler, 1983, 1985, 1987, 1989). Through feedback, classroom participants "engage in interactive regulation by their emphasis on the transfer to the students of the responsibility for their learning" (Harlen, 2006, p. 87). In other words, feedback draws
students’ attention to the quality of their performance and thus it facilitates improved performance on the task. Through feedback, formative assessment becomes a unified activity, because it “feeds back into the teaching-learning process” (Stobart & Gipps, 1997, p.18).

Self-assessment involves the students’ ability to make “qualitative judgments” about their own work based on the expected outcomes, whilst in peer-assessment, students are producing judgments about their peers’ work based on the criteria. These tools, self-assessment and peer-assessment, develop students “critical” discernment (Sadler, 1983, p. 65). To do this, however, students must understand “what is a good performance, their own level of performance and how to compare the two” (Sadler, 1983, p. 60).

Observation and questioning during instruction also serve a number of purposes during formative assessment activity. They provide the teacher with data on students’ present level of mastery as well as develop students’ thinking skills (Burns, 2005). As information-gathering tools, observations and questioning play an important role in discerning the students’ understanding of the task. They shed light on the students’ thinking and facilitate the teacher’s planning for the next step in learning (Crossouard & Pryor, 2008a, 2008b; Pryor & Torrance, 2001b).

2.2.2. Synthesis

Formative assessment is a collaborative activity whereby classroom participants identify and negotiate criteria, judge the quality of learners’ work samples and provide feedback intended to address gaps in the learners’ understanding. Through this process, the teacher develops mastery in her practice, as to the students in learning. During instruction, the teacher and students engage in formative assessment activity. In the classroom, teachers constantly “probe and monitor” students’ learning and provide feedback on their understandings (Noyce, 2011, p. 1). Students also engage in these actions. They judge the quality of their own as well as other students’ work samples. Through these actions, the teacher adapts instruction to address a perceived learning need and the students gain insight. One might ask, what kind of impact does this activity have? How substantial is its effect on learning? This impact-- in particular, that shown
through quantifiable data on increases in students’ academic achievement will be discussed in the next section.

2.3. Why Implement Formative Assessment?

There is an abundance of evidence-based literature, meta-syntheses, meta-analyses, and quantitative and qualitative findings, as well as discussion papers that connect formative assessment and student success. This literature proposes that implementing formative assessment activity promotes success or student academic achievement. In this literature, students’ growth and development is measured through their achievement. So, success is considered to have occurred when there is an increase in students’ academic achievement. An ERIC search revealed over 3,700 publications on the relationship between formative assessment and student achievement. This research provides evidence of the impact of formative assessment and, by doing this, it offers a rationale for teachers to adopt this activity. Some of these findings compare the achievement of students who engage in formative assessment to those who did not. Some compare the achievement of students before and after engaging in formative assessment activity. The following are a sampling of these studies.

Most of the evidence presented during the 1980s focused on the relationship between formative assessment and student achievement in general or on the impact of feedback. For example, in 1986, Fuchs and Fuchs published a meta-analysis of 21 studies on the effectiveness of formative assessment. Their study produced 96 different effect sizes. They found that providing feedback two to five times per week and making the criteria explicit had a positive impact on student learning. The impact was especially marked with those students who were identified as having a learning disability. One year later, Natriello (1987) produced a research synthesis of 90 studies on formative assessment. He also found that individualized feedback significantly increased students’ achievement. Crooks (1988) similarly concluded in a meta-synthesis that formative assessment produced in students the “skills, knowledge and attitudes that we perceive to be important” (p. 470) in society, namely self-skills of motivation, self-regulation and critical thinking. Crooks’ review consisted of 227 studies examined under three
categories: (1) The role of assessment during instruction, (2) The role of assessment in the classroom; and (3) The influence of testing on student motivation.

Crooks (1988) surmised that classroom assessment increased student achievement:

... it guides their judgment of what is important to learn, affects their motivation and self-perceptions of competence, structures their approaches to and timing of personal study (e.g., spaced practice), consolidates learning, and affects the development of enduring learning strategies and skills. It appears to be one of the most potent forces influencing education. (p. 467).

He offered more to the educator than just evidence that formative assessment increases student achievement. He also noted its utility remained untapped because of teachers' reliance on summative assessment and grading. He concluded by emphasizing the need for teacher training in the use of such formative assessment techniques as self-assessment, peer-assessment and feedback, noting that these required “careful planning and considerable investment of time” by teachers (p. 468). These were the first studies to substantiate the claims made by Bloom (1969) when he sought an intervention that would produce student achievement comparable to one-to-one tutoring. They represent the first wave of studies that validated Bloom’s claim, which was that formative assessment, as an intervention, produced students’ success.

In the 1990s, further evidence substantiating the connection between formative assessment and academic achievement was reported. It focused predominantly on the tool of feedback. Three studies in 1991, by Bangert-Drowns et al., (1991a), Bangert-Drowns et al., (1991b) and Dempster (1991), explored the relationship between testing and feedback. Bangert-Drowns et al., (1991b) found that, in general, regular testing, at least once every 15 weeks, increased students’ performance; however, the mean effect size of students who received regular feedback on their test performance was .5 standard deviations (sd) higher than those who did not receive this feedback. The authors also produced a meta-analysis of 40 studies on the utility of feedback. They concluded that “mindful” (p. 217) feedback, that is the provision of detailed feedback after testing, increased students’ achievement. The mean effect size for students who received “mindful” feedback was .58 standard deviations higher than for students whose
feedback centered on identifying the correct or the wrong answer. Similarly, Dempster (1991), in his synthesis of 60 studies, found that feedback frequency, type and placement all impacted on students’ test results. He proposed that “practice makes perfect” (p.71), so students should be provided with opportunities to review instructions and take tests. These studies present a comprehensive picture of the positive impact of feedback on students’ achievement. Although the reported extent of students’ achievement was not as great as Bloom’s (1969) results, they nevertheless provided a strong support for the use of the activity in classrooms.

Another investigation of the impact of feedback was conducted by Kluger and Denisi (1996). This study, a meta-analysis, was the first review to draw on research from both educational and work environments. The authors found over 3000 articles, on the impact of feedback on learning, covering a 90-year period. Of these, 131 were used in the synthesis. The study produced 607 effect sizes and it revealed that students who both received feedback and who knew the assessment criteria attained greater achievement in tests than students who did not. The average effect size was .41 SD. These studies in the 1990s highlighted the versatility of formative assessment to successfully increase students’ achievement. Formative assessment not only paired well with summative assessment to increase students’ achievement, but also was effective in non-educational environments. The studies added to the reputation of formative assessment as a highly effective learning intervention.

Three studies in the late 1990’s and 2000’s (Black & Wiliam,1998; Hattie & Timperley, 2007; Kingston & Nash, 2011) provided more strong evidence that formative assessment increased students’ achievement. In 1998, Black and Wiliam produced a research synthesis of formative assessment findings. Their study analyzed the results of 250 studies and concluded that formative assessment improved students’ achievement. Wiliam (2011) noted that the review by Black and Wiliam (1998) indicated that the practice of formative assessment “yielded improvements in student achievement of between .4 to .7 SD” (p.6). They found that effective formative assessment was embedded in classroom instruction, where it made evident the task criteria and the components for judging students’ tasks. It also included regular feedback to enhance students’ performance. They concluded that “firm evidence shows that formative
assessment is an essential component of classroom work and that its development can raise achievement standards” (Black & Wiliam, 1998, p. 1). This review is arguably the most cited and influential work in this area of study (Andrade & Cizek, 2010; Bennett, 2011; Elwood, 2006). Black and Wiliam produced other studies which also concluded that formative assessment improved students’ achievement. They found that it was the “increased emphasis on formative assessment that was responsible for this improvement in students’ scores” (2003, p. 631).

Hattie and Timperley’s (2007) meta-synthesis of 196 studies included several meta-analyses on the impact of feedback on students’ learning. Study results produced 7,000 effect sizes and mean effect size increase of .79 SD in student achievement for those students who received feedback. The most recent evidence provided for the link between formative assessment and an increase in students’ achievement was a meta-analysis of 300 studies conducted by Kingston and Nash (2011) in the kindergarten to Grade 12 (K-12) school system. Their investigation, an inquiry into the efficiency of formative assessment, was one of the most comprehensive studies done on formative assessment. It yielded smaller effect sizes than previously published studies. They found that formative assessment in the classroom improved student learning by an average mean effect size of .30 SD. They noted that there was great variation in the impact of formative assessment across the subject areas. English and Language Arts produced higher average mean effect sizes (sd=.32) than Mathematics (sd=.17) and Science (sd=.09). However the impact of formative assessment across grade levels remained fairly constant. The mean effect size according to school level was: elementary school (sd=.30), middle school (sd=.23) and high school (sd=.26). Kingston and Nash concluded their findings by suggesting that “research should move from looking at the efficacy of formative assessment to determination of the factors influencing the efficacy of formative assessment” (p.35).

The literature described above clearly identifies a link between formative assessment and student success when it is defined in terms of academic achievement. It presents to teachers, policy makers, researchers and educators a powerful message: formative assessment works, and it can enhance academic achievement. I recall the effect that this literature had on me. It roused in me a belief that student success was
simple and easy. All I was required to do was to implement the learning “intervention” and there would be a substantial increase in my students' test scores. I was not alone in my interpretation of this literature. Throughout the world, educational policies have encouraged teachers to integrate formative assessment into their practice as a way to improve students’ academic performance.

2.3.1. The Push to Implement Formative Assessment

Over the past several decades, formative assessment has become a notable “intervention” within the educational community. It has been touted as an activity that facilitates student success, by “chang[ing] the cultures of classrooms” to those where students feel “safe”, “confident” and ready to learn (OECD, 2005, p. 55). It has been described as an activity that places decision-making about learning in the hands of teachers and requires minimal resources and minor “tinkering” to the existing “classroom structure” (Dorn, 2010, p. 326). Throughout the world, policy makers have employed this literature as a rationale for supporting the implementation of formative assessment. The educational systems of Scotland, New Zealand, Finland, Denmark, Italy and Australia, just to name a few, have developed official policies that promote the use of formative assessment as being instrumental in students’ success. In Canada, for example, Rethinking Classroom Assessment with Purpose in Mind, an assessment guidebook published by the Western and Northern Canadian Protocol for Collaboration in Education (2006), advocated the adoption of formative assessment. This guidebook is one of five assessment documents found on the British Columbia Ministry of Education’s webpage. Such policy documents have influenced the introduction of formative assessment because teachers rely on and employ them to develop a framework for their practice.

This advocacy by policy makers, together with the empirical evidence that identified a strong link between formative assessment and students’ academic achievement, constructed a “rosy perspective” on the activity (Dorn, 2010, p. 326). Formative assessment was presented to teachers as a simple, uncomplicated “intervention” (Black & Wiliam, 1998, p. 61) that yielded significant rewards. As a
consequence, teachers across the world have adopted formative assessment in their classrooms in the hope that they would produce student success.

2.3.2. Voices From the Classroom

Research that features the voices of classroom participants and describes formative assessment activity highlights the benefits of the activity to student learning and development. For example, research conducted by the Assessment for Learning (AfL) Programme Management Group between 2002 and 2008, in over 1500 schools in Scotland, concluded that the use of formative assessment resulted in significant growth in students’ learning and development (Clark, 2010). Similarly, Black and Wiliam (2006) found that teachers were enthused by the intervention. They perceived it as a medium through which their practices could be transformed. In their report on the King’s-Medway-Oxfordshire Formative Assessment Project (KMOFAP) study, they highlighted the experience of a teacher with formative assessment. The teacher described the change in his practices:

There was a definite transition at some point, from focusing on what I was putting into the process, to what the students were contributing. It became obvious that one way to make a significant sustainable change was to get the students doing more of the thinking. I then began to search for ways to make the learning process more transparent to the students. Indeed, I now spend my time looking for ways to get students to take responsibility for their learning and at the same time making the learning more collaborative. (p. 17)

It must be noted that other research indicates that such benefits are not easily gained. As mentioned in Chapter 1, several studies found that struggle accompanied the implementation of formative assessment (Black & Wiliam, 2004; Brighton, 2003; Brookhart, 2007; Clark, 2010; Delanshere & Jones, 1999; Ecclestone, 2010; Filer, 2000; Hagstron, 2006; Kriton et al., 2007; McDowell, 2008; Munns & Woodward, 2006; Sato et al., 2005; Willis, 2007). Blanchard (2008), in his report of the Portsmouth Learning Community AfL project, indicated that teachers were excited by the positive effect that formative assessment activity had on students’ creativity, but found the activity a difficult one to enact. Similarly, at the beginning of the KMOFAP project, Black and Wiliam (2006) noted that teachers found formative assessment to be “scary” and “difficult” (p.17)
and that changes in teacher’s practices were not evident during the first year. Tiknaz and Sutton (2006), who conducted research on teachers’ implementation of formative assessment in Geography Key Stage 3\(^1\), which is equivalent to middle school in the North American educational system, found that teachers struggled with making the criteria explicit, addressing individual students’ needs, and using peer- and self-assessment effectively. The difficulty with implementing formative assessment activity is described in the research conducted by Lock and Munby (1999). The researchers collaborated with a teacher who wanted to implement formative assessment activity in his classroom. Even with the assistance of experts, the teacher found this implementation difficult.

There are an increasing number of studies, conducted mainly in the United States of America (USA) and United Kingdom (UK), that have described the practice of formative assessment as difficult to implement (Black & Wiliam, 2006; Chróinín & Cosgrave, 2013; Cowie, 2005; Elwood & Klenowski, 2002; James & Pedder, 2006; Leirhaug & MacPhail, 2015; Lock & Munby, 2000; Marshall & Drummond, 2006; Munns & Woodward, 2006; Rapetsoa & Singh, 2012; Swaffield, 2008; Tiknaz & Sutton, 2006; Viachou, 2015; Willis, 2007, 2011). As a result, researchers have begun to critically re-examine the literature. In so doing, they found methodological problems with the empirical evidence presented, as well as definitional ambiguities with the concept. These findings called into question the validity of the enthusiastic claims previously made.

2.3.3. A Re-examination of the Evidence

Shute (2008), in her review of the empirical evidence on formative assessment, described the literature as “inconsistent”, “contradictory”, and “highly variable” (p. 156). These adjectives aptly describe the some of the concerns raised with these studies. These include: some of the results reported being inconsistent with the methodology employed, some studies presenting contradictory findings and great variability in

\(^1\) Key Stage is used in the United Kingdom where the national curriculum is divided into 4 blocks or Key Stages. Students begin with the first stage in year 1 and finish stage four in year 11. At the end of each stage, students are assessed based on the learning targets in the national curriculum.
reported findings across studies. I add another issue to Shute’s list: that some studies were methodologically unsound. These problems weaken the robustness of the claims made by these studies and bring into question the link between formative assessment and academic achievement.

Black and Wiliam’s (1998a) study, arguably one of the most influential reviews on the activity, has been critiqued by Bennett (2011), Dunn and Mulvenon (2009) and Torrance (2012) for the inconsistency between the reported findings and its methodology. These researchers noted that given the variation in the studies used, the Black and Wiliam (1998) review could not be classified as a meta-analysis. In their review, Black and Wiliam (1998) noted:

> It might be seen desirable … for a review of this type to attempt a meta-analysis of the quantitative studies that have been reported… Individual quantitative studies which look at formative assessment as a whole do exist …, although the number with adequate and comparable quantitative rigor would be of the order of 20 at most. However, whilst these [studies] are rigorous within their own frameworks and purposes … the underlying differences between the studies are such that any amalgamations of their results would have little meaning. (p. 53, as cited in Bennett, 2011, p.11)

Yet, in subsequent articles on this review, Black and Wiliam provided statistical evidence for their stated improvement in student learning (Bennett, 2011; Torrance, 2012). This disconnect between methodology and study findings raises questions about the accuracy of their findings, such as how they determined an increase “in student achievement of between .04 and .07 standard deviations” (Wiliam, 2011, p. 6).

Within some individual studies, researchers have noted that results could be interpreted as contradictory and unrealistic. For example, Slavin (1987) noted inaccuracies in Bloom’s (1969) findings and proposed that he may have overestimated his study results. Slavin suggested that a more accurate estimate for the difference in standard deviations would be approximately .41. Studies were also problematic because they presented contradictory results. For example, Hattie and Temperly (2007) found that feedback had a negative impact in 37% of the studies they reviewed. Smith and Gordard’s (2005) study of the impact of feedback on students’ achievement divided students into four groups. One group received feedback and no grades, while the other groups received no feedback but grades. The study found that while the overall standard
deviation was .4, “the progress of the treatment group (formative feedback only) was substantially inferior to that of the other three groups” (Smith & Gordard, 2005, p. 21). These problems raise questions about the factors contributing to these findings.

There seems to be an inconsistency between the various mean effect sizes produced by the meta-analyses (Wiliam, 2011). Bloom’s (1968) study produced a mean effect size of 1 to 2 standard deviations, compared to the mean effect size for achievement produced by Black and Wiliam (1998), of .4 to .7 standard deviations. Hattie and Temperly (2007) reported a mean effect size of .95 standard deviations; for Kluger and Dennisi (1996) the mean effect size was .41 standard deviations; Lysakowski and Walberg (1982), in their meta-analysis of 94 studies on the impact of feedback on student’s academic achievement, produced a mean effect size of .97 standard deviations (Bennett, 2011; Dunn & Mulvenon, 2009; Torrance, 2012; Young & Kim, 2010); while Kingston and Nash (2011) reported a mean effect size of .30 standard deviations. The impact of formative assessment on student achievement thus ranged between mean effect sizes of 2 to .30 standard deviations. The evidence presented in these studies suggests that formative assessment produces gains in student achievement, however, the disparity in the mean effect sizes presented creates uncertainty as to its impact.

Some studies possessed serious methodological problems (Dunn & Mulvenon, 2009) that may have contributed to the diversity in those findings. Bennett (2011) noted that Bloom’s (1969) work used data from his PhD students' dissertations and these data were collected in non-classroom settings. In Fuchs and Fuchs’ (1986) meta-analysis 72% of the effect sizes produced were identified as fair and 23 of the studies were categorized as being “unsound” in their findings (p.4). Furthermore, Fuchs and Fuchs (1986) highlighted the list of limitations in their study, which included:

- unequivalent subject groups, unfounded experimental treatments, non-random work samples of subjects to treatments ... the use of technologically inadequate dependency measures, uncontrolled examiner expectance, unchecked fidelity treatment, the employment of inappropriate statistical unit of analysis and inadequate teacher training.

(p. 202)
Finally, Dunn and Mulvenon (2009) argued that in some studies the existence of confounding variables made it difficult to determine conclusively the role of formative assessment in student achievement. As an example, one of the studies used by Black and Wiliam (1998) was Fontana and Fernandes' (1994) research on the impact of formative assessment practices in 25 classes in Portugal. Black and Wiliam found that teachers in this study’s control group, the group that used formative assessment, had been receiving additional professional development training, and this may have had an impact on the students' performance. A more recent study by Wang (2007) found that students’ test scores increased after six formative assessment strategies were introduced to the class. However, this change was not attributed to formative assessment but rather to teachers teaching to the test. When the test was changed, students' scores fell, but as they became familiar with the new test, their scores again increased.

As a result of these problems, researchers have now suggested that the evidence presented to solidify the link between formative assessment and students’ achievement may not be as powerful as was previously stated (Bennett, 2011; Dunn & Mulvenon, 2009; Torrance, 2012; Young & Kim, 2010). In fact, the problems identified above has been identified as a possible explanation for the difficulties teachers have had and are experiencing with formative assessment. As will be shown in the next section, ambiguity in the definition of formative assessment is also rampant in this literature.

2.3.4. What is Formative Assessment? An Ambiguous Definition

Success in integrating an activity into one’s practice is predicated upon knowing what the activity is and what its key components are. Without this knowledge, one cannot achieve “the instructional benefits accompanying appropriately implemented formative assessment” (Popham, 2008, p. 9). Bennett (2011), Dunn and Mulvenon (2009), and Torrance (2012) argued that the definitions of formative assessment presented in the literature are conceptually ambiguous and lacking unanimity. One way in which this presents itself is in the terminology used to define formative assessment. Words as 'gap', 'adapt', 'modify' and 'process', which are associated with some definitions of formative assessment are difficult to quantify and to operationalize. This
adds to the confusion regarding formative assessment (Clark, 2010; Young & Kim, 2010). Young and Kim (2010) argued that the inclusion of these terms in the definition of formative assessment produces it as “fuzzy” which can cause teachers to develop “misconceptions” about the nature of the activity (Young & Kim, 2010, p. 5).

Definitional ambiguity is also apparent in efforts to identify the constitutive elements of the activity. Descriptions of them are “diverse and in key aspects they stand in contradistinction to each other” (Torrance, 2012, p. 326). Young and Kim (2010), in their review of 20 textbooks on formative assessment, found a wide range of definitions and functions for formative assessment, including but not limited to tests, instructional information, feedback. Formative assessment has also been described as planned and also as “on the fly” (Shalveson, 2003). The dissonance that seemed to inflect the greatest effect on the presentation of a compelling definition of formative assessment was between the identification of the activity as a process versus its description as an instrument. Some researchers have perceived formative assessment as a “pedagogic process” (Torrance, 2012, p. 334) whereby the teacher employs tools to judge the quality of students’ work (Bennett, 2011; Torrance, 2012). These judgments were not “scores” but rather were “qualitative” in nature (Bennett, 2011, p.6). They were used to transform the teacher’s instruction and the students’ understanding. This understanding was different from the view of formative assessment as an instrument that could be used diagnostically. When seen as an instrument, formative assessment took the form of a pre-fabricated standardized test. This view was particularly popular with test producers in North America, who labeled their productions as formative assessments (Bennett, 2011; Torrance, 2012).

The issue of process or instrument, strikes at the heart of what formative assessment is, and the consequences are distinct differences in the framing of teachers’ and students’ actions. For example, a process-oriented view of formative assessment proposes that the activity occurs throughout the learning process, with teachers and students continuously engaged in the activity. On the other hand, a view of formative assessment as an instrument means that teachers and students are engaged in formative assessment only at specific times during instruction. When the instrument is used, the difference between the two conceptions of formative assessment has been
confusing for teachers and has resulted in a hodgepodge of practices, whereby teachers moved between defining formative assessment as an instrument and as a process. Within the research community, the fallout from the different definitions has been far-reaching. Researchers such as Stiggins (2005) disliked the identification of standardized test instruments as formative assessment and wanted to distinguish formative assessment, as a process, from these assessment instruments. As a result, the Assessment Reform Group (1999), Black et al., (2004), Earl (2003), Gipps (1994), and Stiggins (2005) replaced began to use the term Assessment for Learning (AfL). The Assessment Reform Group (ARG)² defined AfL as “the process of seeking and interpreting evidence for use by learners and their teacher to decide where the learners are in their learning, where they need to go, and how best to get there” (ARG, 2002, n.d.). Torrance (2012) saw AfL as the “everyday” classroom activity that involved “observation” and teacher-student conversation (p. 25). This situation was further complicated by the lack of a common position on whether there were differences between AfL and formative assessment. Some researchers, for example those at the Centre for Educational Research and Innovation (CERI), a research group established by the OECD in the 1968, employed these terms interchangeably, while some others envisioned a distinction, describing formative assessment as an umbrella concept under which AfL is situated.

Further examination into the nature of formative assessment reveals that those researchers who defined formative assessment as a process seemed to lack a unified stance on what was included in this process (Bennett, 2011; Torrance, 2012). I illustrate this lack of uniformity by comparing the definitions of four of the most prolific proponents of formative assessment. Black and Wiliam (1998) proposed that formative assessment included all activities employed by the teacher to gather information that would be used to address deficiencies in student learning. On the other hand, Shepard (2005) identified formative assessment as those activities that “occurred during the instructional process for the purpose of improving learning” (p. 5). These two definitions were quite broad when compared to those proposed by Bloom (1968) and Popham (2008). Bloom (1968)²

² The Assessment Reform Group was founded in 1989. It consisted of a several prominent assessment researchers. Its was to establish a strong link between policy and research.
limited formative assessment to include only feedback-related activities and activities that corrected students’ misconceptions of the task. Popham (2008) defined it as those assessment activities that gathered “evidence to adjust ongoing learning and instruction” (Dunn & Mulvenon, 2009, p. 2). These differences in the definition of formative assessment have been problematic for teachers and have had serious implications for the ability of the activity of formative assessment to facilitate student success. Bennett (2011) submitted:

If we can’t clearly define an innovation, we can’t meaningfully document its effectiveness. Part of that documentation needs to be an evaluation of whether the formative assessment was implemented as intended, which we cannot accomplish if we don’t know what was supposed to be implemented. (p. 8)

2.3.5. Synthesis

The literature has described formative assessment as a highly effective intervention; one that increased students’ academic achievement. The empirical studies that provided evidence of these increases identified the impact of formative assessment as ranging between mean effect sizes of .30 to 2 standard deviations. This literature is used, by policy makers and teachers, as a rationale for the implementation of formative assessment in classrooms. Early literature presented formative assessment as an uncomplicated and simple activity, one that was easy to implement in the classroom. Yet, studies from the classroom indicated that it was a difficult activity and that teachers were struggling with it. As a way to address these difficulties, researchers have critically re-examined the literature on formative assessment. They have identified two main sources of this struggle - methodological problems in the empirical evidence, and a lack of ambiguity in the definition of formative assessment. A third source is the nature of the activity itself. Researchers have thus shifted their attention to the practice of formative assessment in classrooms by adopting a different approach (Beckett, Volante, & Drake, 2010; Black & Wiliam, 2006; Willis, 2007). This research offered rich and thick description of formative assessment which aided teachers and researchers “to understand the dynamics” of the activity (McMillan, 2013, p. 12). This research will be examined in the next section.
2.4. Formative Assessment in the Classroom

Research on a description of formative assessment practices was guided by three assumptions. First, the literature was guided by an understanding of formative assessment as a process of co-construction between teacher and student. It involved the use of assessment activity to discern and address any conceptual deficiencies in the learner’s understanding. Second, it did not seek to establish a connection between the activity and academic achievement, rather it assumed that formative assessment is a necessary and powerful feature of teaching and learning. That position was necessary because “assessment is always formative, it will always impact on students and have a central place in what and how students learn” (Torrance, 2012, p. 334) and it is powerful because it “probes to the heart of what education is about: it allows educators to explore how students’ understanding and knowledge changes in response to what teachers do” (Noyce, 2011, p. 10). Third, it held that formative assessment, like acts of teaching and learning, is complex and complicated. It proposed that the only way to understand this complication is to document it. As a result, researchers such as Crossouard and Pryor (2008a, 2008b), Gipps (1999), Lock and Munby (2000), Lund (2008), Marshall and Drummond (2006), Shepard (2005), Torrance and Pryor (1998), and Willis (2007) have sought to understand formative assessment by investigating the enactment of the activity. Their studies sought to describe its connection to learning, and how it functioned in the classroom. A large majority of these studies described formative assessment activity within the USA and UK educational systems. They investigated the difficulties as well as successes associated with the activity. The intention of this research was to produce an authentic picture of the practice. In this section, I explore the literature that examined the practice of formative assessment as a central and powerful feature of learning that is complex and difficult to practice. The literature examined formative assessment as a product of its environment, the tools used during the activity and the people who engaged in it.

2.4.1. Formative Assessment and the Context

The wider sociocultural context is powerful in shaping children’s spoken and written responses, the manner of their presentation and the level of social and emotional involvement in the task. Classroom responses are
embedded in and conditioned by gender, ethnicity and social class ... meanings are located in multiple contexts beyond the immediacy of assessment situations. Home, peers and community are ever-present evaluative and relational context within which children locate their response to classroom and shape and communicate their developing sense of self. (Filer & Pollard, 2000, p. 154)

In the above statement, Torrance and Pryor emphasized the role of the macro and micro context in shaping formative assessment activity. They argued that the enactment of the activity does not occur in a context-free classroom. Rather, the activity is determined by the social, historical and cultural context within which it is situated (Crossouard & Pryor, 2010; Elwood et al., 2006; Lund, 2008; Turnstall, 2003). In this section, I examine studies that highlight the role the context plays in shaping formative assessment activity. In particular, I focus on the impact of national policy, subject matter, pedagogical knowledge, and classroom participants’ beliefs on the practice of formative assessment.

**Educational policy**

Educational policies are “statements about practice - the way things could or should be - which rest upon, derive from statements about the world” (Daugherty & Ecclestone, 2006, p. 150). Policy documents are cultural documents because they reflect and make evident, to classroom participants, the needs of a particular society, and in so doing, tailor classroom practice so that it becomes relevant (Filer, 2000). A case in point is the policy on formative assessment in New Zealand, which is based on the Māori principles of decision-making and collaboration (Drummond, 2008; OCED, 2005). However, formative assessment policy is not the only assessment policy that guides classroom participants’ actions. As a consequence, classroom participants face a difficult task of juggling and meeting the demands of various and sometimes contradictory assessment policies. Studies, mainly from the USA and UK, suggest that both teachers and students have responded to the dissonance between educational policies by aligning their actions with “societal accreditation” or meeting accountability requirements rather than formative assessment mandates (Ramesal, 2011, p. 480).

Delanshere and Jones’ (1998) study describes the impact of policy on formative assessment activity of three Mathematics teachers in the US. They found that the
teachers experienced a “paralysis” from not knowing how to respond to formative assessment reform and at the same time trying to meet the requirements of reform aimed at accountability (p. 225). Their responses were powerful. These policies resulted in the modification of formative assessment practices to align the activity to accountability measures. Tunstall (2001) found, in her study on infant or kindergarten teachers’ use of formative assessment feedback in England, that the outcome-based curriculum influenced teachers’ practices of formative assessment. It produced in them a desire to ensure that students achieved the standard expected and, as a result, their feedback was limited to directing students towards the correct answer. Students also responded in similar ways. Goika (2009), Khan (2000), Ramesal (2011) and Rea-Dickins (2007) found that students also opted to meet accountability measures over engaging with formative assessment.

**Pedagogical knowledge**

Pedagogical knowledge has also been identified as a context factor that shapes teachers’ and students’ formative assessment activity (Buck & Trauth-Nare, 2009; Feldman & Capobianco, 2008; Jones, & Moreland, 2005; McMillan, 2003). This factor, though vital to the activity of formative assessment, is perhaps one of its more under-emphasized components. Formative assessment requires that participants make thousands of “qualitative judgments” on the quality of students’ work and provide feedback that will mediate their learning (Sadler, 2010). To do this, the teacher must possess pedagogical expertise (Bennett, 2011; Dargusch 2014). Competence with questioning, feedback and constructing criteria have been linked to building confidence in learners and motivating them (Nolen, 2011; Nolen et al., 2011; Yin et al., 2008), as well as fostering reflection and metacognitive development (Marshall & Drummond, 2006; Perrenound, 1998; Resnick, 1991; Rust et al., 2005). Studies by Aschbacher and Alonzo (2004), Falk (2012) and Wilson (2008) identify the teachers’ knowledge of assessment, teaching and learning as being key factors in their successful use of formative assessment. Unfortunately, the literature also reports that, in general, many teachers do not possess pedagogical competency, especially with assessment. They cannot define formative assessment with certainty and as a result are unable to identify the features of formative assessment or the theories that frame its practice (Black & Wiliam, 2010; Cowan, 2009; James et al. 2007; Stobart, 2008; Vlachou, 2015).
Neemson’s (2000) in a study of 380 teachers’ perceptions of formative assessment, found that teachers did not have a clear conception of formative assessment. This lack of clarity impacted on their practice, in that they assumed that they were implementing formative assessment in their classroom but really were not. The tasks they constructed were used to measure, not facilitate, students’ learning (Macintyre et al., 2007). Many of those teachers who do possess an understanding of the nature of formative assessment lack the expertise to integrate it into instruction (Brown, 2004; Buck & Trauth-Nare, 2009; Feldman & Capobianco, 2008; Jones & Moreland, 2005; McMillan, 2003).

**Discipline knowledge and subject matter**

The literature suggests that subject knowledge, its organization, intended outcomes, and progression for learning determine the assessment tools used and the actions of the teacher and students (Carr et al., 2000; Coffey et al., 2011; Feldman & Capobianco, 2008; Gearhart et al, 2006). The literature has identified teachers’ expertise in the subject area as a necessary condition to mediate student success (Buck & Trauth-Nare, 2009; Carr et al., 2000; Feldman & Capobianco, 2008; Jones, & Moreland, 2005;). This fact has gone widely unrecognized by the proponents of formative assessment (Coffey et al., 2011). Instead, many researchers emphasize pedagogical content over subject knowledge. This robs formative assessment activity of its requisite “disciplinary substance” (p.1106). Bennett (2012) has argued that formative assessment activity can only produce success if there is a “balance” between the teacher’s pedagogical skill and her subject discipline knowledge (p. 18). In fact, pedagogical knowledge is shaped by the subject discipline within which it is practiced (Bennett, 2011; Gallavan & Kottler, 2012; Grossman & Stodolsky, 1995; Harrison, 2005).

There is research on formative assessment activity in the subject areas of Science (e.g., Aschbacher & Alonzo, 2006; Ash & Levitt, 2003; Bell & Cowie, 2001; Black & Harrison, 2004; Buck & Trauth-Nare, 2009; Cowie, 2005; Coffey, et al. 2011; Furtak & Ruiz-Primo, 2008; Harlen, 2010, Roth, 1998; Ruiz-Primo & Furtak, 2006; Sato et al., 2005), Mathematics (e.g., Delandshere & Jones, 1999; Fontana & Fernandes, 1994; Hodgen, 2007; Hodgen & Marshall, 2005; Li et al., 2011; Martinez et al., 2009; Morgan et al., 2002; Morgan & Watson, 2002; Ohlsen, 2007; Panizzon & Pegg, 2007; Parke & Lane, 2008), and English (e.g., Burner, 2014; Dargusch, 2014; Kahn, 2000;
Marshall, 2007; Mustafa, 2012; Rea-Dickins, 2001; Spencer-Waterman, 2013; Wyatt-Smith & Castleton, 2005). However, the subject area of Social Studies has been identified as a “noticeably underdeveloped” area of research (Torrez & Claunch-Lebsack, 2014, p. 486). In fact, Torrez and Claunch-Lebsack (2014) described the current research within this subject area as “nibbling at the edges of a much needed body of research”.

The discipline of Social Studies is an “integration of the Social Sciences and the Humanities” and includes a wide range of subject disciplines including Philosophy (Torrez & Claunch-Lebsack, 2013, p. 461). The purpose of this subject area is to develop learners' metacognitive skills so that their decision-making reflects critical thinking and civic responsibility. Empirical evidence on the practice of formative assessment within this subject area is inadequate (Torrez & Claunch-Lebsack, 2013), as there are few studies that describe how formative assessment unfolds in the Social Studies classroom (Cuban, 1991). The evidence of the practice of formative assessment within Social Studies reveals that while standardized testing influences classroom assessment practices, particularly the teachers' use of multiple choice tests (Breakstone et al., 2013; Grant, 2006; Torrez, & Claunch-Lebsack, 2014), informal formative assessment, in the form of discussions, is also employed (Grant, & Salinas, 2008; Torrez & Claunch-Lebsack, 2013). In Social Studies classrooms, students perceive hard work and internalizing teacher knowledge as criteria for success (Brookhart & Durkin, 2003). Given the multidisciplinary nature of Social Studies and the dearth of empirical evidence within this field, greater evidence is needed on the practice of formative assessment within Social Studies (Torrez & Claunch-Lebsack, 2013, p. 486).

**Classroom participants’ beliefs**

Beliefs are an individual's “sense-makers.” They are accepted truths that an individual is committed to and employs to guide her behaviours and actions (Borg, 2000). These truths are cultural and social norms, theories, and rules that the individual has appropriated and employs to frame her actions and relationships. The literature identifies belief systems as key determinants in the practice of formative assessment. Beliefs about learning are linked to the learning theories that teachers draw on to conceptualize and enact their practice (Dixon et al., 2011; Gipps, 1999; Lumadi, 2013;
Shepard, 2005; Willis 2007). A teacher’s belief system is comprised of a variety of truths which are ordered in terms of importance. This hierarchy has “constrained” teachers’ formative assessment practices (Lock & Munby, 2000, p. 9). Some beliefs are amalgamations, new beliefs “assimilated into older ones” (Khan, 2000, p. 284). The result is that some teachers’ formative assessment practices are a patchwork of actions. Teachers’ beliefs about learners’ ability, relate to the learners’ gender and socioeconomic status also influence their actions. These beliefs have implications for the teacher-student relationship during formative assessment activity. Brighton’s (2003) study of 48 middle school teachers, described this. His findings indicated that teachers altered the level of difficulty of the assessment task given to students of lower socioeconomic status because they believed that these students could not successfully complete difficult tasks. Similarly, Munns and Woodward (2006) found that teachers’ formative assessment feedback contained messages which legitimized the status quo and dismissed the experiences of students of lower socioeconomic status. This legitimacy occurred in a number ways, including controlling students' access to knowledge, determining their ability, regulating their learning space, deciding whose ideas were important, and also when or if students would be allowed to voice their ideas. Filer and Pollard’s (2000) longitudinal ethnography of teacher practices at Stage 1 in an elementary school\(^3\) illustrated how teachers’ beliefs about gender determined their actions during formative assessment activity. They described the experiences of the teacher and her student, Elizabeth, during feedback. The teacher’s use of words, such as “not a nice girl,” to describe Elizabeth’s actions. Furthermore, the teacher used a system of rewards, where she provided a pin that said “best worker” when Elizabeth completed the test (p. 45). These actions served to legitimize and reproduce gender norms. They noted that the feedback was “embedded in and conducted by gender, ethnicity and social class” of the students (p. 154). The teacher’s beliefs about learning can, therefore, make formative assessment “vulnerable to bias and distortion” (p. 156).

Similar to teachers, students’ cultural, social and historical context also fashioned formative assessment activity (McDowell, 2008; Smith & Gordard, 2005; Tunstall, 2002). Students also perceived assessment as a measure of student learning that categorized

\(^3\)Key Stage 1 is equivalent to Grades 5 and 6 in the North American educational system.
students’ according to their ability. Their actions during assessment were competitive where achieving high grades was the main purpose for completing work samples. Furthermore, they perceived that a teacher-directed environment was the best medium through which high grades could be attained (Gipps, 2007; Shepard, 2005; Wells 2011). The teachers’ and learners beliefs’ thus strongly influenced their actions in the classroom (Marshall & Drummond, 2006; McMillan, 2007; Nias, 1987).

Locale of studies

As previously mentioned, the majority of studies on the practice of formative assessment have been conducted within the US and UK and as such, they describe the activity of formative assessment within these contexts. There are some studies conducted on the activity of formative assessment within Canada, but this body is not extensive. Research on formative assessment in secondary schools in Canada has explored the practice in Canada as a whole (OCED, 2005; Peterson & McClay, 2014; Sliwka et al., 2005), and it has also been done in specific provincial contexts, such as within Ontario (Beckett et al., 2010; Cooper & Wakeman-Jones, 2000; Drake & Reid, 2010; Earl & Katz, 2000; Schmidt & Plue, 2000; Sliwka et al., 2005), Alberta (Bennett, 2014; Currie, 2005; Dassa et al., 1993; Lock & Munby, 2000; Normore, 2004) Saskatchewan (Davis, 2015, 2014; Noonan & Yackulic, 1995), Quebec (Godbout & Richard, 2000; Morrissette, 2011), Manitoba (Daniels, 2005) and British Columbia (Muncer, 2006; Roth, 1998; Taylor, 1992). Formative assessment is considered a “key component of student learning” yet there are few studies that explore this practice in a Canadian context (OECD, 2005, p. 12).

Summary

These context factors bring to the fore the other elements involved in teaching and learning. Learning is determined by the needs of society, brought into the classroom through policy, and influenced by theories of learning and subject matter as well as the individual beliefs of teacher and students. Highlighting the role that these factors play in formative assessment adds to the “map” and brings new understandings to the activity’s complexity. As Filer (2000) argued, formative assessment does not occur within a vacuum; it occurs within and is shaped by the context.
2.4.2. Formative Assessment Activity and Mediating with Tools

Formative assessment is also characterized by the use of cultural tools to mediate the subject’s interaction with the object of the activity, or its problem space (Hagstrom, 2000; Wells & Claxton, 2002). Vygotsky (1978) defined a tool as the:

conductor of human influence on the object of activity; it is externally oriented; it must lead to changes in the object of activity. It is the means by which human external activity is aimed at mastering and triumphing over nature” (p. 55).

Tools which mediate the subject’s interaction with the object are dynamic by nature. They assume a variety of forms, including persons, material tools and psychological tools (Kozulin, 2001). Tools possess a history, which can hinder or facilitate the mediation process (Rust et al., 2005). Ultimately, tools employed during formative assessment activity play a significant role in the transformation of the learner’s higher psychological functions (Hagstrom, 2000). In this section, I highlight the utility, as well as the challenges, of specific formative assessment tools for mediating learning and development.

The tool of assessment criteria

The literature underscores the importance of learners understanding the criteria to successfully engaging in formative assessment activity (Crossouard & Pryor, 2008a, 2008b, 2008c; Elwood, 2002; Sadler, 1989). In other words, making criteria explicit so students are aware of the rules governing the task is a central feature of formative assessment (Sadler, 1983, 1985, 1987, 1989). There seems to be a link between this formative assessment tool and students’ development of self-monitoring skills (Brookheart, 2001), their learning success (Black, et al., 2004; Crisp, 2013; Harlen, 2007), and the successful completion of the task (Black, et al. 2004; Brookheart, 2001; Dargusch, 2014; Harlen, 2007; Torrance & Pryor, 1998). Kirton et al. (2007) found a positive correlation between students’ knowledge of assessment criteria and their success at the task, and they argued that an understanding of assessment criteria resulted in pupils “taking more responsibility for their learning, contributing to improved motivation, confidence and classroom achievement” (p. 605). This was possible because
comprehending the criteria facilitated students’ evaluation of their performance on the task (Harlen & James, 1997, p. 372).

The literature highlights the challenges teachers face in making the criteria explicit to students, which indicate a "hurdle" that many teachers and students cannot cross (Elwood, 2002, p. 255). The difficulty in understanding the criteria stems from “fuzzy” or “abstract” language (Sadler, 1983, 1985, 1987, 1989, 2010), and from the dynamic and open nature of criteria. Criteria are constructed through constant negotiation between the teacher and the students and as a result are never static or fixed (Crossouard & Pryor, 2008a; Wyatt-Smith & Klenowski, 2013).

Sadler (1989) noted that fuzzy criteria can result in misinterpretations. For example, the meaning of the 'criterion of originality' is flexible. It varies depending on the context within which it is employed. This is particularly evident in Social Studies, where content knowledge can be abstract and subject to different interpretations (Klenowski & Wyatt-Smith, 2010; Marshall, 2007). Assessment criteria also reflect the academic requirements of the task and the goals of the educational organization within which the task is completed, as well as the personal and professional beliefs of the teacher and students. The multiple voices that constitute criteria can produce them as complex and ambiguous and can cause difficulty for students to understand the requirements of the assessment task (Crisp, 2013; Dargusch, 2014; Klenowski, 2013; Wyatt-Smith & Castleton 2005).

The teacher’s role is one of a mediator. He ensures that the criteria are explicit and understood by the students (Dargusch, 2014; Black, et al., 2004; Harlen, 2007; Torrance & Pryor, 1998). However, this task can prove to be difficult as some teachers lack the requisite assessment literacy to understand the criteria (Crisp, 2013; Klenowski, 2013). So, they "interpret and mediate assessment criteria and standards making the original criteria and standards inaccessible to their students" (Dargusch, 2014, p.194). As designers, teachers may construct criteria narrowly, making them too specific, and in so doing, they provide the students with no room to negotiate and interpret the criteria which important to the development of students’ metacognitive skills (Crossouard & Pryor, 2008a). A lack of assessment literacy can also result in teachers “teaching to the
rubric instead of using the criteria as a tool to mediate students' learning” (Elwood, 2002, p. 252).

**The tool of feedback**

Feedback is “the information about the gaps between the actual level and the reference level of a system parameter which is used to alter the gap in some way” (Ramaprasad, 1983, p. 4, cited in Sadler, 1989, p. 120). It involves a three-step process: (1) the student understanding the criteria; (2) the teacher comparing the student performance to the criteria; and (3) the teacher discussing with the student the ways in which she can improve her or his work so that it meets the criteria (Sadler, 1989).

Feedback motivates students to engage in the activity (Bruno & Santos, 2010; Juwah et al., 2004; McGarrell & Verbeem, 2007), improves the quality of students’ performance (Black & Wiliam, 2006; Hattie & Timperley, 2007; Sadler, 2010; Shute, 2008), and contributes to the development of students' sense of self-regulation (Black & Wiliam, 2006; Brookheart, Moss, & Long, 2009; Hattie & Timperley, 2007). Black and Wiliam (2004) noted that the benefits of feedback extended beyond the task. In their study involving 48 secondary school teachers, they found that feedback guided students to the next step in their learning.

Feedback involves a co-constructing process whereby the teacher and students dialogue with each other (Daniels et al. 2013; Elwood, 2002). This co-construct leads to student empowerment (Black & Wiliam, 2006; Daniels, et al. 2013), which moves students towards an equal partnership in the construction of knowledge (Ash & Levitt, 2003; Lund, 2009; Sadler, 2010). Daniels et al. (2013) posited that feedback transforms the classroom into a “community of practice, in the process of establishing its shared repertoire and processes of mutual engagement within its joint enterprise” (p. 160).

The co-constructing process can be limited by the traditional division of labour, between the teacher and student, during assessment activity (Crossouard & Pryor, 2008a, 2008b). Torrance and Pryor (1998), in their investigation of formative assessment practices of teachers in an infant or kindergarten classrooms, found that feedback served to reproduce and legitimize the teacher’s power in the classroom.
Crossouard and Pryor’s (2008b) study of the implementation of formative assessment in a doctoral research methods course produced similar findings. The tutor used feedback to “position himself authoritatively” over students by prescribing ways of learning to them (p. 228). Dominating the conversation is another way that teachers maintain their power in the classroom. Hodgen (2007), in his study of 20 secondary school Mathematics teachers, found that feedback produced a division of labour where teachers dominated the talk. He noted that this was attributed to the low-level questions asked by teachers during the feedback sessions, which were directed at knowledge responses. Students’ motives also played an important role in determining the utility of feedback. Bell and Cowie (2001) found that students who were driven by a desire to learn saw feedback as useful, while students who were driven by social motives, for example maintaining their status in their peer group, and as a result, they did not apply the feedback they received.

*The tools of peer-assessment and self-assessment*

The literature identifies a link between assessment tools, peer- and self-assessment, and the development of students’ autonomy, motivation, and self-regulation (Black & Wiliam, 2006; Earl & Katz, 2008; Popham, 2008). Students who used these tools during assessment activity were found to have a better understanding of assessment criteria, ability to identify gaps in their knowledge and excitement about learning. Sadler (1985) argued that self-assessment helped to produce students’ success in a task, because success required that they not only “rely upon evaluative judgments made by their teachers” but also on their own (p. 143). Fernandes and Fontana (1996) found that students who were trained to evaluate their performance understood the nature of their success. They concluded that “children operating self-assessment techniques become less inclined to attribute outcomes to luck, and are better able to identify the real causes of the academic events that happen around them” (p. 309). Black (2010) saw a mutually beneficial relationship between peer-assessment and self-assessment, as the former prepared students to engage in the latter. This was not the only benefit of peer-assessment. It also improved students’ thinking (Mercer & Dawes, 2004), performance on assessment tasks (Black, et al., 2003), and self-regulation (Topping, 2010).
Though beneficial to students’ learning, research indicates that teachers rarely employed these tools in their classrooms because they felt that students were too inexperienced to use them competently. Teachers especially felt this way about those students with a low socioeconomic status (Browne & Harris, 2013; Tiknaz & Sutton, 2006; Toppin, 2013). Students also questioned their own competence and that of their peers with these tools, indicating that they preferred to be assessed by an adult rather than to engage in self- or peer-assessment (Browne & Harris, 2013).

**Summary**

Twenty-first century educational goals centre on the creation of a learner who is not only motivated to learn but is also a critical thinker, an autonomous and self-regulated learner. The specific formative assessment tools of criteria, feedback, and peer- and self-assessment mediate such learning and development in students. These tools are especially beneficial in the subject area of Social Studies, where the learning progressions are not always linear. The ability of these tools to transform learners is affected by the social nature of the classroom. Peer groups, multicultural differences, pre-existing teacher/students relationships, ambiguity of language, the extent of teachers’ assessment literacy and teachers’ beliefs about learners have determined the teacher’s and students’ actions. Tools and their users possess a history that shapes the ways in which they are used during formative assessment activity, as well as the nature of student learning. Next, I explore the people involved in formative assessment, and describe their roles during the activity.

2.4.3. Understanding the Teacher-Student Relationship

Formative assessment is a relational activity that materializes in the zone of proximal development (ZPD). The ZPD, a concept advanced by Vygotsky (1978), is “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more intelligent peers” (p. 86). In it, the learner’s competence at a task is transformed, as he transitions from requiring assistance in the completion of a task to successfully completing the task independently, as a result of working with an experienced collaborator (Tharp & Gallimore, 1991).
The ZPD provides a space for the co-construction of knowledge that is mutually beneficial to the teacher and student. The learner develops mastery by working with an expert, and the expert, while assisting the learner, gains expertise in teaching. Both the learner and the expert are transformed (Ash & Levitt, 2003). This development is relational and involves the expert appropriating the learner’s understanding of the task. Through interaction during activity, the teacher appropriates the student’s understanding of a particular task and uses her expertise to assess it. Based on this assessment, the teacher provides the student with tools to mediate his or her development, and the student then appropriates the new understandings provided by the teacher (Moschkovish, 1989, cited in Ash & Levitt, 2003). Newman, et al. (1989) described this process as a joint appropriation:

Just as the children do not have to know the full cultural analysis of a tool to begin using it, the teacher does not have to have a complete analysis of the children’s understanding of the situation to start using their actions in the larger system. Children’s actions can function within two different understandings of the significance of the task: the child’s and the teacher’s. (p. 63-6)

Formative assessment therefore involves classroom participants using tools to mediate the object of the activity within the ZPD. The result of such an activity is student and teacher learning. It is a co-constructing process where the teacher provides “appropriate support” in the form of feedback and/or adapts instruction to develop the student’s mastery. The student appropriates the teacher’s support and revisits the assignment (Torrance & Pryor, 1998, p. 9). From this description, one can ascertain that the practice of formative assessment is a contextual and negotiated one.

The literature identifies teacher-student relationships as also shaping the nature of learning and development in the classroom. Crossouard and Pryor (2008a, 2008b), explored classroom participants’ roles during assessment and the power associated with these roles. They noted that the teacher’s role as an assessor reproduced the traditional vertical relationship between the teacher and the student. In this role, the teacher employed tools to establish and legitimize his authority over students (Crossouard & Pryor, 2008a, 2008b; Gipps, 2002; Shepard, 2005). The teacher also drew on classroom culture for his or her authority, in particular, the norms and rules that traditionally established teacher and students’ behaviours and expectations (Gallego & Cole, 2001,
Newman et al., 1989). The classroom culture thus not only legitimizes the teacher's power; it also governs their actions. Derrick et al., (2008) felt that formative assessment required a transformation in the culture of the classroom, but this transformation was difficult for both the teacher and the students because it required them to rethink the way that they have come to understand school and the expectations that they have had about their role in learning. The literature suggests that both teachers and students resist altering classroom culture. Changing the verticalness of pre-existing power relationships is difficult for the teacher, while for students, giving up their understanding of learning as a competition among students is equally challenging (Orr, 2010).

The assumption of a learner’s identity by the teacher also makes the activity into a collaborative endeavour, where, through joint appropriation by teacher and student, the student develops as a learner and the teacher’s practice is transformed. As a learner collaborating with the student, the teacher’s role is one of interacting through “the use of clarifying and metacognitive elicitation, focused critique involving explicit discussion of criteria, the discussion of and modeling of self-monitoring and careful ‘intervention’ to promote learning goals” (Torrance & Pryor, 2001, p.16). To effect this, the teacher must be intentional in her practices and think about learning. This involves establishing clear rules, involving students in the learning process, employing students’ experiences and using questioning appropriately (Miller, 1994). The student’s role also involves reconstruction. He or she becomes actively involved in her learning (Moschkovich, 2004). In her study, Moschkovich (2004) found that teacher-student collaboration transformed the student’s role so that the students were co-constructors of knowledge. She concluded that through appropriation, students employ “meanings, actions, or goals for their own purposes and are actively involved in appropriation by transforming what they appropriate” (p.51). Within the teacher-student dyad, the student’s potential to transform into a co-author is, however, limited by the teacher’s role as an assessor (Crossouard & Pryor, 2008b). It is also limited by students’ goals, which may be social, such as maintaining friendships, rather than educational (Cowie, 2005; Gipps, 2007, Wells, 2011). Lund (2008), in his study of 56 students preparing for an oral examination, noted the potential of peer-assessment to create ZPD’s within which students engage in co-construction. He highlighted the impact of the context in shaping student actions, including students’ individual motives, national standards and criteria, and the goals of
collective assessment. Ash and Levitt (2003) also studied teacher-student collaboration. They found that collaboration led teachers to reflect upon the tools used to mediate learning. In their study, the tool investigated was questioning. As a result of this self-reflection, teachers improved their expertise in using questions. With this in mind, Ash and Levitt (2003) stated that:

Doing formative assessment allows teachers to reflect critically on their own understanding of inquiry, as well as to reflect on their own practice, as part of a unit of mutual growth. This feedback loop of teacher and learner change propels each forward with mutual appropriation of knowledge serving to improve the practice of both the expert and the learner simultaneously. (p. 22)

The ZPD as a space to enact formative assessment activities offers possibilities for learning. Using this space in such a manner, however, requires that teachers and students have time to plan, a resource that is scarce in the classroom (Leirhaug & MacPhail, 2015). This is especially critical in differentiated learning environments, where many ZPDs are required to accommodate the individual needs of learners as well as cultural differences found in the classroom (Cowie, 2005; Rapetsoa & Singh, 2012; Swaffield, 2009).

As a space, the ZPD offers much more than the development of students’ mastery and the teacher’s practice. It provides room for the transformation of the teacher-student relationship from one where the teacher as an assessor wields significant power over the students, to another where the teacher and students are collaborators in their development. It is within the ZPD that assessment becomes an activity that is done with the learner. How this occurs within the various ZPDs reflects the teacher-student relationship as well as the context within which the activity is enacted.

2.4.4. Addressing the Challenges of Formative Assessment

The previous sections described both the possibilities and problems associated with the practice of formative assessment. As a pedagogical activity, formative assessment can and has positively impacted on students’ development, both academically and cognitively. However, these gains have not been easily secured (Gipps, 2002; Shepard, 2005). Researchers have identified formative assessment as a
“difficult” activity (Williams, 2011, p. 6), one where success is not always guaranteed (Ecclestone, 2002; Klenowski, 2009; Marshall & Drummond, 2006, Torrance, 2012). Given the possibilities as well as the problems associated with formative assessment, policymakers and researchers have produced an extensive resource base on the practice of the activity. Their intent was to assist teachers successful enactment of formative assessment by providing them guides and strategies for its implementation.

Professional development

Buck and Trauth-Nare (2009) noted the utility of in-service professional development to build upon teachers’ existing understanding of formative assessment. This involves a variety of activities and techniques ranging from the production and dissemination of manuals and books on formative assessment to engagement in collaborative research between teachers and researchers. Some of the approaches have proven to be insufficient to produce the kind of competence required to mediate students’ learning. For example, some guidebooks and workshops have been critiqued for providing teachers with “quick fixes” (Elwood, 2002, p. 226). They paint a picture of the activity as involving simple easy teacher-directed strategies. This disregards the complex and co-constructed nature of the activity (Marshall et al., 2007; Vlachou, 2015; Willis 2011). Marshall and Drummond (2006), in their study, discussed the implication of such approaches. They found that these approaches led teachers to adopt the “letter” of the activity or “the procedures in place … sticking to the letter of a particular rule” (p. 139). This robbed the activity of its broader purpose, or its “spirit” and limited its adaptability within the dynamic nature of the classroom (139). Furthermore, these approaches failed to address the contextual as well as the relational nature of the activity (Vlachou, 2015). Researchers such as Buck and Trauth-Nare (2009), Dixon, Hawe and Parr (2011) and Vlachou (2015) have argued for in-service professional development that educates teachers on the big picture of the activity, engages them in dialogue about the ways that their beliefs, motives and actions shape their practices, and teaches them how to engage critically in deconstructing formative assessment activity with their students.

As a solution to the difficulty that teachers experience with implementing formative assessment, researchers have engaged in action research where they
collaborate with teachers to build their expertise. Their goals have been two-fold: to gather data on the practice of formative assessment, so that theory is informed by practice (Willis, 2007), and to change teachers’ practices by deconstructing formative assessment activity and critically discussing the norms behind their practices (Lock & Munby, 2002; Torrance & Pryor, 2000). Ash and Levitt (2003), Bell and Cowie (2001), Black and Wiliam (2004), Cowan (2009), Crossouard and Pryor (2008b), Crossouard (2009), Feldman and Capobianco (2008), Gearhart et al, (2006), Lock and Munby (2002), Sato (2003), Swaffield (2009), and Torrance and Pryor (2001) are among those who conducted such collaborative research. Many of their studies have been conducted in the subject of Science. They “encouraged them (teachers) to participate in learning communities and to think and reflect on ideas and practices” (Vlachou, 2015, p. 104). It is important to note that becoming involved in this kind of collaboration is not the experience of the average teacher. As mentioned in Chapter 1, for most teachers and students, engaging with formative assessment is an activity done with little assistance from experts. For me, this raises an important question: 'What do the practices of teachers who are engaged independently in formative assessment activity look like?

2.4.5. Synthesis

The research suggests that formative assessment is a powerful activity, one that is central to teachers’ and students’ learning and development (Black & Wiliam, 1998, 2004, 2006; Brookheart, 2007; Cizek, 2010; Clark, 2010; Filer & Pollard, 2000; Torrance & Pryor, 1998). It offers classroom participants a path to mastery, be it at a task or at the practice of teaching. The literature presented highlights the practice of formative assessment, its possibilities as well as its challenges. Explorations of the practice of formative assessment have revealed that assessment-specific tools have the potential to determine classroom participants' development. They have been linked to the development of students’ self-regulation, metacognitive thinking, and autonomy. Formative assessment has the potential to establish new relationships in the classroom, where the teacher and student collaborate to construct knowledge. However, the literature also points to the complexity and the dynamism of the activity. This complexity is not just derived from the context, teacher pedagogical knowledge, policy mandates, subject matter, and teachers’ and students’ belief systems, which have a powerful
impact on determining the shape of formative assessment, but also from the relationships in the classroom.

Spending time in the classroom reveals more and more about formative assessment activity. This underscores the need for further investigation on the practice of formative assessment (Bell & Cowie, 2001; Gipps, 2002; Crossouard & Pryor, 2010; Stiggins, 2007; Willis, 2009). McMillan (2013) in an article entitled “Why We Need Research on Classroom Assessment,” advanced that “we are only beginning to map and understand the dynamics of formative assessment” (p.12), and he proposed the need for a “comprehensive” study into the practice (p.12). Researchers have acknowledged that due to the complexity of formative assessment, research that examines the practice comprehensively is difficult to undertake, analyze and describe. In the next section, I present activity theory as a theoretical framework for understanding formative assessment as an activity that is embedded within a context, mediated by tools and relational.

2.5. Activity Theory as the Conceptual Framework

Activity theory describes learning and its outcome, human transformation. Both are shaped by the activities in which we engage, both are embedded within a social, historical and cultural context. These activities are relational; they involve people interacting with each other, using tools to mediate their development (Engeström, 1999; Kaptelinin et al., 1995). Activity theory provides a framework for understanding complex activity in a systematic manner, where the role of the context and relationships are made evident (Yamagata-Lynch, 2010). The works of Leont’ev (1974) and Engeström (1999) provide useful analytical and organizational tools for documenting, analyzing and describing the complexities, dynamism and culturally embedded activity of formative assessment (Gallego & Cole, 2001). In this section, I describe the theoretical framework used in this study, its history and evolution, as well as key features of the theory and its utility to understanding formative assessment.
2.5.1. History of Activity Theory

Activity theory is defined as a "philosophical framework for studying different forms of human praxis as development processes, both individual and social levels interlinked at the same time" (Kutti, 1996, p. 532, cited in Jonassen & Land, 2000, p. 97). It is based on the works of Vygotsky (1978), Leont'ev (1974) and Engeström (1999) and it proposes that human consciousness is shaped by social, cultural and historical contexts (Kaptelinin et al., 1995). Together, both the consciousness and the context determine the nature of activity (Engeström, 1999).

Activity, the foundational concept in this theory, is defined as:

a molar and nonadditive unit of a material subject's life. In a narrower and more psychological sense, activity is a unit of life mediated by mental reflection whose real function is to orient the subject to the world of objects. Activity is thus not a reaction or a totality of reactions, but rather a system possessing structure, inner transformations, conversations, and development. (Leont'ev, 1974, p. 41)

This definition presents a view of activity linked to human consciousness. Our consciousness is formed through activity, and our consciousness makes possible activity (Engeström et al., 1999). Tools link activity and our consciousness. They are a mediating force. Like our consciousness, tools have a social and cultural context and a history (Vygotsky, 1978). Activity is therefore "socially and culturally determined" (Kaptelinin et al., 1999, p. 28).

2.5.2. The Generations of Activity Theory

The concept of activity was first proposed by Vygotsky in 1930-1934/1978. Leont'ev (1959/1981) was a student of Vygotsky who further developed the theory by incorporating into it the three-stage hierarchal structure of human functioning. Leont'ev's contribution is known as the second-generation activity system. The third-generation activity system is based on the work of Engeström (1999) who developed the five principles of activity theory. The generations of activity theory are described in the paragraphs below.
**First-generation activity system**

Vygotsky (1978) first argued that human consciousness is situated. For him, this meant that it exists within a social, historical and cultural context. He argued that human consciousness develops through mediated activity. Figure 2-1 is a graphic crafted and used by Vygotsky (1978) to explain the concept of mediated activity. Mediated activity is a process of meaning-making, whereby humans use tools to interact with an object in order to achieve a particular goal. As previously noted, tools are situated. They possess a history, exist within a social and cultural context, and function to mediate humans’ interactions with the object (Kaptelinin et al., 1995; Yamagata-Lynch, 2010). In mediated action, tools mediate the subject’s interaction with the object. Subjects never interact directly with the object. Vygotsky (1978) identified tools as instrumental to the cognitive development of humans. Within the first-generation activity system, the assessment process involves the subject (teacher) employing mediational tools (questioning, feedback, etc.) to achieve an object (evidence of student learning) (Lund, 2008; Crossouard & Pryor, 2008a, 2008b). Through assessment activity, the student’s cognitive structures are transformed as she engages with the assessment (Dixon-Krauss, 1996). This generation of activity system is useful for understanding how tools are used to mediate the assessment task. For example, during formative assessment activity, a supervisor may provide a student with feedback in the form of a question. She may ask, what does activity theory explain? This feedback is employed by the student to mediate her development. It directs her to the features of the task that must be included in her work samples. Feedback thus serves as a tool to mediate the student’s interaction with the object.
Figure 2-1. Vygotsky’s mediated action triangle.

Vygotsky’s (1978) concept of internalization can also serve as a conceptual tool for understanding a teacher’s formative assessment activity. He argued that internalization results in learning and development. This occurs through a two-stage process. The first stage he identified as the interpsychological stage. In this stage, the subject appropriates knowledge that is external to him, or generated by his community. It is within the interpsychological stage that the learner engages in joint production of knowledge with others. Through dialogue, interactions and negotiations with others, the learner gains insight into the meanings and ideas of the community. The second stage, the intrapsychological stage, occurs when the individual internalizes this knowledge by herself (Hardman, 2007a; Jonassen & Land, 2000). It is at this stage that the novice gains mastery by internalizing and appropriating the knowledge of the community (Vygotsky, 1978). Internalization is a useful concept for understanding activity. It is a “conceptual tool for understanding the complexities involved in human activity while individuals engage in meaning-making processes and interact with the environment” (Yamagata-Lynch, 2010, p. 19). Through internalization, one can understand assessment as a co-constructed process, in which through collaboration and interaction with each other, the teacher and the students learn and develop. The process of internalization offers tools for understanding how this co-construction occurs. Through internalization, the learner first interacts with the community to appropriate information relating to the assessment task, and then he forms a mental construct about that task (Hardman, 2008). The concept of internalization is therefore useful for tracing the
collective-individual interaction during the construction of a work sample (Yamagata-Lynch, 2010).

**Leont’ev’s second-generation activity system**

Leont’ev (1975) extended Vygotsky’s concept of mediated action by addressing the reasons why individuals participate in activity, and their motives for doing so. He identified activity as the unit of analysis, defining it as “a series of processes that is contained within an activity that acts as a bounded system” (Yamagata-Lynch, 2010, p. 20). For him, activity involved the collective group in a shared task and the individual completing particular actions. Leont’ev’s work paid particular attention to the role of division of labour in a collective activity as well as the individual actions of participants. In his analysis of the primeval hunt, Leont’ev illustrated the dynamics of the collective as well as individual human functioning. The hunt is a collective activity, in which a beater participates because he is motivated by his hunger. His actions of directing the herd toward the other hunters are a reflection of his individual motives, as well as those of the collective activity. The hunt is therefore a collective activity, involving all members of the tribe, but this process is shaped by the individual actions of the beater.

Leont’ev (1975) developed a three-stage hierarchal model of human functioning (see Figure 2-2). At the apex is the activity, a collective and social enterprise, and attached to it are object-oriented motives. Leont’ev noted that motives are important to the activity. They determine its objective. However, unlike the activity, which is a collective process, motives can be individual. As noted above, the hunt is a collective endeavour, but the beater’s hunger (his motive) drives his actions. Thus, according to Leont’ev, two persons engaged in the same activity, with different motives, could produce different outcomes. From an educational perspective, formative assessment is an activity, undertaken by a collective involving the teacher and students in the co-construction of a work sample. Both the students and the teacher have motives for engaging in this activity. These motives may be individual; for example, a student may be motivated by an A grade, whilst the teacher may be participating in the same activity because of policymakers’ mandates. This difference in motives has implications for the practice of assessment, as the object of the assessment activity may reflect individual rather than shared motives. Thus, a student may engage in whole class discussion
whereby, as part of the class, she co-constructs knowledge by contributing to the dialogue, but her motives for participating may be to receive a good grade (Shepard, 2005).

![Diagram of Leont’ev’s second-generation activity system](image)

**Figure 2-2. Leont’ev’s second-generation activity system.**

The second level of human functioning is action. Actions are attached to individual goals. Each action contributes to the overall completion of the activity. For example, within a formative assessment activity, the student completes several actions, including reading the assessment criteria, conducting research on a topic, discussing the topic with others, constructing the work sample, receiving feedback from the teacher and rewriting the work sample based on the feedback. All these actions constitute the activity of formative assessment. The third and final level of human functioning is operations. Operations and conditions are attached to each other. Operations are automatic actions that subjects unconsciously perform, and conditions determine how these operations are performed. For example, writing the work sample (operation) is constrained by the teacher's stipulation of the number of pages that the work product must contain (condition).

Within a formative assessment activity, for example completing a project on the French Revolution, the teacher may want the students to attain high grades on the project (motive). Instruction may be one of several actions performed by the teacher in completing the activity; others may include planning to visit a museum, selecting a movie about the Reign of Terror, administering practice tests, or discussing with the students the novel *A Tale of Two Cities*. The teacher’s actions are connected to the goal of
providing students with knowledge so that they can complete and submit quality work samples. To complete actions, the teacher is involved in many different operations; for example, the action of providing instruction may include writing and erasing on the whiteboard, handing out notes, speaking, and asking questions. The extent to which the operation is executed is determined by conditions. For example, in providing the students with instruction on the French Revolution (action), the teacher erases part of the white board to write important events (operations), but the teacher only erases half the board because there are important reminders on the other half that she does not want the students to forget (condition).

**Engeström’s third-generation activity system**

In 1987, Engeström proposed an activity system with six interacting elements: subjects, tools, objects, community, rules and division of labour (see Figure 2-3). In the top half of the triangle are subjects, tools and the object. It describes the subject-object relationship in which tools are employed by the subject to mediate the object. This mediated action was described by Vygotsky (1978) in the first-generation activity system. In the bottom of the triangle are the tools that represent the role of the context in shaping the activity. They include a community of participants who are invested in the object, rules which govern and guide the relationship between the system’s elements, and a division of labour of the tasks assigned to subjects in order to achieve the object (Engeström, 2001). The components of the activity system do not exist independently of each other. As the arrows of the activity system in figure 2-3 suggest, the components are connected to each other and together they constitute the activity. The activity is therefore the interaction between and among the various components in the system. The elements of activity theory, will be applied to formative assessment in section 2.5.4, after its principles are described in the next section.
Like Vygotsky and Leont’ev, Engeström (2001) believed that activity was a unit of analysis in which constructing meaning was a collective endeavour. He added to the theory by employing it in interventionist research, where the activity system was used to examine changes within an organization. Engeström proposed that engagement in activity produces expansive learning. This occurs “when an object and motive of an activity are reconceptualised to embrace a radically wider horizon of possibilities than in the previous model of the activity … [it is] a collective journey through the ZPD of the activity” (Daniels, 2001, p. 93). The result of activity is the development of new knowledge, practices and activities (Engeström, 2000, p. 960). Engeström’s activity system and its use to explore formative assessment activity will be further examined.

2.5.3. Engeström’s Principles of Activity Theory

Engeström (2001) identified five key principles of activity theory. These are: (1) Consciousness; (2) Intentionality; (3) Historicity; (4) Multivoicedness; (5) Contradictions. These principles form the basis of activity theory. Daniels (2001) employed the word “manifesto” to describe their purpose (p. 93). This suggests that a researcher who uses activity theory to explore formative assessment practices in the classroom must utilize
these principles to guide the process of her research in order to understand the relationship between the context and the activity (Daniels, 2001; Yamagata-Lynch, 2010). The principles are: (1) consciousness and activity dialogue, (2) intentionality, (3) historicity, (4) multivoicedness, and (5) contradictions. These elements provide a holistic picture of the phenomenon (Yamagata-Lynch, 2010).

**Consciousness**

As previously noted, activity theorists believe that activity and human consciousness are inextricably linked. Human consciousness transforms activity, and activity, in turn, alters human consciousness (Yamagata-Lynch, 2010). Jonassen and Land (2000) described this relationship: “the human mind emerges and exists as a special component of interactions with the environment, so activity and consciousness cannot be separated” (p. 105). Engeström proposed activity as a unit of analysis for understanding this relationship. As a unit of analysis, activity is collective, mediated and object-oriented. From this perspective, the activity of formative assessment and the consciousness of the learner are inextricably bonded. The assessment activity develops the learner’s and teacher’s consciousness, and the learner’s and teacher’s consciousness are used during activity. This relationship reflects the classroom context.

**Intentionality**

Engeström (2000) believed that subjects entered into activity with intentions. These intentions determine the actions of individuals and, in so doing, alter the object of the activity. Intentions therefore shape the outcome of the activity. He described intentions as dynamic, in that they reflect individuals’ goals, so that when goals alter, so do the intentions. An example of intentionality is the teacher who employs formative assessment in his classroom, with the goal of producing student learning. The teacher intentionally designs and enacts formative assessment activity to meet this goal. In the classroom, as the teacher reviews her actions, he or she alters and develops new designs for learning, and as the goals change, so do her or his intentions (Daniels, 2001; Jonassen & Land, 2000).
**Historicity**

Engeström (2001) also held that individuals are engaged in a multitude of activity systems, with each one being distinct in its own right. Multiple activity systems reflect the personal histories: “Different subjects due to different histories and positions in the division of labour construct the object and the other components of the activity in different partially overlapping and conflicting ways” (University of Helsinki, 2005). Engeström’s (1999) notion of historicity draws attention to the roles of the teacher’s and students’ histories in classroom practices, in particular how their motives and goals frame and provide legitimacy to their actions during assessment activity. The notion of historicity is a useful conceptual tool for understanding the link between the micro (classroom relationships) and the macro (wider community), as it points to the context as a key determinant in formative assessment activity.

**Multivoicedness**

As previously noted, individuals exist in multiple systems which shape each other’s operations. An activity system is therefore an amalgam of the “intertwining of many voices, roles, histories, networks and cultural perspectives” (Engeström, 2001 p. 135). In his study on hospital work, Engeström (2001) discussed and provided an illustration of multi-voicedness. He noted that a patient in the hospital had his own activity system which interacted with that of the doctor’s, as well as the hospital administrator’s and specialists’. As a result, the patient’s activity system included all those voices.

The notion of mulitvoicedness has significance for the practice of assessment because there are multiple activity systems in a school. The formative assessment activity system is a reflection of staff professional development and staff social activity systems, administrative activity system, school clubs activity system, Parents and Teacher Association (PTA) activity system, and union membership activity system, just to name a few. All these voices impact the practice of formative assessment. Providing a space that allows for the multiple voices that shape activity requires an understanding of the classroom as a site of many activity systems; a site where systems impact on each other. This principle leads to formative assessment activity in which voices,
histories and discourses not only interact with each other, but also affect the functioning of other classroom systems.

**Contradictions**

In activity theory, systems are dynamic and are constantly changing as a result of internal contradictions. “Contradictions are historically accumulating structural tensions within and between activity systems” that cannot be resolved easily (Engeström, 2001, p. 137). They are the “misfit within elements [components], between them, between different activities, or between developmental phases of a single activity” (Kuutti, 1996, p. 34). Contradictions are not problematic; in fact, they are “the motive force of change and development” (Engestrom & Miettinen, 1999, p.9). These contradictions cause subjects to act in new ways towards the object and in so doing, they promote an “expanded understanding of the object,” of how the components shape each other, and in so doing they construct the identity of the subject (Engeström, 2001, p. 137). Lund (2008) and Conway and Artiles (2005) posit that the concept of contradictions is a useful tool for understanding the dynamic nature of formative assessment activity. I also believe that this concept is useful. It can greatly assist in tracing the development of formative assessment activity in the class and in understanding how classroom participants navigate and negotiate changes in the activity system.

2.5.4. **Applying Activity Theory to Formative Assessment**

The activity system proposed by Engeström (2001) is well suited to documenting how formative assessment activity unfolds in the classroom. It can be used to understand the dialectic between the collective activity and the individual’s motives, as well as how the activity (formative assessment) transforms subjects (classroom participants). Yamagata-Lynch (2010) noted the utility of activity theory for studies that investigate classroom practice, in particular studies that seek to discover how the subjects’ motives, their social, historical and cultural context, and their engagement in multiple activity systems influence the enactment of the activity. This framework enables “one to describe, analyze and interpret in detail educational environments and learning and classroom assessment, and to provide a sound study of the relations among its constitutive elements” (Fernandes, 2009, p. 96). Activity theory can therefore involve the
tools necessary to organize, systemize and understand assessment activity in a way that provides the whole picture and the interaction of its parts (Hardman, 2007b; Tharp and Rivera, 2004; Yamagata-Lynch, 2010). In the ensuing paragraphs, I explore the elements and components of the activity system and relate them to formative assessment.

**Activity**

Activity is “the framework society uses for communal actions and for the socialization of its members” (Rivera & Tharp, 2004, p. 206). In Leont’ev’s (1975) primeval hunt, the activity is the hunt. In the classroom, formative assessment is the activity and the unit of analysis. This activity is key to the realization of learning. Torrance (2012) argued that formative assessment activity entails all assessments that lead to learning.

**The unit of analysis**

The unit of analysis within activity theory is an activity system (see Figure 2.3). Activity systems are “collective human constructions ... focused by the interaction of minds in the world, socially constructing and sharing meaning” (Jonassen & Land, 2000, p. 98). This unit of analysis explores activity. In this activity there are individuals (subjects), whose actions are directed towards an object or goal. They use artifacts, both mental constructs and physical objects (tools), to mediate the object and to engage in activity. This activity occurs within a community. In the community (class), there is a division of labour, where subjects (class members including the teacher) are assigned roles and their actions are governed by rules (Engeström, 1999). Engeström argued that this unit of analysis is composed of two elements: first, the mediated action; and second, the context within which the activity occurs. Tharp and Rivera (2004) described this as the “who, what, when, where and why of everyday events that take place in homes, schools, and workplaces” (p. 207). As just mentioned, formative assessment activity systems include subjects, the students and teachers, the “who” of the activity. The actions undertaken by the teacher and the students during the activity are mediated by tools such as feedback and criteria. This is the “what” of the activity, be it a work sample or a debate. The activity occurs within a particular period of time determined by the date for submission. This is the “when” of the activity. Formative assessment occurs within a
classroom. This is the “where” of the activity. Both the teacher's and students' actions are governed by motives. Students, for example, want to achieve a good grade. This is the “why” of the activity (Tharp, 2005, p. 29). Activity systems as units of analysis are complex and dynamic, so they are constantly developing and are being transformed (University of Helsinki, 2005; Wilson, 2008).

**The subject**

The subjects are the individuals who engage in the activity. These subjects engage in the activity to achieve an object. Each subject has motives which determine his actions during the activity. Feldman and Weiss (2010) proposed that identity is both a “product and by-product” of the activity system, because people “produce and reproduce themselves” through activity (p. 4). Identity construction is therefore a collective as well as an individual act. It occurs through participation within a community. The community facilitates the individual’s creation of meaning and this transforms the individual (Crossouard & Pryor, 2008a). In the classroom, subjects are the teacher and student. They both have motives for engaging with formative assessment. Their beliefs about education, as well as their experiences and backgrounds, shape their actions during formative assessment (Hardman, 2007a). Through participating in the activity, the teacher and student gain knowledge and are transformed (Lave & Wenger, 1991).

**Tools**

As previously noted, tools mediate the subject’s interaction with the object (learning). Within a formative assessment activity, there are a number of tools used by the subjects to mediate the object. These include criteria, questions, feedback, worksheets, computers, discourses and tests. These tools direct students and the teacher towards the object (Crossouard & Pryor, 2008b).

**Object**

Engeström (1999) defined the object as “the raw material or problem space at which the activity is directed and which is molded and transformed into outcomes” (University of Helsinki, 2005). Objects can be tangible (work sample) or abstract (mental construct). They are generated from the process of internalization and result in mastery (Crossouard & Pryor, 2008). Hardman (2008) argued that objects inform the students
and teacher of “all available actions available” to them, and in so doing, determine their actions (p.72). However, the object can at times be invisible to the community members or not the same for everyone participating in the activity (Roth & Lee, 2007). Within the formative assessment activity, the object can be a curriculum objective, or “the construction of texts disciplinary, narrative and meta-contextual” concepts (Crossouard & Pryor, 2008a, p. 12). For example, possible objects of formative assessment activity within a Social Studies class might be constructing an essay on democracy (construction of text) or developing the skill of debating (meeting a curriculum objective).

**The outcome**

The outcome is the “intended long-term goal” of the subjects (Yamagata-Lynch, 2010, p. 25). In formative assessment activity, this goal is learning. Learning involves knowing the distinct discipline knowledge. Outcomes are also learning the rules of the discipline knowledge and the classroom, and using them appropriately (Crossouard & Pryor, 2008). For example in a formative assessment activity on the French Revolution, the outcome would be learning, that enables students to critically analyse the impact of the French Revolution.

**The rules**

Rules are the norms that regulate actions within the activity system; they are the legitimate actions within the activity system. They organize and frame the subjects’ actions (Hardman, 2008). Holland (2001) identified rules as scripts generated from shared norms and beliefs. They are common understandings that inform the subjects of the resources available; define their knowledge, skills and competencies; and shape their positions in activity and their use of tools. Through the rules, the teacher and students know what is legitimate and acceptable. In other words, rules regulate the subject’s actions (Daniels, 2001). Cole and Gallego (2001) state that the rules in the classroom can be a source of contradiction, because they are a reflection of the society’s multiple voices. For example, rules can reflect pedagogical rules, subject discipline rules, or expectations of the community, as well as policy mandates. The differences between these discourses can cause tensions in the classroom. Within formative assessment, the rules govern the activity. Examples of rules would include assessment criteria such as the use of APA formatting, or regulations for participating in
discussions or feedback, such as respecting the opinions of others and deadlines for submission.

**Division of labour**

The division of labour is defined by the roles and positions available to subjects within the activity system. Daniels (2007) noted that the teacher-student relationship could take two possible forms. It might be vertical, where the teacher is seen as having a more valued position and power than the student. The relationship can also be horizontal, as in group work where the students have equal power. During assessment, teachers and students adopt a variety of positions, and attached to each position is power. For example, the teacher assumes the role of assessor when evaluating students’ work samples. The students’ reciprocal position is that of the assessed. In this pair of roles, the teacher possesses greater power than the student. As collaborators, the teacher and student work together on constructing the work sample. Theoretically, when in these roles, both the student and the teacher have equal power. In the role of subject expert during instruction, the teacher furnishes knowledge vital to completing the work sample to the students, and the student becomes the learner, gaining expertise at the subject. These roles reflect a vertical power relationship, where the student as a learner possesses less power than the teacher, the expert.

**The community**

The community, immediate and wider, is comprised of those persons who participate in the system. Each member of the community has a role to play, and their actions result in the transformation of the object. The immediate community of a class is usually the students and the teacher. Cole and Gallego (2001) hold that the classroom is a paradox, in that it is multicultural, filled with persons who possess different cultural and socioeconomic backgrounds. It is also an “idioculture” (p.962), or a distinct community of practice made up of norms particular to that classroom that inform students and teachers of the rules for interactions and negotiations within the community (Newman et al., 1989). Both the multiculture and the idioculture of the classroom shape teaching and learning. The former produces classrooms where the teacher must plan for and negotiate with several different and sometimes contradictory norms and values. Within the multiculture community, the teacher participates in multiple ZPD’s and activity
systems, each of which reflects the cultural, social and historical context, as well as the learning level of each individual student. The latter, the idioculture, produces a distinct space with distinct practices (Gallego & Cole, 2001). Within the classroom community, the teacher must plan for and enact these unique ZPD’s, while simultaneously appropriating students’ understanding of concepts and providing appropriate feedback to each student based on classroom criteria (Gallego & Cole, 2001; Nolen, 2011; Wells & Claxton, 2002). The teacher’s role in the classroom community is therefore not only instructional. She produces and reproduces the idioculture and the multiculture of the classroom.

2.5.5. Theories of Formative Assessment

Formative assessment is a complex and nuanced activity that can be understood through theories of formative assessment activity based on an activity theory framework. These theories identify the essential features of formative assessment and offer tools to facilitate the researcher’s analysis of the situated and relational nature of formative assessment activity. In the following sections, I describe two of these conceptualizations as they were enacted in research projects undertaken by: (1) Black and Wiliam’s (2006); and (2) Crossouard and Pryor's (2008a).

Black and Wiliam’s conception of formative assessment

Black and Wiliam’s (2006) theory was developed and refined during the King’s-Medway-Oxfordshire project, a two-year study of the implementation of their model of formative assessment in 48 Mathematics, Science and English Language classrooms. During the study, formative assessment was defined as all activities wherein the teacher ascertained students’ understanding of the task and altered instruction to aid the students’ successful completion of the task. Black and Wiliam viewed the subject classroom as the activity system for analyzing formative assessment activity. They argued that this activity system allowed them to investigate the impact of students’ motives, as well as the wider social, cultural and historical context. They identified four essential features of any formative assessment activity: (1) teachers, learners and the subject discipline; (2) the teacher’s role in the regulation of learning; (3) feedback and the student-teacher interaction; and (4) the student’s role in learning. They held that
these four features were the “minimal elements of a formative assessment theory” (p. 84).

**Teachers, learners, and the content area**

As previously mentioned, each content area in school possesses distinct goals and specialized knowledge. As such, they can be categorized as subcultures with their own specialized teaching, learning and assessment practices. Black and Wiliam (2006) explored English as an illustration of a subculture. The content of English, grammar mechanics and essay writing for example, is different from the content taught in a Physical Education classroom. Teaching within this subject area is also different. Black and Wiliam advanced that different content knowledge and learning outcomes would produce disparate formative assessment activities. Thus, the Physical Education teacher might employ a more performance-oriented approach to assessment, whereas the English teacher would use a competency-based approach. The subculture is not only characterized by specialized context knowledge and distinct approaches to teaching, learning and assessment; it also determines the nature of the teacher-student relationship. In other words, different subject disciplines create different communities of learners, with particular knowledges, teaching and learning activities, interactions, rules and roles. They asserted that it was within this context that the teacher’s formative assessment activity must be understood. In their study, Black and Wiliam (2006) found that the students’ successful completion of the task was greatly influenced by the quality of the conversations that they engaged in with the teachers, as well as the teacher’s knowledge of the subject content.

**The teacher’s role in the regulation of learning**

The teacher’s role during formative assessment activity is one of regulation. Wiliam (2011) identified regulation as an essential feature of formative assessment. It is an “adjustment” that occurs similarly to how “a thermostat regulates the temperature of a room” and even could be adjusted to the perfect temperature (p.8). This regulation involves teachers being attuned to the needs of the students and possessing the requisite expertise to make adjustments that develop students’ metacognitive thinking. Simply put, the teacher regulates and makes adjustments to student learning so that the students developed the cognitive tools required to learn independently. Black and Wiliam
(2006) viewed regulation as an intentional act undertaken by the teacher. She used such tools as “questions and tasks so that they generated teachable moments – occasions when the teacher could intervene to further learning” (p. 87). In the study, Black and William found that teachers who embraced this role established classroom environments that facilitated “didactic moments” (p. 86) where students assumed greater responsibility over their learning, and the teacher’s formative assessment targeted the development of the students’ cognitive skills. They noted that not all teachers respond positively to this role. In fact, regulation is a difficult activity for some teachers to engage in because it requires that they release substantial control over learning and establish a non-traditional teacher-student dynamic.

**Feedback and the student-teacher interaction**

Black and Wiliam’s (2006) model draws on teacher-student interaction in a number of ways, to create student learning. Feedback is one of those teacher-student interactions, and its objective is to create student mastery. They proposed four elements of feedback: (a) teacher internalizes students’ responses, (b) teacher interprets students’ responses, (c) teacher alters teaching based on these responses, and (d) students appropriate the feedback. These elements are not sequential or linear. They could occur in any different order or combination, depending on the nature of the task. For example, (b), (c) and (d) are the elements necessary for short-term feedback. During the implementation process, Black and Wiliam discovered that learning required the tool, feedback, to do more than just “close the gap” (p. 89). It had to serve to assess the quality of students’ thinking in order to develop their metacognitive skills. These researchers identified the individual’s ZPD as the space where this type of feedback occurred because working with students individually allowed the teacher to understand each student’s “level of thinking” (p.90). Black and Wiliam stressed the influence of the context on the teacher/student interaction. They noted that such variables as the nature of the relationship between the teacher and student, as well as classroom management, determined how feedback was employed in their study.

**The role of the student in learning**

Here Black and Wiliam (2006) shifted their focus from teacher-student interactions to student-student interactions, such as peer-assessment. They found that
peer- and self-assessment were important formative assessment activities because they involved students in their own learning and triggered students’ self-reflection and metacognitive development. Through these tools, students developed an awareness of their worth and ascertained how others, particularly teachers and classmates, perceived their ability and potential. Black and Wiliam (2006) saw peer- and self-assessment as essential to the collective-individual dialectic. These interactions enact the formation of a community of practice, where students collectively learn and develop, and it also provide students with the tools to take responsibility for their own learning. Once again, they pointed to the role of the context in shaping students’ participation in their own learning, in particular how students’ motives, beliefs about their teacher’s role in learning, and prioritization of performance and social goals determined their use of these tools.

The use of activity theory

Black and Wiliam (2006) employed Engeström’s (1999) activity system to analyze formative assessment activity. They noted its utility, stating that they “found it more productive to think of the subject classroom as an activity system” (p. 83) because it alerted them to the interactions between the various components of the system, as well as the tensions and contradictions that occurred during the activity. This model offers several insights into the practice of formative assessment. For one, the identification of specific aspects of the context, such as the subject discipline, to frame formative assessment, is particularly useful. It made me wonder, how do the distinctive features of the Social Studies classroom shape the teacher’s and students’ formative assessment activity? The emphasis on the multidimensional nature of the teacher-student relationship was also useful. It focused the researchers on the relational nature of formative assessment activity. Shirley (2009) noted that Black and Wiliam’s research did not fully explore the workings of these four components within the classroom. For one, they did not examine how these elements functioned as a collective, nor whether all those elements were necessary for formative assessment.

Crossouard and Pryor’s theorization of formative assessment

The most recent theorization of formative assessment offered that employed activity theory as its theoretical frame was formulated by Crossouard and Pryor (2008a). They drew upon the 1998 study of Year 2 and Year 6 teachers’ assessment practices,
conducted by Torrance and Pryor. Participants were recruited from nine schools in two educational districts in England. Crossouard and Pryor (2008a) described formative assessment activity as occurring:

> when teachers and learners seek to respond to student work, making judgments about what is good learning ... . Formative assessment interactions involve enabling learners first to engage with new ways of being and acting associated with new, aspirational identities and second to have these recognized as legitimate, where what counts as legitimate is strongly framed by institutional discourses and assessment demands. (p. 3)

Crossouard and Pryor identified four features of formative assessment activity: (1) types of formative assessment activity; (2) the negotiation of assessment criteria; (3) the teacher and student relationship; and (4) identity formation. Each is described below

### Types of formative assessment

Crossouard and Pryor (2008a) built on the types of assessment, convergent and divergent, proposed by Torrance and Pryor (1998). They defined convergent formative assessment as the use of “closed questions” by the teacher to determine students’ knowledge and comprehension of a predetermined task (p. 153). The teacher-student interaction during this type of assessment is linear, resembling the “Initiation-Response-Feedback pattern” (IRF), where the teacher asks closed questions (p. 153). The student provides a limited response and the teacher’s feedback confirms the accuracy of the response. Crossouard and Pryor argued that this type of formative assessment was “something that teachers did to learners” and could be classified as a type of “behaviourist” or “stimulus-response” tool. It possessed a “scaffolding” element in which “the teacher played a crucial role in enabling the learners to do with help, that which they would not have been able to do alone” (Crossouard & Pryor, 2008a, p. 4).

Divergent formative assessment on the other hand, involved the use of open-ended tasks by teachers to determine what students “knew and understood” (Crossouard & Pryor, 2008a, p. 4). During a divergent assessment moment, teachers employed “exploratory questions” and they provided feedback that developed students’ metacognitive skills (p. 4). Divergent assessment occurs in the ZDP and is characterized by the joint construction of knowledge by teachers and students, whereby the teacher
uses a tool to access students’ understanding and provide feedback intended to engender students’ mastery. Crossouard and Pryor identified convergent and divergent assessment as distinct tools, co-existing on a continuum where classroom participants moved between these two forms of formative assessment.

The negotiation of criteria

Crossouard and Pryor (2008b) posited assessment criteria to be the “tool of tools” in formative assessment activity (p. 80). Their theorization drew upon Sadler’s (1989) notions of task and quality criteria. The former (task) refers to the predetermined guidelines for the assessment, whilst the latter (quality criteria) is centred on student improvement of the task, by the provision of feedback on the difference between the quality of students’ work and the task criteria. Crossouard and Pryor (2008a) argued that criteria are technical tools which reflect the cultural, social and historical context from which they are established and are employed “socially within the classroom” (p. 8). As a consequence, criteria are one of the most difficult tools to competently employ when mediating the object. The inherently social nature of criteria gives rise to ambiguity and this can result in student misunderstanding of the requirements of the task. In the classroom, the criteria are made explicit through teacher and student interaction, and are affected by observational and questioning tools.

The teacher-student relationship

Like Black and Wiliam (2006), Crossouard and Pryor (2008a) felt that the teacher-student relationship is an essential feature of formative assessment. For them, the collective nature of formative assessment suggests that the activity is steeped in interaction. This interaction is situated within a particular historical and cultural context and roles, where power is ascribed to those involved in the interaction. An example of the context of interaction could be the process of students raising their hand to answer a question during a class discussion. This action not only reflects certain historical norms about responding in the classroom. It also demarcates the role of the teacher, who has authority to invite the student to speak, from that of the student, who has to ask to speak.

To explore the nature of teacher-student roles and their power dynamic, Crossouard and Pryor (2008a) employed Bernstein's (2001) concept of “framing.” Framing is the measure of control over social practices within the classroom. It consists
of the instructional discourse and the regulative discourse. The former determines the selection of content, as well as its sequencing, and pacing of the activity. The latter is made up of the recognition and realization of the rules and norms of the classroom (Crossouard & Pryor, 2008a; Daniels, 2001; Hardman, 2007b). Framing informs students of the legitimate actions required in the task, or what is required to complete the task successfully. According to Crossouard and Pryor (2008a), it is essential that students know what is legitimate, what the task requires (the recognition rules) and whether they are capable of responding to task demands (the realization rules) in an appropriate manner. Framing could be either strong or weak. This is determined by the nature of the task and the roles ascribed to that task. Crossouard and Pryor thus argued that recognition and realization rules should be made evident to students during the negotiation of assessment criteria, whereby the teacher makes the framing explicit to students. This negotiation involves meta-contextual reflection, “where, by considering issues of power and control, the criteria may not just be clarified but deconstructed” (p. 16).

Attached to the concept of framing is classification, which Bernstein (2001) defined as the robustness of the borders between social practices. Types of assessments used in classrooms, formative and summative, are an example. These social practices possess their own unique “social relationships, behaviours, values, objects, technologies and, ultimately, learning that is unique to that specialized knowledge” (Gee, 2008, p. 29). The robustness of the boundaries between different social practices generates clarity about the nature of the practice. For instance, if the classification between formative and summative assessment is weak, and a summative assessment can have formative purposes, students will experience difficulty distinguishing formative from summative moments. This has implications for formative assessment activity, as formative assessment involves joint production between the teacher and the student, while summative assessment centres on the assessment of an individual’s learning. Crossouard and Pryor (2008a) explored the relationship between classification and framing and the implication for formative assessment activity. They noted that if the classification is strong – that is, if there is a clear differentiation between formative and summative assessment – then framing will also be strong. There will also be clear and distinct instructional and social discourses to govern teachers’ and
students’ actions, within each type of activity.

Classification as an analytical tool offers two main advantages to researchers. First, it zeroes in on the roles and rules in the classroom, making evident how formative assessment activity is collaborative. Second, it identifies metacognitive development as a function of formative assessment activity. That is, the teacher and student discuss the social rules, so that they are evident to the students and the students can respond to them in legitimate ways. Through an examination of classification and framing structures in the classroom, the researcher can document not only how the activity is enacted and the object is achieved, but also the struggles that the teacher may face when sharing power with the students.

Identity formation

Crossouard and Pryor (2008a) identified identity formation as an essential feature of formative assessment. To explore this element, they drew on the work of Gee (2004), who argued that the learner is formed through the process of “changing and acquiring new patterns of participation with concomitant changes in identity” within the community of practice (p.179). This means that the outcome of formative assessment activity is the transformation of learners into experts at the prescribed task and the development of their metacognitive skill. This transformation reproduces them as “new persons”(Gee, 2004, p. 179). Thus, formative assessment activity functions “as a means whereby learning activities become relevant to students’ desired identities and futures” (Crossouard & Pryor, 2008a, p. 16).

The theorization and activity theory

Crossouard and Pryor (2008a) described how these elements function in the classroom. The activity commences with making the criteria explicit. The teacher relies on such tools as questioning and observation to do this and moves between convergent and divergent assessment to ensure that students understand the task. During this process, the teacher alerts students to legitimate actions for completing the task. Formative assessment is a joint activity, so they, the student and teacher, work collectively during the process. This involves negotiating criteria, constructing knowledge and appropriating each other’s understandings. As the students and the teacher develop the task, they transition from novices to experts at the pre-specified learning and are
thus engaged in identity formation. Crossouard and Pryor argued that the process requires metacognitive reflection whereby the teacher and student deconstruct roles, and identify and make evident power structures within the classroom and in the wider context. At the end of the process, the student gains an understanding of the recognition rules: the knowledge of what is appropriate for the task. These authors concluded by submitting that this model is “not linear” and is a “possible heuristic” tool that might be used to explain and explore formative assessment activity (p. 3-4).

Crossouard and Pryor (2008a) held that the formative assessment activity is a “social process happening within communities” (p. 223), steeped with contradictions. They found activity theory to be a:

useful heuristic to explore the relationships between human action and the cultural, institutional and historical contexts in which it occurs ... the Activity System, ... provides a means to explore assessment. It permits a theorization of the ‘cultural tools’ used within these activity systems, including the discursive practices of the different communities ... the pedagogic structuring of the interactions ... different factors which make these tools differently available to constrain or enable learning. (p. 3-4)

Through the inclusion of activity theory in their sociocultural theorization of formative assessment, Croussard and Pryor (2008c) examined the division of labour and describe the different roles that the teacher and student hold during the assessment activity. For example, in their study of the use of formative assessment in a doctoral research methods course, they found that in the role of an assessor, the teacher monitored students’ progress by using an “authoritative gaze” (p. 229). This gaze established a vertical power relationship between the students and teacher, and students’ actions and responses demonstrated that they were aware of the assessor’s role (p. 226). Using activity theory, the researchers analyzed the difficulties that students and the teacher experienced in “code switching” between roles, especially with the transition from assessor to assessed, and from assessor to collaborator (p. 236). They argue, given the difficulty that the teacher experienced, that the power inherent in the roles assumed during assessment must be identified and critically analyzed. They concluded by noting the utility of activity theory for problematizing and analyzing the division of labour during formative assessment activity.
Activity theory therefore enabled an analysis of the divisions of labour associated with the different subject positions of the students and tutor, where the subject position can be seen as discursively constructed, but also from a post structural perspective as multiple and conflictual (p. 224).

The conception provided by Crossouard and Pryor (2008c) has offered an enhanced perspective on formative assessment. Through it, they have furnished researchers with the tools needed to extend their investigations beyond the mechanics of formative assessment, and to explore how the social, historical and cultural context has shaped that activity. Their problematization of the teacher-student relationship has drawn attention to issues of power and control, metacognitive development and agency in the classroom. It has brought to the fore identity construction during formative assessment activity. Their distinction between types of formative assessment is not only useful for understanding its complex and dynamic nature, but helpful in determining patterns of classroom interactions.

2.5.6. Research Using Activity Theory to Investigate Formative Assessment

My search of the literature revealed nine studies that employed an activity framework to investigate formative assessment. Four of the studies – Asghar (2013), Crossouard and Pryor (2008b), Havnes (2004), and Thanh Pham and Renshaw (2004) – explored formative assessment activity at the university level. Another four – Black and Wiliam (2006), Bruner (2014), Crossouard (2009) and Hodgen (2007) – explored formative assessment in secondary school. These last four studies reflect formative assessment activity in a variety of different subject disciplines, including: English, as a foreign language (Bruner, 2014); Mathematics (Hodgen, 2007); Mathematics, Science and English Language (Black and Wiliam, 2006); and History, Math, Literacy and Science (Crossouard, 2009). Crossouard’s (2009) and Webb and Jones’ (2009) studies were conducted at the elementary school level. Two studies, Havnes (2004) and Thanh Pham and Renshaw (2004), focused on students’ experiences with formative assessment. They employed observations and interviews to collect data from study participants. Ashgar (2013) and Hogden (2007) explored the experiences of teachers with the activity; Ashgar used interviews to collect data, and Hogden employed observations and interviews. Five studies explored both.
teacher and students engaging in formative assessment activity. Black and Wiliam (2006), Bruner (2014), Crossouard (2009), and Crossouard and Pryor (2008b) employed both observation and interviews as their primary sources of data collection, and Webb and Jones (2009) interviewed teachers and observed classroom activity.

With the exception of Asghar (2013), Havnes (2004), and Hodgen (2007), all the studies reported findings on the implementation of formative assessment in a classroom with the aid of researchers as collaborators. These collaborations served as a means by which teachers could gain expertise at the practice of formative assessment, through the help of a more knowledgeable partner. Activity theory was then employed to analyze the practice of formative assessment within these classrooms.

These nine studies adds to our understanding of the practice of formative assessment in several ways. They described the teacher-student relationship and the roles the teacher and students assume in shaping formative assessment activity (Black & Wiliam, 2006; Crossouard, 2009; Crossouard & Pryor, 2008b). They examined the role of the context, in particular teacher and student experience, as being important in producing power relationships. Crossouard and Pryor (2008c) noted that alerting students to different teacher positions and the power inherent in them can produce legitimate responses by students. The studies by Ashgar (2013) and Webb and Jones (2009) also identified the context of participants, in particular the teacher's belief systems and the students’ prior experiences, with assessment as key in shaping the nature of the activity. Thanh Pham and Renshaw (2004) and Havnes (2007) found that students’ prior experiences with assessment, in particular standardized testing, made it difficult for them to collaborate with the teacher during formative assessment activity. Formative assessment tools as self-assessment and feedback (Black & Wiliam, 2006), dialogue (Ashgar, 2014), assessment criteria (Crossouard & Pryor, 2008b) and questioning (Hodgen, 2007) were identified as important to formative assessment activity. These tools made collaboration possible between the teacher and the students. Finally, both Bruner (2014) and Webb and Jones (2009) explored contradictions that emerge from the implementation of formative assessment activity into the classroom. Bruner (2014) concluded that
formative assessment facilitates teachers’ improving their teaching. He identified several contradictions, including differences in objects between the teacher and students and teachers’ discomfort with the tool of self-assessment. He advocated for research on “communities of learning where both the student and the teacher perspectives are the driving forces of development” (p. 8). Webb and Jones (2009) found that the introduction of formative assessment led to expansive learning. This arose from a contradiction between the culture of the classroom and teacher beliefs. While both studies employed classroom observation to collect data, they only interviewed the teachers. As a result, these studies focused on the perceptions of teachers.

All of these researchers noted the utility of activity theory for conceptualizing formative assessment activity. Havnes (2004) concluded aptly:

Activity theory seems to be an adequate approach for analyzing the interrelatedness between assessment, learning and teaching and for coming to grips with how the configuration of interrelated positions and practices constitute an educational programme. The emphasis on conceptualization of the contextually embedded dilemmas or contradictions opens up for the analysis of complexities and potentials for change and development. (p. 174-175)

2.5.7. Summary

Activity theorists proposed that activity involves subjects interacting with the object through the use of mediating tools, within a social, historical and cultural context. This activity is situated and relational, and as such is complex. Its principles of contradictions, intentionality, multi-voicedness, consciousness, and historicity serve to provide a picture of the activity in its entirety, including its context. Engeström’s (1999) activity system highlights the various components of the activity system, and its arrows describe the ways in which these nodes interact with each other. Theorists such as Black and Wiliam (2006) and Crossouard and Pryor (2008a) have incorporated activity theory into their formative assessment theory as a way to produce a “systematic” exploration of activity (Yamagata-Lynch, 2010 p. 3). They noted that activity theory provided a “useful heuristic” (p. 3) for analyzing the practice of formative assessment. Black and Wiliam (2006) found that the activity system offers a way to highlight the
different rules, tools and division of labour required in each subject classroom. Crossouard and Pryor (2008) found activity theory helpful for understanding the teacher-student relationship during assessment.

Activity theory therefore provides the researcher with a tool to explore the activity and the context within which it is embedded. With activity theory, she can critically examine mediated activity to discover how subjects organize and act as they develop new knowledge and transform (Dixon-Krauss, 1996). Its assumption that activity and tools are cultural allows the researcher to critically analyze such assessment tools, as well as to study the social organization of the classroom (division of labour) and the scripts (rules) which frame it (Crossouard & Pryor, 2008a). Activity theory provides a way to identify and explore contradictions, and how these contradictions lead to a reconceptualization of learning and the creation of new knowledge (Black & Wiliam, 2006). In sum, this theory provides a view of activity in a systematic and organized way that does not rob the activity of its substance or complexity (Gallego & Cole, 2001).

2.6. Synthesis

Since its inception in the work of Scriven (1967), researchers, teachers and policy makers have been enthralled with formative assessment. Consequently, over the decades, a substantive body of literature has developed on the topic. This literature explored the possibilities, as well as the challenges associated with the activity. A quick search of the research revealed that in 2014 alone, approximately 3,500 studies were conducted on formative assessment. Over the years, studies have helped educators to understand the role that formative assessment played in producing students’ academic achievement, as well as in the development of their motivation to learn, their critical thinking and self-regulation skills, and their autonomy. Prior to and during my study, I relied heavily on the literature. It played an important role in my decision to implement formative assessment in my classroom. It informed me of the nature of formative assessment and its elements and provided me with a guide as to how to implement it in my classroom. During this study, it pointed me to the best techniques for collecting data on the activity in its entirety, as well as it served as a reference point to understand the
data collected. The ensuing paragraphs discuss the literature reviewed in this chapter, to evidence what I learned from my reading.

There has been a noticeable shift in the literature on formative assessment from its connection to students’ academic success to its everyday practice in the classroom. Its nature as an activity whereby the teacher and students collaborate on an assessment task with the aim of developing the students’ mastery and the teacher’s practice (Ash & Levitt, 2003; Black & Wiliam, 2006) is now emphasized. This shift seemed to have widened our understandings of the roles that teacher-student interaction, tools and context play in classroom participants’ learning and development.

An examination of the literature revealed the strong influence that context had on formative assessment activity. The activity is embedded in and is shaped by social, historical and cultural context. The tools used during the activity, as well as the participants, had histories attached to them which determined the activity.

Two contexts that the literature identified as important to the enactment of formative assessment activity were discipline and policy. Black and Wiliam (2009) noted that content areas, with their distinct goals and content knowledge, “created strong differences between both the identities of teachers, and the conduct of learning and assessment in the classroom” (p. 86). Most of our understanding about formative assessment activity originates from studies conducted in the areas of Science, Mathematics, and English Language. These content areas possess clear learning progressions that make it easier to implement formative assessment (Marshall, 2006) than with some others. There were few studies conducted in the area of Social Studies; however, those that focused on this subject area pointed to the use of particular tools, for example discussion, as influencing teachers’ and students’ actions during the activity. They offered a glimpse into the dynamics of formative assessment activity within the content area and highlighted to “scholars the importance and necessity of engaging in research within K-12 classroom setting” (Torrez & Claunch-Lebsack, 2014, p. 486).

There is no doubt that policy plays an important role in determining the success of formative assessment. Policy is part of the legitimacy of an activity. It identifies which activities are legitimate and describes the approved actions of classroom participants.
James (2007) noted the role of policy, saying that it “can act as a powerful facilitator or barrier to innovation” (p. 225). The literature presented in this chapter described the role policy played in the practice of formative assessment. It provided a rationale to the teachers for the adoption of the activity, and it informed teachers how formative assessment should be used in their classrooms. Of particular interest to researchers is the role policy played in influencing teachers’ actions. Most of the studies that described this role are from the US and the UK, and as such reflect the contexts in those countries. As noted before, these contexts are strongly influenced by the culture of national and standardized testing.

There is much to learn about how the policy context in other countries shapes formative assessment practices. One such country is Canada. Canada presents a unique situation because the various provincial governments determine educational policy, so each province has its own policies. As previously noted, the OCED (2005) report acknowledges the role that policy plays in shaping practice, and it argued for more studies on the practice of formative assessment in Canada. Research on formative assessment is available on the enactment of the activity in Ontario (Volante, 2010; Volante & Beckett, 2011), Newfoundland (Nomore, 2004, Peterson & McClay, 2014), Manitoba (Godbout, & Richard, 2000), Saskatchewan (Davis, 2014; Davis, 2015) and Quebec (Morrissette, 2011). Few have been conducted on the practice of formative assessment in British Columbia. During my search, I found two such studies, by Anderson and Bachor (1992) and Roth (1998). Given the limited research in this province, it is unclear how this context influences the success of students. Clearly there is a need for more research into how the context of British Columbia influences the practice of formative assessment.

A strong thread woven throughout the literature relates to the difficulty and challenges that teachers and students have experienced during formative assessment activity. These difficulties have left many teachers weary of the activity. Studies revealed much on the nature of these difficulties, acknowledging that formative assessment is a complex and complicated activity and may not always live up to its potential of producing learning. Research also highlighted how the context and the relationships within formative assessment shape the activity. For one, the effectiveness of assessment tools to produce meaningful and sustained learning was influenced by the tools’ history as
well as the cultural, social and historical context within which it was used. So, for example, the formative assessment tool of peer-assessment, which mediated students’ critical thinking, was affected by such variables as the students’ social goal of maintaining friendships, and their beliefs that teachers, not students were experts. Similarly, the tool of feedback, which is used to address the learner’s gap in understanding, was shaped by the socialness of language, and the demands of policy (Brighton, 2006; Crossouard, 2009; Filer, 2000; Marshall & Drummond, 2006). This impact was not standardized. Rather its nature varied across classrooms. As a result, researchers have called for greater research into the practice of formative assessment. They argue that such research will help to “map” the landscape of the activity (McMillan, 2013, p. 12).

This literature review demonstrated the value of research that investigates the relational nature of formative assessment. It highlighted the role of teacher-student interaction in the use of tools and how this relationship produced formative assessment as a joint activity. The process commences with the teacher appropriating students’ understanding of what is required and providing relevant feedback. This leads to the student being able to understand what is needed to produce quality work. This process positively impacts on the development of the student as an active learner. It also benefits the teacher, for it is through the ZPD that the teacher’s practice is transformed, as he gains expertise. Furthermore, the literature identified the role of the division of labour, and the different identities adopted by the teacher and the students, as well as the power associated with these identities in shaping the practice of formative assessment. Studies by Ash and Levitt (2003), and Crossouard and Pryor (2008a, 2008b, 2008c) discussed how this relationship unfolds within the ZPD. However, these studies were conducted with adult students, where the relationship between the teacher and student was marked by a different power relationship and division of labour from that in the K to 12 system. Torrance and Pryor (1989) and Crossouard (2009) demonstrated how within the ZPD, the teacher can use formative assessment tools, such as feedback, to maintain substantial power in the classroom. Further studies, especially in the secondary system, can shed light on the functions of the division of labour, on how it hinders or facilitates students’ and the teacher’s development.
Researchers have advocated for more studies that highlight the voices of classroom participants, noting that through their voices, researchers came to a better understanding of the activity. Given the difficulty involved in practicing formative assessment, researchers collaborated with teachers. This collaboration sought to strengthen the bond between theory and practice. Unfortunately, most teachers who engage in formative assessment do so independently, without the aid of researchers. My research seeks to add knowledge to the area of teachers who are successfully practicing formative assessment on their own. Research studies of this nature serve as “living examples of implementation” (Black & Wiliam, 1998, p. 15).

The aim of this research was to gain a holistic understanding of formative assessment, where all the elements of the activity are included in the inquiry. While there is a rich field of literature on formative assessment available, most articles have focused on one aspect of its practice (Richardson, 2010). Few have explored it through the adoption a holistic approach, where formative assessment is investigated as multidimensional activity with several interconnected elements (Rust, 2005). To accomplish this, I employed activity theory as the theoretical lens. This theory provides a structure for understanding how multiple tools interact with each other (Terantino, 2009). Daniels (2001), Engeström (2001) and Hardman (2005) noted the utility of activity theory to understanding and analyzing complex and situated environments like classrooms; it provides a systematic method (Yamagata-Lynch, 2010). It emphasizes “the psychological impacts on organized activity and the social conditions and systems which are produced in and through such activity” (Daniels, 2001, p. 83-84).

The current study adds to the growing body of literature which explores formative assessment employing an activity theory framework. Crossouard and Pryor (2008a) have noted the need for additional literature within this area. They pointed out that “little work has been done to theorize assessment from a sociocultural perspective” (p. 2). There is utility in employing Engeström’s (1999) activity theory as a conceptual lens to understand assessment activity. Activity theory offers several advantages for a study that seeks to understand how formative assessment practices unfold in the classroom. It is useful in organizing and systemizing complex assessment practices, including task design, curriculum dictates, student and teacher activity, as well as the physical and social structure of the classroom. It is also useful for revealing aspects of the activity that
are invisible, yet powerful in shaping practices. These aspects include motives, as well as the division of labour between the teacher and the students, and the rules which legitimize their actions. Cole and Gallego (2001) argued that activity theory “provides a set of useful heuristics for analyzing” (p. 961) activity within the classroom. Both Crossouard and Pryor (2008a) and Black and Wiliam (2006) concurred with this conclusion.

In this study, formative assessment is defined as a “unified activity” (Lund, 2008, p. 19), involving both assessment and instruction, whereby the teacher and student collaborate on producing an assigned task. This collaboration results in the development of both parties, as the learners gain expertise at the task. Within the formative assessment activity, the expert (teacher or student), intentionally gauges the learner’s, (teacher’s or student’s) current level of learning and alters instructional activity so that the learner can complete the task successfully (Bennett, 2011; Black & Wiliam, 2009; Cizek, 2010; Nolen, 2011). This definition is aligned to the works of Ash and Levitt (2003), Lund (2008), and Rust et al., (2005), who frame formative assessment within a sociocultural paradigm. All activity is situated and is a result of collaboration and co-construction. As a consequence, activity, such as a teacher’s pedagogy, is born from and shaped by the community within which it is practiced (Daniels, 2001; Rust, et al., 2005).

Here I investigate the activity of formative assessment within a Social Studies Philosophy secondary school classroom in Canada, where the classroom participants are unaided by expert collaborators in their enactment of the activity. The study seeks to address gaps in the literature on the activity of formative assessment that unfolds unaided by a researcher. This is the condition under which formative assessment activity occurs in most classrooms. The study specifically focused on the practice of formative assessment in Western Canada and in the subject area of Social Studies. It recognizes the uniqueness of both the micro-culture and the macro-culture within which the practice is located and, in so doing, adds to an understanding of formative assessment within that province and that subject area. It seeks to discover and document the formative assessment activity within these contexts in all its complexities, nuances and messiness.
This research is guided by the question, “How does formative assessment unfold in a Secondary School Social Studies classroom?” My personal experience as a teacher who had experienced difficulty with formative assessment inspired this research question, and the literature provided a framework for my investigation. In the next chapter, I describe the methodology, my plans for the investigation of formative assessment activity in the classroom.
Chapter 3.

Methods

This study explored the formative assessment practices enacted in a Grade 8 Philosophy classroom. It was guided by the research question, “How does formative assessment unfold in a Secondary School Social Studies classroom?” To capture a picture of the formative assessment activity, I employed activity theory as the study’s theoretical lens. This lens proposes that human development is inextricably linked to activity; it occurs within a context and is a result of mediation with tools. Accordingly, this investigation entailed understanding the social, historical and cultural context of the activity, examining the teacher’s and students’ motives and goals for engaging in activity, and surveying the actions undertaken to achieve the object of the formative assessment activity.

I undertook this investigation employing an interpretative qualitative case study design. A central assumption of this design is that knowledge is constructed from our understandings and interpretations of the world and is socially, culturally and historically situated. To access this knowledge, data was collected from multiple sources, including interviews, observations and documents. These data sources enabled me to capture the activity completely and holistically (Flick, 2009). The works of Yamagata-Lynch (2010) and Auerbach and Silverman (2013) offered me a systematic and comprehensive way to analyze the participants’ understandings of and experiences with formative assessment activity and present it in rich and thick detail. Using this approach amplified the voice of the teacher and students so that the research squarely focused on the activity of formative assessment, its context and the teacher’s and students’ goals, motives and actions (Yamagata-Lynch, 2010).

In this chapter, I present the research design that I used to explore the formative assessment activity. I also describe: (1) the research question; (2) the study’s
3.1. Research Question

The research question, 'How does formative assessment unfold in a Secondary School Social Studies classroom?', was intentionally crafted with a wide focus so as to provide sufficient opportunity to explore the formative assessment activity in its entirety, including the context and organization, the relationships and interactions among classroom participants, and the tools employed to mediate these activities. This question required an in-depth exploration of the everyday practice of formative assessment activity, including task design, teacher and student actions, and cultural tools employed during the activity. Therefore, this inquiry focused on the object of the formative assessment activity, the tools used to meet this object, the transformation of the object, and the context within which the activity occurred.

3.2. An Interpretative Qualitative Case Study Research Design

I chose to use an interpretative qualitative case study design for three reasons. First, it adequately addressed the research question. Second, it aligned seamlessly to the assumptions of activity theory, and third, it had the potential to provide an in-depth picture of formative assessment activity in a Social Studies classroom. This design has the ability to reveal the inquiry's assumptions about the nature of knowledge, as well as the best possible way to understand this knowledge, given its assumptions.

3.2.1. Interpretative Paradigm

The study adopts an interpretative paradigm. This paradigm positions everyday human interactions as the primary stimuli for the construction of knowledge and
highlights the role of context in producing human interaction that is rich, complex, distinct and situated (Crotty, 1998; Westberry, 2009b). An interpretative paradigm views “all knowledge, and therefore all meaningful reality as such, as contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context” (Crotty, 1998, p. 42). The assumptions of this paradigm possess sufficient commonality with the tenets of activity theory. They both perceive knowledge to be constructed in collaboration with others. Knowledge is, therefore, social, cultural and historical and as such, requires a research paradigm that can make sense of its situated and relational nature.

3.2.2. Qualitative Research

Qualitative research is better aligned with the conceptualization of knowledge construction, during formative assessment, as being situated and relational, than is a quantitative approach. The latter proposes a view of formative assessment activity as “measurable” and “generalizable”, fixed, and stable; it argues that formative assessment can be observed and measured objectively, devoid of its context (Creswell, 2008, p. 51). Qualitative research, on the other hand, lends itself to description of an activity that is dynamic, complex, nuanced, situated and relational. It is:

a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible ... qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2005, p. 3)

Given this definition, qualitative research offers the tools to capture the essence of formative assessment activity, including its “temporal,” “local” and “idiosyncratic” nature (Denzin & Lincoln, 2007, p. 5) and its “ebbs and flows” (Yamagata-Lynch, 2010, p. 65).

By their very nature, qualitative methods are compatible with activity theory (Yamagata-Lynch, 2010), thus enabling me, as the researcher, to explore phenomena naturally. This is only possible when the investigation assumes that there is an
inextricable bond between a phenomenon and its social, historical and cultural context, which is a central tenet of activity theory.

Furthermore, the rich and abundant data associated with a qualitative methodology can be managed and systematized through activity theory tools (Yamagata-Lynch, 2010). Organizing an “overwhelming” quantity of “complex” data, where the connection between ideas and concepts are indirect, into easily communicable findings, can be “challenging” (Yamagata-Lynch, 2010, p.8). The difficulty of analyzing these concepts occurs when they morph or are involved in multiple connections. Activity theory provides the tools to communicate results in a manageable way. Its predetermined components – subject, tools, object, community, rules and division of labour – act as a storyboard from which participants’ tales can be told in a comprehensive and organized manner. Additionally, changes in concepts and their connections can be “zoomed in and out” so that the story in all its twists and turns can be revealed (Yamagata-Lynch, 2010, p.7). Complexity can also manifest itself in contradictions and tensions. Activity theory adds to the exploratory power of qualitative research because it holds that tensions are a key feature of any social phenomenon and it offers a way to examine and explore these tensions. Activity theory provides a way to describe this type of complexity because it proposes that contradictions are the inevitable consequence of activity and the primary fulcrum for change and transformation (Daniels, 2001; Engeström 2001; Hardman, 2005, 2008).

3.2.3. Case Study

The design employed to understand the construction of knowledge that is situated and relational is the case study research design. A case study “involves an in-depth exploration of a bounded system” (Creswell, 2002, p. 476). The case is bounded, in the sense that the inquiry's phenomenon and its context are “fenced in” together to form the unit of analysis (Merriam, 1998, p. 27). Stake (2000) argues that this bounded system of study facilitates a particular, yet holistic picture of a complex social phenomenon. In this study, the phenomenon to be explored is the formative assessment activity, and the boundaries that make up the case are the participants (the teacher and students), subject (Philosophy) and place (Grade 8 classroom). The phenomenon of formative assessment is a unified activity; it reflects the integration of assessment and
instruction. Establishing this bounded system was a primary concern while constructing
the case. This bounded system not only guided my direction by “delimiting the object of
study” (Merriam, 1998, p. 27), but also ensured that processes for the selection and use
of data collection instruments, identification of participants, and analysis of data were
aligned with the research question (Hardman, 2005).

I offer four reasons for the selection of a case study design. First, the case study
meets one of my aims in this research, which was to capture the phenomenon in its
entirety, including its “ordinariness, peculiarities and complexities” (Merriam, 1998, p.3).
To this effect, the design of any case study is open, to ensure that a myriad of tools
could be used to unearth and decipher the phenomenon (Stake, 2005)

Second, one assumption of a case study design aligns with that of activity theory.
Both the theory and the design position context as essential to an understanding of the
activity and the phenomenon, respectively. The case study thus provided the researcher
with the tools to capture and understand the phenomenon of formative assessment and
the role the context played in shaping the activity. Third, Chadderton and Torrance
(2011) note that the “case study assumes that social reality is created through social
interaction, albeit situated in particular contexts and histories and seeks to identify and
describe it before trying to analyze and theorize it” (p. 53). Given this, I believed that the
tenets of case study are in tandem with the study’s paradigm and method of inquiry. All
three – an interpretative paradigm, qualitative methodology and case study design –
describe a view of the construction of knowledge as occurring through participants’
interactions. This principle of the case makes it possible to design a study with the
mechanisms required to capture the interactions that lead to the construction of
formative assessment activity.

Fourth, there is a history of studies that have successfully married activity theory
and case study design. Theorists as Black and Wiliam (2006), Crossouard and Pryor
(2008a), Daniels (2001), Engeström (2001), Hardman (2005, 2008), Nolen (2011) and
Yamagata-Lynch (2010) have used this combination when studying the classroom
environment and have acknowledged its utility. Yamagata-Lynch highlights the
compatibility of activity theory and case study;
Activity systems analysis involves the examinations of self-sustained systems that are difficult to remove from the context ... [and] the case study which involves the examination of clear and bounded systems in natural setting brings an organizing framework to maintain focus. (p. 79)

3.2.4. Summary

This research design, a interpretative qualitative case study with its assumptions – the social construction of knowledge and the phenomenon as being embedded into the context – and its aim, which is to collect rich and in-depth data, has guided the execution of this inquiry. It has impacted every choice that I have made – from how I defined my role as a researcher, through the establishment of procedures and processes connected to participant selection, data collection and data analysis, to the guidelines that I instituted for maintaining ethical standards and trustworthiness of the study results. That is to say, this research design has served as the foundation on which I built my investigation of formative assessment activity in a Grade 8 classroom.

3.3. The Researcher

Maxwell (2005) discussed the researcher’s identity and experience as sources of credibility, validity and vision within the research design. He cited the work of Glesne and Peshkin (1992) who described the role that their personal experiences played in their investigations:

My subjectivity is the basis for the story that I am able to tell. It is a strength on which I build. It makes me who I am as a person and as a researcher, equipping me with the perspective and insights that shape all that I do as a researcher, from the selection of topic clear through to the emphases I make in my writing. (p. 104, cited in Maxwell, 2005, p. 38)

My subjectivities and experiences as a student, a novice researcher and a teacher have been embedded in the design and execution of this study. They have influenced my documentation and understanding of the formative assessment activity. Lichtman (2007) eloquently describes the role of the researcher: "All information is filtered through the researcher’s eyes and ears, and is influenced by her experience, knowledge and background" (p. 21). As a researcher, a data-collection instrument and a
teacher, I have built in mechanisms that allowed me to “enter the field with an open mind and develop an emic, or insider, perspective while relying on prior knowledge about the research site with an etic, or outsider, perspective for contextualizing observed activities within a larger context” (Yamagata-Lynch, 2010, p. 65). My experiences, history, and beliefs will be discussed further in Chapter 4.

In the classroom, insiders are teachers interested in conducting research as a means of transforming their practice (Bassey, 1992). They are “those practitioners (and/or researchers) who are most interested in outcomes from research that relate fundamentally to the development of their practice as teachers” (Jaworski, 2004, p. 3). Outsiders, on the other hand, are investigators who want to observe and report pedagogical practices but not transform them. They are “those researcher-practitioners who are concerned with development from the outside: typically, it is not their own practices that are being developed” (p. 3). In my mind, I see myself occupying both perspectives. I did not exactly fit the definition of an insider as proposed by Bassey (1995) and Jaworski (2004), but because of my identity as a secondary school teacher, which was present from the inception to the culmination of the study, I have categorized myself as a partial insider. This identity was the initial motivating force for the inquiry. This research was designed as a medium through which my own formative assessment activity, as a Social Studies teacher, could be improved. During the study, my shared experience of teaching connected me to the teacher participant, Mr. Benedict. I understood his challenges, saw merit in his actions, applauded his success and felt his failures. This connection as well as my beliefs and experiences with formative assessment became a filter through which I came to understand the teacher’s activities. My identity as a teacher, looking to transform my own formative assessment practices, thus impacted the way that I collected and analyzed the data.

I also have categorized myself partially as an outsider – that is, someone who is an international student with no prior learning or teaching history in the Canadian secondary school community. I designed the study to document another teacher’s formative assessment activity, with no intent of intervening or collaborating with him to alter his practices. Rather, during the study, I assumed the role of non-participant observer. This meant that my membership in the classroom, and thus my participation,
was “peripheral” (Yamagata-Lynch, 2010, p.67). While I did engage in some goal-directed actions – for example, I answered students’ questions or acted as a chaperone on school trips – my intention for engaging in these activities was not to transform the teacher’s practices. Rather, it was an attempt to engage with the students in a manner which facilitated insight into their meaning-making as participants. My goal was to build a rapport with the students in a way that did not deter the collection of data on assessment activity (Maxwell, 2004).

Considering that my roles as a researcher and a teacher had a substantial impact on the design and execution of this study, I have made evident the choices that I made about the processes of data collection. In particular, I have included a description of my social, cultural and historical context and a discussion of my use of researcher notes to collect and explore the data. These discussions can be found in the sections of this chapter which address the participants and the data collection sources, respectively. I believe that making evident my assumptions about myself as researcher, and documenting my roles as designer of the study and data collection instrument, demonstrates my process. This can enhance as well as threaten the trustworthiness of the study’s results (Denzin & Lincoln, 2007; Glesne, 2011; Maxwell, 2004).

3.3.1. Summary

My experiences, history and knowledge played a critical role in shaping how I employed data collection devices, interpreted the data and narrated the story of the participants. These will ultimately impact on how the audience understand the realities of the participants (Glesne, 2010).

3.4. Selection Process

Purposive sampling, where I intentionally sought and selected an “information rich case” (Merriam, 1998, p. 48) guided all sampling decisions. The sampling process involved several steps, all guided by the question, “Which case provides me with the best ‘opportunity to learn’ (Stake, 2007, p. 446) about the activity?” It commenced with selecting a site in which to conduct the study. I had two options – either to conduct the
study in Trinidad and Tobago or in British Columbia. My teaching history offered me the option of selecting a case within the Trinidad and Tobago educational system. This option would have been advantageous in many respects. I had been a teacher for ten years within that system, so I was familiar with its educational culture. Furthermore, my membership in the teaching community would have facilitated my search for the case.

Notwithstanding these advantages, I decided to conduct the study in the province of British Columbia (BC) in Canada, for two reasons. First, I wanted to have easy access to my supervisor and committee, who, throughout the process of data collection and analysis, would advise and guide me. I felt that regular discussions with my committee would facilitate the production of rigour in the study (Silverman, 2009; Simons, 2009; Stake, 2007). Second, I had attributed my struggles with formative assessment to the Trinidad and Tobago educational system’s emphasis on testing, and my conclusions were strongly supported by the literature, which identified this type of environment as a barrier to those teachers who wanted to integrate formative assessment into their practices (Gipps, 2007; Shepard, 2005). Although BC has a history of standardized testing, it is not practiced with the same intensity as it is in Trinidad and Tobago. As a consequence, I felt that the sampling frame for cases would be larger in BC than in Trinidad and Tobago. In other words, given the low stakes assessment context in BC, I felt that it would be easier to find those “living examples” of formative assessment activity for investigation (Black and William, 1998, p. 15).

The next step in the selection process involved identifying the school districts from which the case could be drawn. I sought permission from two school districts to conduct the study. Two reasons determined my choice of districts. First, I had established connections with several teachers within these two districts, and I felt that these teachers could be key brokers in informing me about suitable sites. Second, the school districts were two of the largest school districts in British Columbia. The secondary schools within these two districts numbered 52 schools. These districts provided me with a large sampling frame from which to select the case.

Three teachers were suggested, by an advisor, as possible participants for the study. I employed five criteria to determine their suitability. First, the teacher had to possess a Bachelor of Arts or Education degree, with 18 credits in such subject areas as
History, Geography, Economics and Political Science, and have taken a Social Studies teaching methodology course. Second, she or he needed to hold BC teaching credentials. Third, the teacher must have taught for no less than five years. Fourth, the teacher must practice formative assessment. She or he would need to have a theoretical understanding of formative assessment and to have employed it in her or his classroom for a minimum of three years. Fifth, the teacher’s current practice of formative assessment needed to be aligned to the definition of formative assessment employed in this study. The inclusion of the first three criteria ensured that the teacher selected would possess adequate knowledge about teaching and the subject discipline and would have experience with pedagogy. The fourth and fifth criteria narrowed my focus to identify those classrooms where formative assessment was practiced successfully. That is, a longstanding practice, at least three years, of formative assessment whereby the teacher and students collaborated with each other on an assessment task with the aim of developing the students’ mastery and the teacher’s practice.

All three of the suggested teachers employed formative assessment in their classroom; however, Mr. Karl Benedict seemed to be the best possible candidate, since he employed formative assessment more extensively than the other teachers. One teacher, the middle school teacher, limited her use of formative assessment to English Language, whilst the other teacher, a high school Social Studies teacher, used formative assessment in a diagnostic capacity. Mr. Benedict met all the criteria. He had been practicing formative assessment in his classrooms for the past three decades, integrating the activity into classroom instruction. Mr. Benedict possessed expert knowledge about the activity, as within the three-year period prior to the study, he had conducted three workshops on assessment in his school district.

After the mandatory permissions from the school, Public Secondary School 1 (PSS1) and Mr. Benedict were granted, I embarked on the last step in selecting the case, which was identifying the class. The sole criterion in selecting the classroom was that the students and teacher must be engaged in formative assessment activity. Mr. Benedict taught five classes: Grade 8 Philosophy, Grade 9 Philosophy, Grade 10 Philosophy, Grade 11 Social Studies and Grade 12 History. Although formative assessment activity was implemented in all five classrooms, at that time, another researcher was collecting data in the Grades 10 and 11 classrooms, so Mr. Benedict
identified the Grade 8 Philosophy class as the possible case. The case thus constituted the Grade 8 Philosophy class, comprising Mr. Benedict and the students. In the ensuing paragraphs, I describe the context of the case – the School District and school – and the case, the Grade 8 Philosophy class.

3.4.1. The School District

The school district is a large metropolitan district in south western BC. Covering an area of 114 square km, the district encompasses an entire city in BC. Vancouver is one of the most populous and culturally and linguistically diverse urban centres in Canada. The district enrols 56,000 students and has 108 public schools. The secondary school population of 26,000 students enrolled in secondary Grades (8-12) is dispersed throughout the district’s 18 secondary schools. Over 126 different languages are spoken in the district, and more than 60% of the school population is bilingual. Estimates place the English Second Language (ESL) and the special education learners at 25% and 7% of the total school population, respectively. The district’s mission is “to enable students to reach their intellectual, social, aesthetic and physical potential in challenging and stimulating settings which reflect the worth of each individual and promote mutual respect, cooperation and social responsibility” (School Board Policy Document, 2013). This has resulted in the establishment of a wide range of educational programs and partnerships with various communities and institutions within the district. Included in the list of programs offered in the district are Montessori, French Immersion, Mandarin bilingual, mini-schools, gifted programs, outdoor education, fine and performing arts education and sports education. The district divides the academic year for secondary schools into two semesters. Each semester is approximately 19-20 weeks long. For the academic year 2013-2014, the first semester began in September 2013 and ended in February 2014. The second semester commenced in February 2014 and culminated in June 2014. The district has identified Assessment for Learning (AFL) as an important innovation for achieving student, and in 2009 it incorporated this pedagogical activity into its policy.
3.4.2. The Public Secondary School 1

Public Secondary School 1 (PSS1) is a co-educational public secondary school located in southwest BC. Most of its 1,700 student population is drawn from the eight elementary schools located within the catchment area. PSS1 is situated in an ethnically and culturally diverse community in which over 50 different languages are spoken.

The academic curriculum at PSS1 includes three district approved and accredited enrichment programs. They are known as French Immersion, Arena and Angora. The goal of an enrichment program is to provide students who have demonstrated academic promise with an advanced and challenging learning experience based on student interests. Students wishing to participate must apply to enter and write the School Board's Test of Cognitive and Writing Skills. The French Immersion program is a five-year program commencing in Grade 8 and culminating at Grade 12. The other enrichment programs, Arena and Angora, are identified as mini-schools. Arena is a three-year accelerated program intended to develop students’ academic knowledge, leadership skills, and ingenuity. Included in the curriculum are Math, Science and English. Angora, the other mini-school, is headed by Mr. Benedict and the Grade 8 Philosophy class is included in its program.

3.4.3. The Case

As previously mentioned, the case was comprised of the teacher, Mr. Benedict, and the students in his Grade 8 Philosophy class. At the time of the study, Mr. Benedict had 30 years of teaching experience. He was not only the Grade 8 Philosophy teacher, but also head of the Angora Program and the Social Studies department at PSS1. In total, there were 26 students in the Grade 8 class. This cohort of 10 boys and 16 girls reflected a cross-section of the school's population in relation to its gender, ethnic and socioeconomic status variables. Students' academic ability, namely, their grades attained during elementary school and their scores on the district’s Test of Cognitive and Writing Skills, was one of the criteria used to select the Grade 8 students for the program. This criterion was however not as significant as the students’ potential to think philosophically, in determining entry into the Program. The Grade 8 students thus possessed a range of academic ability, and there were several students in the
classroom who were identified as having a learning disability. They came from various elementary schools in the district. Most students lived within the PSS1 catchment area. However, because the class was included in the Angora Program, there were a couple of students who lived outside of this area who had been attracted to it. An example was Nathaniel, who on average commuted for an hour every day to participate. The students were between the ages of 12-14 and were new to the school. In fact, they had recently completed elementary school and had just started their first year as secondary school students. Students’ profiles can be found in the data collection section of this chapter and in Chapter 4, section 4.2, respectively.

3.4.4. Ethics

After permission was granted from the Simon Fraser University’s Ethics Review Board, I contacted the Vancouver School Board and requested permission to conduct the study (see Appendix A). Once School Board permission was obtained, I visited and secured consent from the principal of PSS1 (see Appendix B). I invited Mr. Benedict to participate in the study and he accepted (see Appendix C). The Grade 8 Philosophy students were identified as possible participants. I sought permission from their parents (see Appendix D) and the students (see Appendix E). Of the 26 students in the class, 18 readily agreed. I selected eight of these students, five girls and three boys between the ages of 13-14, to be interviewed. The selection process for the eight students will be described in Chapter 4.

At this point, my primary concern was ensuring that all the participants who consented to participate in the study made an informed decision and that their consent was voluntary. To this end, I included on the consent forms for participants, and the parents of participants under 18 years, the rights of participants as well as measures undertaken to address issues concerning privacy and confidentiality, informed consent, ownership of the data and participants’ involvement. I met with the teacher, and then the students, to discuss with them the participants’ rights, responsibilities and the logistics of the study. My goal was to address any concerns that they might have about participating in the study.
Of equal importance was ensuring that participants’ rights were not infringed during the study. To address issues of privacy and anonymity, pseudonyms were provided to all participants and all personal identifiers were blocked out from artifacts before they were analyzed. Although participants had already provided consent to my audio-recording them during interviews, before every interview I again requested their permission to interview and record them. Participants also knew that they could stop the process at any time and withdraw from the study. Consent was also requested from Mr. Benedict (see Appendix F), the parents of the eight students who agreed to be interviewed (see Appendix G), and the students who were later interviewed (see Appendix H) during member checking.

3.5. Data Collection Techniques and Procedures

The data collection occurred in two phases within five months. Phase 1 was a one-month pilot study, from September to October 2013. Phase 2, the four-month main study, was conducted from November 2013 to February 2014, immediately following the culmination of the pilot. Data collection was scheduled to occur within a school term because I believed that this time period would afford me sufficient time to capture the formative assessment activity, including its development and transformation. At Mr. Benedict’s request, the data collection started three weeks after the school term had begun, in late September. Mr. Benedict desired the first three weeks to settle the class and get to know the students before I entered the space.

The data collection was scheduled to conclude during the first week of February, at the end of the school term. However, the study was extended by two weeks so that a fourth assignment could be included in the data collection. Mr. Benedict assigned the fourth task, a speech, in January. This assignment differed from the previous assignments in its format and presentation. I believed that its inclusion would provide me fuller and richer understanding of the formative assessment activity.

The goal for data collection was to capture fully the phenomenon of formative assessment. To do this, five data sources were employed. They were: (a) classroom observations and fieldnotes, (b) pre-observation interviews and post-observation
interviews, (c) semi-structured interviews, (d) classroom assessment artifacts, and (e) researcher’s memos. See Table 3-1 for a list of data collection methods and their frequency of use during the study. These sources complemented each other. Observations sought to capture the unfolding activity, and documents revealed the assignments in progress. Interviews collected data on the participants’ perceptions of the activity, as well as their motives for engaging in formative assessment. Documents, as students’ work samples, and curriculum plans, were important for tracing the development of student learning, as were the plans and rules for the assignments. These data sources enabled triangulation, offering a variety of perspectives, which together provided a more complete picture of the formative assessment activity than any single data source. The use of multiple sources is congruent with the principles of activity theory and case study methods, which advocate the use of several data collection devices to provide the perspective required for an understanding of complex phenomena (Yamagata-Lynch, 2010).

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Time Period</th>
<th>No. of Sessions</th>
<th>Length of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Observation</td>
<td>All sessions</td>
<td>37</td>
<td>80 Minutes per session</td>
</tr>
<tr>
<td>Pre-observation and Post-observation Interviews</td>
<td>September - February</td>
<td>34</td>
<td>2 – 5 Minutes per session</td>
</tr>
<tr>
<td>Research Memos</td>
<td>September – February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Interviews</td>
<td>September - February</td>
<td>5</td>
<td>45 - 60 Minutes per interview</td>
</tr>
<tr>
<td>Student Interviews</td>
<td>October – February</td>
<td>14</td>
<td>20 – 30 Minutes per interview</td>
</tr>
<tr>
<td>Student Work Samples and Documents</td>
<td>November – February</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Member Checking</td>
<td>July - October</td>
<td>9</td>
<td>60 Minutes per sessions</td>
</tr>
</tbody>
</table>

Table 3-1. List of the data collection methods used during the study

3.5.1. Pilot Study

The data collection tools were first piloted in the classroom to determine their effectiveness in capturing the phenomenon (Stouthamer-Loeber & Van Kammen, 1995). The pilot study was conducted a month prior to the onset of the main study. It commenced in late September and ended in October 2014. It was conducted in the same class and with the same teacher as the main study. Eight observation sessions,
one teacher interview and two student interviews were conducted. At the end of the pilot, the teacher and I discussed the data collection process. My intent in this discussion was two-fold. One was to include his voice in any changes that were to be made in the study’s design and methods, so that any modification to the procedures or instruments would reflect the participants’ voices. I believed this would enhance the authenticity of the study’s findings. The discussion was also intended to ascertain Mr. Benedict’s level of comfort with the data collection devices and to ensure that the process was not too cumbersome for the participants (Angrosino, 2007; Bogdan & Biklen, 2007; Flick, 2007). He expressed his satisfaction with the data collection process. The methods also worked well, in general.

When the pilot was completed, I met with my committee to discuss the data collection process. A change made to the sources was the adoption of a semi-structured format to the post-observation conferences. This alteration was made in order to probe the teacher about specific issues and actions that occurred during observation. Given that no substantial changes were made to data collection, it was deemed appropriate to include the data from the pilot with that collected in the main study (Maxwell, 2004). I felt it necessary to include this data, because a portion of it centred on making assessment criteria evident to the students, which has been identified as a key feature of formative assessment activity (Crossouard & Pryor, 2008a; Sadler, 2010, Torrance & Pryor, 2001).

The pilot study proved to be useful in a variety of ways. It established rapport between the study’s participants and myself. It also allowed me the opportunity to test and modify the data collection techniques. I found a notepad was better suited for fieldnotes than the structured observation form I had intended to use. The pilot also offered me my first opportunity as a researcher to observe formative assessment activity. From the pilot study, I came to understand the literature’s description of formative assessment as a unified activity that could not be separated from instruction. This validated many of my design decisions, in particular that to collect data during all Philosophy class sessions.
3.5.2. Observations

In all, I observed 37 sessions of 80 minutes each. Eight observation sessions occurred during the pilot study and the remaining 29 throughout the main study. During this time, the class engaged in a diverse array of activities including group work, debates, instruction, musings, examination, feedback, and watching movies, and involving a variety of participation configurations. Mindful of the embedded nature of formative assessment, that it is integrated into an instruction, I observed all instructional activities during the data collection period. I did so based on my previous experience of the classroom, that it is an unpredictable place. Instructional activities that were not designed for a particular task could in fact, turn out to be so, or could have tacit connections to an unrelated task. I was able to gather data during those unexpected moments that I would not have witnessed if I had focused solely on planned formative assessment activities. There were many occasions when Mr. Benedict indicated to me that there would be no formative assessment activity during the session, yet he took a portion of the session to make the criteria explicit or to model good answers. These moments were often done quickly, prompted by students’ questions, and offered invaluable data.

During whole class sessions, I remained stationary, in the back of the classroom. My intent in sitting at the back of the class was to not unduly interrupt the class or draw attention to myself. During group work sessions, I floated around, moving from group to group, trying to capture the groups’ artifacts, discussions and dynamics. These activities were challenging to observe because I wanted to understand the different ways in which the activity unfolded, so I moved from group to group. As a result, the data collected in these sessions did not reflect all of any group’s entire activity, but rather snippets of activity as it unfolded in the various groups. I also observed feedback sessions involving Mr. Benedict and the students. During these sessions, I sat at some distance from Mr. Benedict and the students, in order not to make the student feel self-conscious. I took note of the interactions, body language and both written and verbal feedback. In many of these sessions, the students spoke softly and shyly to Mr. Benedict, so at times it was difficult to hear their words. However, I included these sessions as a data source given feedback’s role as one of the most effective learning activities and a crucial part of formative assessment (Hattie, 2012).
During the observation sessions, I attempted to maintain the role of observer. Mr. Benedict’s recognition of my presence, to ask me questions or to confirm information, made me feel uncomfortable at first, as I felt that my role was to observe and not to participate in classroom activities. However, prolonged observation of the classroom made me aware of a particular pattern in his behaviour, that his classroom was a learning environment for all its members. This realization lessened my discomfort and made it easier for me to participate. I believed that this pattern of behaviour made the students feel as if I were a part of the classroom. This is evidenced by Brittney, in her explanation of my presence to the substitute teacher; when the teacher asked a group of students who I was, Brittney replied, “Oh, that’s Ms. Kronberg; she’s with us” (Brittney).

I employed two techniques, fieldnotes and reflective memos, to document classroom observations. The latter technique was also used after interviews, so it is discussed in section 3.5.7. Fieldnotes were the “written accounts” of my observations of classroom activity (Bogdan & Biklen, 2007, p. 119). I wrote them with the intent of providing the reader with “a slice of life: in the classroom; activities and context” (p. 120). To accomplish this, I adopted the advice of Angrosino (2007) and in my handwritten notes, I included descriptions of classroom demographics; the physical environment, including notes on the workstations, classroom resources and whiteboard writing activity; descriptions of participants; a chronology of the activities during each classroom sessions; and accounts of classroom interactions. I tried to be as accurate as possible when documenting conversations. I included descriptions of nuanced behaviours, gestures, emotions and body language. As I observed, I looked for patterns and daily routines, as well as anomalies in the classroom interactions and activities. This helped me to see the activity not as a simple string of actions, but as a whole influenced by unspoken norms, cultures and rules (Flick, 2007). These actions helped the fieldnotes to have a sense of “completeness” to them (Atkinson & Coffey, 2003, p.6). Only the pseudonyms of non-consenting class members were included in my fieldnotes, not their contributions to conversations.

During the pilot, at the beginning of each data collection session, I used a structured observation sheet that included such headings as (1) activity event number, (2) location of activity, (3) time period for activity, (4) persons involved in the activity, (5) physical context, and (6) sequence of activity (see Appendix I). However, the fast pace
of the classroom and my inexperience as an observer made it impossible for me to include all these details while observing. I abandoned the sheet during the main study and opted for a notebook, where I had greater freedom to draw and write. After each session, I would rewrite notes and as I did, I listened to the day’s recordings. In this review, I included these details, identified themes and possible issues, and made plans for the next session. Each fieldnote write-up was between four to 12 pages, in length and at the end of the data collection period, I had accumulated 283 pages of fieldnote data, in total. The observation fieldnotes provided a thick, holistic description of each assessment event throughout its enactment.

3.5.3. Pre-observation and Post-observation Interviews

Prior to and after the daily observation sessions I conducted pre-observation interviews with the teacher, and post-observation interviews with both the teacher and students (see Appendix J for the list of questions). These interviews were designed to identify the intent of instructional activity, as well as an evaluation of the daily task. The interviews were scheduled to last no longer than five minutes and were audio-recorded. My goal in conducting these conferences was to easily identify and trace the development of the formative assessment activity, which could be hidden due to its qualitative nature and its integration into instruction (Miller, 2003). It also alerted me to the motives of Mr. Benedict and the students, which Leont’ev (1975) argued are the driving force for engagement in activity.

Time constraints, and in particular, the busyness of the classroom, affected the regular use of these interviews. Mr. Benedict was scheduled to teach before and after the Grade 8 class, and the students were scheduled to attend another class after they left his class. By December, it became difficult to schedule pre-observation interviews with Mr. Benedict, and post-observation interviews with the students and Mr. Benedict. In all, 34 pre-observation and post-observation interviews were conducted. These were conducted in the classroom. They were written at the top and bottom of the fieldnote for the day’s observed activity. I attached them to the fieldnote so as to trace the impact of Mr. Benedict’s and the students motives during their engagement with formative assessment. Despite my inability to successfully execute this data collection technique as I had envisioned, it still was important in providing information to identify Mr.
Benedict’s actions, the reasons behind them and the students’ responses to Mr. Benedict’s to them.

**Pre-observation and post observation interviews with the teacher**

The teacher was scheduled to be interviewed twice: prior to and after observation sessions. During the pre-observation interview I asked three questions aimed at identifying the assessment event: (1) “Is there formative assessment in this session?”, (2) “If yes, what is it?”, and (3) “If yes, why?” After each observation session was completed, I also conferenced with Mr. Benedict. This interview served as an evaluation session, where I posed two questions to him: (1) “Do you feel the formative assessment was successful/effective?” and (2) “What did you learn from it?” The structured format of the post-observation interview was reduced to these two questions, so I could explore events and their meanings. However as previously noted, these interviews were difficult to conduct. In all, 21 pre-observation and post-observation interviews were conducted with Mr. Benedict.

**Post-observation interviews with the students**

Five-minute post-observation interviews were scheduled to be conducted, with two students, on a weekly basis. The questions asked were: (1) “What do you think were the teacher’s goals during assessment?”, (2) “Why do you think that these were his goals?”, and (3) “How did the teacher’s goals shape your participation?” These post-observation interviews served three functions. They surfaced students’ motives for participating in formative assessment activity, revealed the reasoning for their actions and their perceptions of Mr. Benedict’s actions. After the pilot study, a semi-structured approach was also used, where the questions asked targeted incidents that had occurred during the session. A total of 13 post-observation interviews were conducted with the students. The class schedule of the students rendered this technique less feasible than I had hoped.

**3.5.4. Semi-structured Interviews**

Nineteen semi-structured interviews were conducted during the study, five with the teacher and 14 with the students. These interviews were conducted on the school
grounds and at the convenience of the participants. The purpose for using this source of data was to furnish rich and thick detail on the nature of the teacher’s and students’ actions from the perspective of the participants (Bailey, 2007; Flick, 2007; Litchman, 2012). Yamagata-Lynch (2010) highlights the role of the interview in studies that adopt an activity theory framework. Interviews inform how the participants “view their own experiences and bring attention to idiosyncratic language, cultural practices, and artifacts with symbolic significance that are embedded in participant everyday activities” (p. 70). Furthermore, the interviews and observations were well matched with the object of the activity. The interviews made evident the motives for engaging in activity, while the observations identified the unfolding object (Daniels, 2005; Hardman 2007a).

The interviews were comprised of both etic and emic questions (Fetterman, 2010). Etic questions were crafted prior to the interviews (see Appendices K and L for the questions posed to Mr. Benedict and students respectively). To construct them, I adopted the advice of Bloomberg and Volpe (2012), who suggest that the researcher employ the research question as a reference guide to formulate the questions. I wrote my research question on the top of a page, and as I developed a question, I inquired about its potential to reveal responses that reflected the participant’s conceptual understanding of the phenomenon. Whenever I developed a list of questions, I submitted them to my supervisory committee for feedback. Committee members provided the critical insight required to craft questions with simplicity, clarity and focus (Flick, 2007). I applied the feedback I received and reconstructed the questions when necessary. Emic questions emerged as the interviews progressed. They “probed for meaning to explore, to capture the grey areas that might be missed in other or questions that merely suggested the surface of the issue” (Angrosino, 2007, p. 43). These questions helped me to maintain a flow while digging deep to draw forth a meaningful discussion (Creswell, 2008; Flick, 2007).

Through the interviews, I wanted to “know their [the participants’] consciousness, see the development and learning” (Dorman, 2007, p. 98). Therefore, interviews were constructed to allow participants to share their stories. I used the phrases “Tell me about” and “Tell me more” instead of “how” and/or “why” as a way to invite participants into dialogue. Although all interviews were recorded, I also took notes. In the notes, I
recorded expressions, emotions, pauses and body language as well as key issues identified that required further exploration. I explored these in subsequent interviews.

**Teacher interview**

I conducted five interviews of approximately 45-60 minutes each with Mr. Benedict. The first interview was conducted at the beginning of the pilot study. Its purpose was to gather information on the context of the classroom as well as on his goals and motives. As a result, the questions inquired, “Tell me about yourself as a teacher” and “Tell me about your plans for the term”. I sought to draw out how the context might shape learners’ progress (Dixon-Krauss, 1996). It was useful for identifying the driving force behind Mr. Benedict’s actions (Hardman, 2007b).

I conducted the other four teacher interviews during the main study. These were scheduled after each month’s major assignment was returned to the students and were conducted in November, December, January and February. They thus served as a way of understanding the teacher’s plans for the next assignment, as well as his evaluation of the last assignment. Using these intervals, I could trace the overall object for the class and understand its progress, while focusing on particular assignments. These interviews supplied valuable information on the different elements – tools, rules, division of labour and community – of the activity. For example, I used questions such as, “Tell me, how is formative assessment progressing?” or “At the end of the semester, what do you hope to achieve?” to understand the object of the activity. Other questions were emic; they explored and confirmed themes that emerged during the observations. For example, I employed the question “I notice that you have said to the students on a number of occasions to make the assignment their own; tell me about that” to confirm the theme of originality.

**Student interviews**

Two assumptions of activity theory influenced my decision to interview the students. First, the theory purports that there is an inextricable link between the activity and its context. As a consequence, I would not have been able to understand the formative assessment activity by isolating it from the context within which the activity occurs. Second, the theory proposes that activities are multi-voiced in nature. The
community engaged in activity has varying motives, opinions, interests and histories. All these components play a role in shaping the nature of the activity (Daniels, 2001). I believed that interviewing students would provide a rich and thick description of the context, as well as add the multi-voiced dimension to the study.

Fourteen interviews, each lasting approximately 20-30 minutes, were conducted with the students. Two interviews were administered in October, with two students, during the pilot study. The remaining 12 interviews were conducted with six students. I interviewed each of these six students twice: once in November, at the beginning of the main study, and again between January and February, at the end of the data collection period. Like the teacher’s first interview, the first student interviews focused on students’ motives for engaging in assessment activity as well as on their backgrounds. The second interviews sought to gain their perspectives on Mr. Benedict’s assessment practices, as well as on their engagement in assessment.

Of the 18 participants, I interviewed eight students. The eight students were identified as key sample informants reflecting the wide cross-section of attitudes and behaviours of students found in the classroom. These students provided multiple voices on the assessment activity in the Grade 8 classroom.

3.5.5. Reflective Notes

At the end of each interview and observation session, I dictated notes on the sessions. The notes served three purposes. First, they focused on the ideas and themes that emerged in the interviews and the activity witnessed during the observation sessions. These notes contained questions and issues that needed to be discussed during interview sessions, and possible leads and ideas for continued observations (Glesne, 2010). They sharpened my focus on the phenomenon (Flick, 2007).

Second, my reflective notes were a space to explore patterns that emerged as the participants engaged in the activity. I examined themes and patterns and discussed their relationship to the research question. As I dictated, I kept in mind the question, “How does this relate to the investigation?” (Creswell, 2008). The connections between some notes were easy to establish; others proved to be more difficult. I kept notes that
contained ideas that did not easily connect with the research question and re-examined them during the data analysis period.

Third, the notes provided me with a place for reflection about my experiences as the data collection instrument. In these notes, I explored my successes, struggles and frustrations throughout the processes. These were many, given my inexperience with data collection. Through these notes, I explored my history and experiences as a teacher, researcher, foreigner and student. It surprised me how much my history and experiences influenced the data collection process.

In all, these reflective notes created what Flick (2007) identified as verisimilitude. He describes this as an unambiguous focus that triggers the production of an authentic picture of the participant’s experiences and activities, used to “draw the audience into the world of the participants” (p. 119).

3.5.6. Work Samples and Documents

Fifteen samples of students’ work were collected. They were works in progress – drafts submitted and returned to the students with feedback that they would use to refine the text. The work samples therefore showed evidence of joint production between the teacher and the students. I first collected artifacts from those students who had agreed to participate in interviews. My decision to ask these students first was based on the limited success I had had with the post-observation interviews. I realized that I needed a longer time than two minutes to discuss with the students their writing process, the use of feedback and the “re-do process”. The “re-do process”, as Mr. Benedict identified it, was the rewriting and resubmitting of draft work samples by students. Four of the students who agreed to participate in the interviews provided me with work samples. Two other students who consented to participate in the study provided me with work samples. I selected Google’s work because of his rewriting process. He wrote responses to Mr. Benedict’s feedback on the draft assignments before rewriting his work samples. I selected Ashley’s work sample because she was the only student to attempt a Translation Critique - a kind of writing that is particular to Philosophy. I collected samples from a number of students so that I could identify trends in Mr. Benedict’s feedback, and I felt that 15 was enough to identify patterns, as well as to trace the development in his
feedback. The class and school documents I collected from Mr. Benedict. They included unit plans, syllabi, three examination papers, two assessment rubrics, introductory letters written to the Grade 8’s by Mr. Benedict and former Angora students, six class note handouts, a PSS1 and Angora brochure and a school policy document. These documents provided me with a deeper understanding of the classroom and the wider educational environment. In all, I collected 18 documents. These documents gave me a "rich source of information, contextually relevant and grounded in the contexts they represent" (Lincoln & Guba, 2000, p. 177).

3.6. Data Analysis

3.6.1. The Research Question

During the data collection process, I came to realize that there was a lack of formative assessment activity, as I had previously defined it, occurring in the Grade 8 classroom. I shared my concern with my committee. It was suggested that I observe two teaching sessions with another class to ascertain the nature of formative assessment activities in these classrooms (P. Grimmett, personal communication, November 4, 2014). Mr. Benedict granted me permission to visit a Grade 10 Philosophy class and a Grade 12 history class, and I spent one 80-minute session in each class. I saw evidence of formative assessment practices, as I had defined it, occurring in both classes. These visits reconfirmed my decision to select Mr. Benedict. Interestingly, the differences between the formative assessment activity in Grades 8, 10 and 12, roused the question in me, 'Why did the formative assessment activity in Grades 8, 10 and 12 differ?' I discussed this with Mr. Benedict in one of our interviews and he replied that the Grade 8’s were new to the school and to him, and for him the first step of formative assessment was to “know them [his students] as people” and that students needed to become “comfortable” with formative assessment activity (Mr. Benedict, interview). This suggested to me that his approach involved progressively incorporating the formative assessment activity into teaching and learning. My focus therefore shifted to understanding the process of integrating formative assessment into the class activity. The research question was thus modified to: “What are the essential features of a class where formative assessment activity is being integrated?”
Altering the question shifted the focus of the data analysis to one where I examined the activity to determine what features needed to be in place before the class could practice formative assessment. As a teacher and researcher, I saw value in the flexibility and adaptability of qualitative research. Having the research question “constantly under review” as my research progressed was instrumental to my “understand[ing] and explor[ing] the central phenomenon” (Creswell, 2008. p. 141), to follow the data wherever they might lead.

3.6.2. Identifying Formative Assessment Activity

As previously stated, the definition of formative assessment I used was aligned to sociocultural theory. Formative assessment was therefore seen as a process of collaboration among classroom participants. The intent of this collaboration was to promote learning. This practice involves the teacher discerning learners’ current standing and progress to identify their strengths and weaknesses, and adapting feedback and instruction so learners can complete the task successfully (Bennett, 2011; Black & Wiliam, 2009; Cizek, 2010; Nolen, 2011). The literature suggests this type of formative assessment is difficult to distinguish from classroom activity because it occurs during and is embedded in teaching (Miller 2003; Crossouard & Pryor, 2008a). With this in mind, I employed five criteria to identify the type of formative assessment activity that would be the focus of my study. First, it involved the identification and negotiation of the task criteria by Mr. Benedict and the students. Second, pedagogical tools such as instruction, observation and questioning were used to assist the learner develop the task. Third, once the task was complete, criteria were used to discern the quality of the piece. Fourth, there was feedback and dialogue about the task, and fifth, there was negotiation about next steps, and how the cycle was to be repeated (Ash & Levitt, 2003; Torrance & Pryor, 2001).

3.6.3. Data Analysis

Auerbach and Silverman (2013) offered a four-step framework for analyzing data that I found useful. The first step that they recommend in the data analysis process is identification of the research concern or “what you want to learn about and why,” as well as the study’s theoretical framework (p. 44). With these, I included the research
question. Together, my intended learning, the reason for the inquiry, the theoretical framework and the research question became the “blueprint for making coding decisions” (p.44). These were drafted on post-it notes and placed on my desk where I could constantly refer to them as I interacted with the data.

**Figure 3-1. A draft of the research concern as suggested by Auerbach & Silverman (2013)**

Once the concern was drafted, I prepared the data for coding. I uploaded the data – transcripts, fieldnotes, memos, documents and audio-recordings – into NVIVO and labeled it (NVIVO, 2012). I used this data management software for two reasons. First, NVIVO served as a record-keeping system where I could organize and systematize the data. This system proved particularly helpful given that I had five months’ worth of data. Second, the system produced the data in a format that allowed me to conduct an audit trail easily (Yamagata-Lynch, 2010). Sinkovics (2008) discussed the merits of using NVIVO to create an audit trail. He argued that it “makes data easily accessible to collaborators and strengthens credibility, replicability and substance of results” (p. 709).

Once I had uploaded the data, I read and listened to them before I began to analyze them. I believe that a researcher’s primary intention should be to understand the participants and their voices. I wanted to obtain a sense of their meaning, their experiences and the context in which the activity occurred in a hermeneutic manner.
My first reading brought to the fore the embedded nature of formative assessment activity.

The second step in the data analysis process was to identify and highlight the relevant texts. Auerbach and Silverman (2013) defined relevant texts as “passages of transcript that express a distinct idea related to your research concern” (p. 47). To identify the relevant texts, as I read the interview transcripts, work samples and documents, I constantly referred to my research concern. For fieldnotes, I identified the relevant texts by first dividing the data into episodes. Wells and Arauz’s (2006) Cultural Historical Activity Theory (CHAT) coding scheme for classroom discourse was useful for segmenting the data. I employed their definition of an episode to segment the observed data. They define an episode as a “recognizable task” comprising of a sequence of related actions (p. 8). These tasks possess demarcated beginning and ending signposts, and are framed by a change in classroom activity, participation structure or theme. To identify the episodes, I posed two questions while reading the data: (a) ‘Is there a clearly demarcated signpost that signals the beginning and ending of a task?’; and (b) ‘Is there a change in activity, participation or theme?’ The fieldnote extract below, in Figure 3-2, is an illustration of how episodes were generated from the data.

Figure 3-2 is a chunk of observation data that was divided into two episodes. The first episode begins with the announcement “You may begin the examination. You have 20 minutes,” and ends when Mr. Benedict says “Pencils down, please.” The task is framed by a change in activity as students move from listening to Mr. Benedict providing them with instructions about the examination, to writing the examination. The second episode begins and ends with the announcements, “Pencils down, please; I have something to negotiate with you,” and “Okay, back to your papers.” In this episode, students have changed their activity from writing an examination, to engaging in discussion about the return of their assignment.
Whenever I found an episode, I gave it an identifying number and recorded details of its signposts. I then began to sort episodes as relevant texts. To do this, I referred back to the criteria for identifying formative assessment activity. If the episode met one of the criteria, then it was give a number. For example, in the second episode shown in Figure 3-2, Mr. Benedict identified the criteria used to assess the students’ work samples to determine their quality.
Step three involved using the relevant texts to establish codes. Auerbach and Silverstein (2013) called this the categorization of repeating ideas. A repeating idea is a concept or an action that is repeated in the data set. Once I found a repeating idea, I placed it in a folder, labelled and defined. For example, the following data set was identified as a repeating idea. It was coded as *seeing students’ success*. This code was developed from different data techniques, interviews and observations. Also, the repeating idea was identified by more than one participant.

___, Addelaid, Lucifer and Isaac [three students] are speaking about the assignment. Addelaid says “he wants you to put thoughts, make it deep” (Observation 17)

“ah i think he wants us to understand am philosophy and philosophy ideas and um um i think he wants us to write well, explain things and argue well am yeah, I think he just wants us to do well, in every thing we are trying to do.” (James, Interview 2).

I think Mr. Benedict really wants us to learn, to do very well (Alexandra, Interview 1)

Repeating ideas formed the basis for the development of codes. Once I identified a repeating idea and determined its relevance to understanding Mr. Benedict’s formative assessment practice, I labeled and defined it as a code. Some of the names of codes reflected themes from the literature review, for example *feedback*. Others codes were *invivo* codes; their names were the same words Mr. Benedict used to describe his practice. For example, Mr. Benedict talked about his concept of *fixable*, which for him meant errors in students’ work samples that could be corrected easily. Memos and diagramming were instrumental in determining the robustness of a code. The latter served to make evident the relationship between the repeating ideas.

As I identified the relevant data, I examined and compared them to already established codes to determine similarities and differences. Questions such as “What is the meaning of this chunk?” and “Does it fit any previously established definitions, or is this something new?” guided the classification of the chunk of data. When all the data had been coded, I printed out the codes and re-examined them to ensure that each

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Throughout the document, codes, categories and themes are italicized for easy identification and emphasis.
chunk of data reflected the code definition. If for some reason I was unsure about the relevance of a chunk of data, I un-coded it and placed it in an “undecided” bin. As I engaged with the codes, code names and definitions altered, and some codes were divided while others were merged. At the end of the process, the codebook contained 125 codes. I found diagramming useful for exploring my ideas and thoughts, so, using post-it notes and a wall, I constructed a visual representation of the codes (Corbin & Strauss, 1990).

The fourth step involved developing categories, where I identified the connections between the codes. This step occurred concurrently with coding the data. The data analysis steps were not linear, but an overlapping processes (Strauss & Corbin, 1990; Litchman, 2013). Constantly referring to my research concerns, as well as the post-it notes on the wall, facilitated the identification of connections and relationships among codes. For example, the codes seeing academic growth and seeing student success were collected in the category seeing Mr. Benedict’s motives. Once I had identified categories, I grouped them into themes. Litchman (2013) defines a theme as “the meaning you attach to the data you collect” (p. 254) Only after the themes were developed did I begin my activity system analysis by constructing narratives. I followed Yamagata-Lynch’s (2010) recommendation to construct the narratives. The post-it notes wall and my concern were once again useful, as they kept the narrative focused on the research question. I constantly referred to these tools, moving back and forth between them and my writing. The narrative developed included descriptions of the context and the participants, the activity that occurred and any contradictions that emerged (Litchman, 2013; Yamagata-Lynch, 2010).

During the process of data analysis, I engaged in conversations with three different peer debriefers. These debriefers served as critical peers whose questions helped to make connections between the codes. Once completed, I presented a copy of the analysis to my senior supervisor. She provided me with a review of the analysis. We discussed my interpretations of the data. Her questions prompted me to return to the data and re-examine it. New codes emerged, while others collapsed and were merged with other codes. In total, 95 codes emerged from the data (see Appendix M for a map of codes, categories and themes). The categories were also reorganized and new themes
were formed. Twenty categories and four themes were identified in this study. The themes were *Piece of the Puzzle, Aligning Motives, Student Ownership* and *Reciprocity*.

Once the re-examination of the data was complete, I wrote a narrative for the activity systems and began to construct the activity system. I used the questions in Mwanza’s (2001) eight-step model to identify the components of the activity system, as well as its contradictions. The construction of the activity system was “an iterative process” (Yamagata-Lynch, 2010, p. 91), where the activity system and narrative complemented each other. I centred my attention on the research question and on the “lived experiences of the participants” during this process and as I “relived” their story, I became further immersed in the data (Yamagata-Lynch, 2010, p. 91).

In conjunction with constructing the activity systems, I engaged in member checking. I provided the participants with the narrative of my interpretation of their actions and the activity to read and asked them to comment on its accuracy. As participants read the story, we explored the themes identified within it. My goal in member checking was to ensure the accuracy of my interpretation of the data. The participants were, of course, experts on their story, so having them explore my findings, to confirm and identify misunderstandings, meant that participants not only provided the raw data but also contributed to its findings (Bailey, 2009; Fetterman, 1989).

Conducting member checking at this stage was important to ensuring that I was providing an accurate account of the assessment activity. Daniels (2005) and Hardman (2007a) argue that providing the interpretation of data for participants to read is a way to surface any contradictions in the activity. I was surprised by participants’ dialogue with the story. For example, during the member checking, Mr. Benedict said to himself, “Am I a process junkie?” He then laughed, and said, “I guess so.” This provided me with the opportunity to discuss with him my understanding of his use of a process-based approach to learning.

### 3.7. Trustworthiness

Key features of any qualitative study are the tools employed by the researcher to ensure that the story presented is trustworthy. The objective of trustworthiness is not to
make the reader concur with study results, but rather, to present a clear picture of how I came to my interpretations. Woven throughout this chapter have been the measures that I have undertaken to secure the trustworthiness of study results. In this section I make evident some of the steps that I have taken.

Prolonged engagement, which fostered trust between the participants and myself, was secured by spending non-instructional time with the Grade 8s. At Mr. Benedict’s request, I also spent non-instructional time with the class. I acted as a chaperone during the class’s two-day camp retreat, sat with them during the human rights symposium held at PSS1, built snow sculptures with them on the day Mr. Benedict decided to cancel teaching, attended the parent-teacher conferences, participated in their Christmas lunch, and was there while they managed the program’s intake day. While this time was not a part of data collection, it fostered familiarity between myself and the students, making us comfortable with each other (Fetterman, 2010). The decision to observe all classroom activities was influenced by the study’s sociocultural lens, which emphasizes the role of the context in activity. These episodes and activities facilitated the capturing of the phenomenon in its entirety, both activity and context, because it furnished me with greater time to interact with the participants (Arkinson & Coffey, 2003).

One of my goals was to produce study findings that were credible, so that the audience could determine the accuracy and plausibility of the research (Bailey, 2007; Creswell, 2003; Maxwell, 2005; Miles & Huberman, 1996). In the research design, I emphasized two aspects of credibility, methodological and internal validity (Bloomberg & Volpe, 2012). Methodological validity is defined as a process of congruency between one’s research questions and the research findings. It is the “consideration of the interrelationship between the research design components” (p. 37). Internal validity refers to the coherency between the study’s findings and the formative assessment activity that occurred in Mr. Benedict’s classroom (Bailey, 2007). To ensure both methodological and internal validity triangulation was an important aspect of the data analysis (Sinkovics, 2008). This involved using several different data collection methods – multiple interviews, observations, documents, and researcher notes – to make certain that my conclusions were confirmable. This process commenced with coding, where I would look for evidence of a code in more than one source before identifying it as a
code. Ensuring that each code was generated from the different dimensions in the data provided rigour and robustness to my coding.

Discussing the data analysis with critical peers and identifying my assumptions also promoted credibility. On completion of the narrative and activity system, I gave the narrative to three persons to read: a former teacher, a university professor, and a recently graduated PhD student working locally in secondary school education in BC. I provided the former teacher with a copy of my defined codes and the story. He asked questions about the coding system and was particularly concerned with my use of certain words. For example, he asked me why I used the words 'expert' and 'expertise' interchangeably. I had been motivated to conduct this research because I wanted to understand my practices. As a consequence, I wanted this dissertation to possess a ‘by a teacher, for teachers’ feel. The former teacher provided me with the tools to do this. I met with the university professor three times. Her expertise in activity theory was the main reason why I selected her to discuss my work. Our discussions served to cement codes on motives as well as identify contradictions in the story. The recently graduated PhD student suggested that I needed to unpack the idea of vulnerability as a reason why the teacher shares his life story with the students. These peer-debriefing made me examine the codes with new eyes helped me to further clarify concepts. The process helped to make my definitions less ambiguous and made me aware of the pieces of the story that required further development (Bailey, 2007; Bloomberg & Volpe, 2012). In this study, the critical peers played the role of “provid[ing] inquirers the opportunity to test their growing insights and to expose themselves to searching questions” (Guba, 1981, p. 85).

Internal credibility was also engendered by my awareness of my role in this research (Merriam, 1998). I acknowledged that my presence and beliefs influenced all aspects, including the design, the structure of the interviews, the choice of site, the literature employed, the questions asked, the situations explored and my interpretations of the data. Lincoln and Guba (2000) noted the impact that the researcher has on the study. They argued that a researcher’s beliefs, behaviours, actions and thoughts during her or his inquiry affects the data collection and analysis process. To document this impact, I employed researcher notes. For example, in a memo entitled “my struggle with data collection” I discussed the tension between my identities, the teacher and
researcher. In it I explored how conflicted I felt documenting teacher-student interaction at a time when the teacher was establishing trust between him and his students. Documenting these thoughts brought to the fore my belief about the classroom as a private space and how that belief affected my actions as a researcher. I have also made an effort to describe my beliefs about and my experiences with formative assessment. In Chapter 4, as well as in the researcher notes, I discuss my role as a researcher and my beliefs as a teacher and acknowledge my impact on the study.

The audit trail, member checking and critical peers were key tools to ensure dependability and confirmability of study results. As part of the design, I made evident the processes and procedures of data collection and analysis. Researcher notes, diagrams, draft codebooks and memos, as well as the descriptions provided in this chapter, were all a part of the audit trail that provided a sense of the processes used to investigate the research question. Member checking was also a technique used to generate dependable study results, where the participants confirmed both the accuracy of interview transcripts and themes generated from the data. After writing my initial interpretation of the data, I engaged all nine participants in member checking. Each session took approximately one hour. Seven of the nine member checking sessions, occurred through an electronic device: via telephone, Skype or Facetime. Mr. Benedict and Ingrid’s sessions were conducted face to face. These sessions also lasted approximately one hour. A three-step process was used to do this. First, I emailed or gave the transcribed interviews to the participants, who were asked to examine it for any inaccuracy in the information. Once the participants had read it through and made comments concerning its accuracy, I asked them if there was anything in the transcript that they wanted to add or explain. Second, I highlighted words, sentences and phrases in the transcripts where I was unsure of the participants’ intent and asked them to help me understand their meaning. I explained to them that my object was to ensure that their voice was accurately represented in the data analysis and this was only possible by exploring these passages. Third, as previously noted, I gave participants their narratives to read. We discussed my interpretations to ensure their accuracy. During member checking sessions, participants also informed me of inaccuracies in the story. We discussed these inconsistencies and I came to a better understanding of the participants’ experiences. For example, Brianna indicated to me that she hated “swimming in the
Pacific" and I used this information to refine the story. Member checking was a vital aspect of trustworthiness. These member checking sessions gave participants an opportunity to highlight inconsistencies in the story and allowed me to discover and correct these inconsistencies.

3.8. Conclusions

This chapter described the means by which a rich and in-depth picture of the formative assessment activity has been produced. It highlighted the research design that targeted information on the practice of formative assessment in a Grade 8 Philosophy classroom. This qualitative case study was employed to answer the question, ‘What are the essential features of a class where formative assessment is being introduced?’ To discover these features, the inquiry employed such data collection techniques as semi-structured interviews, observations, documents and a researcher’s journal. The data collected was then analyzed using Auerbach and Silverstein’s (2013) five-step process – drafting research concerns, relevant text, repeating ideas, themes and themes – and Yamagata-Lynch’s (2010) construction of narratives and activity systems. I also presented the measures undertaken to secure the trustworthiness of the study’s findings. In the next chapter, I discuss the insights gained from this process.
Chapter 4.

The Case and its Context

A story is not just a series of events strung together. It is set within a particular place and time and is populated with characters who give it life. A story is inanimate without its context and personas, whose roles are simple yet important. The context provides the backdrop for events. Characters' experiences and understandings shape the events. It is through the context and the characters that the reader is connected to the story (Bailey, 2007). Activity theory offers a framework for understanding stories of human engagement in activity. It, however, does not see activity as devoid of the influence of the context. All activity is conceived and enacted within particular social, cultural, historical and geographical contexts (Daniels, 2004; Engeström, 1999; Leont'ev 1979; Lund, 2008). The school and its programs, as well as the classroom and its members, form the immediate environment where formative assessment activity is born and practiced. As part of the sociocultural and historical context, they shape the nature and enactment of formative assessment activity and provide the formative assessment in Mr. Benedict’s class with its distinctiveness.

The story of formative assessment activity begins in this chapter with an introduction to the school, the class and the study’s participants. Within these descriptions are clues to the identity and motives of participants, as well as the frame by which they are constrained and within which they flourish. This context includes descriptions of: (1) the program to which Mr. Benedict’s class is connected; (2) the study participant; (3) the researcher; and (4) the assessment activity. It will be followed by the data analysis in the next chapter.
4.1. Angora Program

The Angora mini school at PSS1 is a three-year program that commences in Grade 8 and ends in Grade 10. Angora was introduced in the early 1990s as a way to provide students and teachers with greater curricular freedom. The subjects at the time offered included Mathematics, English, Science and Social Studies. In the late 1990s, the program was altered when Mr. Benedict was appointed as Head. He redesigned it with four aims in mind. First, he wanted the Angora Program to be unique and distinct from any other program offered by the school, so he changed the curriculum to reflect an integration of the humanities, the arts and modern languages. To effect this, he replaced Mathematics, the Sciences and English with French, Art and Philosophy or Classical Studies. His rationale was that he felt the original curriculum was a “pale reflection” of the Arena Program (the other mini-school at PSS1). Second, Mr. Benedict wanted to integrate socializing activities for students into the program. So, he created greater avenues for collaboration among the teachers and he re-crafted the program’s timetable to allow for greater flexibility. Third, he wanted the students to experience “intellectual development” by using “something old to create something new” (Mr. Benedict, Interview 5). To this end, he replaced the English curriculum with Philosophy. Fourth, he applied for district accreditation for the program because he wanted Angora to have the same prestige as Arena.

At the time of the study, the Angora Program involved four mandatory courses including (1) Philosophy; (2) Spanish; (3) Art; (4) History and four elective subjects. They were taught on a two-day timetable. Angora-specific subjects are taught on Day 1. In addition, there are several learning and community-building events planned for students, such as the annual Angora Program two-day camp-out and the school trip to New York in Grade 10. Both of these social events, the camp and the school trip, are planned and managed by students. At the end of the program, students have the opportunity to apply for and enroll in an introductory Philosophy course at a nearby university. The credits earned from the completion of this course will be included in the their university undergraduate transcript.

Selection into the Angora Program involves a five-step process over a three-day period. This includes a district level examination, a student interview and a Philosophy
paper. Applicants first write the three-hour long District’s School Board’s Test of Cognitive and Writing Skills. Second, students complete an Angora application form. This form seeks to provide the selection panel with a sense of who the student is, so students are asked to write short descriptive informative answers to some of the questions. Third, students participate in an interview. During a visit to the school, the students meet and interact with the Angora panel, comprising of one of the Vice-Principals at PSS1, the History teacher and the Grade 10 English teacher. An informal interview is conducted at that time by Mr. Benedict, which enables him to assess the applicant’s suitability for the program. During the interview, he attempts to ascertain whether the student is a self-motivated learner who can flourish in a project-based collaborative environment. Fourth, after the interview, prospective students write the program examination. It consists of one paragraph on a particular philosophical idea or text. This provides the panel with clues regarding the potential of the student to think and write philosophically. The fifth step is the selection of the class. The program’s teachers meet and discuss each application. They begin by examining the pieces of student writing. Whenever a student is nominated, Mr. Benedict comments, based on the interview, on the applicant’s suitability for the program. If there is uncertainty about a student, then her or his test scores from the Test of Cognitive and Writing Skills become the determinant. If the student passes the test then the committee selects the student. The only other criterion used is gender balance. The selectors try to ensure that there is a balance of girls and boys among those accepted.

The Philosophy course taught by Mr. Benedict is an amalgam of classical literature and Philosophy. Its curriculum is designed for the three-year period. In Grade 8, students begin with pre-Socratic philosophers and end with Medieval Europe. In Grade 9, students study philosophical thought and literature from the latter half of the Medieval period to the Enlightenment. In Grade 10, students focus on 19th and 20th century writers and philosophers. Five ideals guide Mr. Benedict’s delivery of the curriculum. These are:

1. Knowledge must be taught in its historical and cultural context.
2. Students must learn the subject’s (Philosophy) specific language.
3. Ideas in the class must be reflected upon to discern their relevance to the students’ lives.
4. Students must be offered opportunities to explore Philosophy and classical literature.

5. Throughout the course, there must be ample opportunity for the students to develop their writing skills.

At the start of Grade 8, students are provided with a Philosophy 8 package. Included in this package are a course syllabus and goals, the assignments, and information concerning Bibliotecka, an electronic site where students can obtain course resources. In addition, there are welcome letters from Mr. Benedict and the Grade 10 Angora students, and Mr. Benedict's process constructs, which are subject-specific assessment criteria and rubrics. Philosophy is scheduled for 80 minutes every second day.

4.1.1. The Classroom

My first impression of Mr. Benedict's classroom was that the hodgepodge of teacher resources, books, posters, handouts, and students' personal and academic artifacts imbued the room with an ambience that was animated, bright, warm and inviting. If the clutter were to be removed, one would immediately notice the age of building, the unfinished ceiling and the worn furniture. Mr. Benedict's classroom was very much like his mind, a busy information-rich centre. Almost every square inch of the walls and doors was covered with educational paraphernalia and student artifacts, all strategically placed to enhance student learning.

Even the main classroom wall, with the five huge windows that covered two-thirds of its surface, was utilized. Every available space on this wall was filled with material. Mr. Benedict placed encyclopaedias and dictionaries on the white sills of the windows. On the wall space below the sills were two bookcases filled with History, Philosophy and Geography magazines. His desk and a filing cabinet were also positioned against this wall. His desk was cluttered. There were two computers, a desktop PC and laptop on it as well as a row of reference books that acted as the desk's backsplash. Students were constantly hovering around this desk. They had full access to the computers and to the reference books found there. The only condition was that they must inform Mr. Benedict prior to using them.
At the top of the blue painted wall at the back of the class were six History curriculum aims posters. Each one of the six posters displayed Peter Seixas six outcomes or “the big six” for teaching History (Seixas, et al., 2013). An American flag with logos of corporations in place of the 51 stars, a picture of Winston Churchill with a machine gun in his hand and a women’s empowerment poster by J. Howard Miller also featured on this wall. Against the bottom of the wall were a 32-inch television, a VHS player, a vintage movie projector, two bookcases and a book carousel. The bookcases were old. They came from a period when it was fashionable to encase wooden bookcases with glass panes. One was brown and the other was yellow. They contained textbooks as well as novels. On the glass panes were the graduation pictures of former students. The bookcases were not the only place that Mr. Benedict has pictures of students. There were also pictures on the wall next to his desk.

Mr. Benedict used the white wall opposite the windows, with its mustard-coloured storage closet and classroom doors, to display students’ work. He said that he loved to display students’ work, and so he constantly added pieces to his classroom collection. At the front of the classroom were a multi-layered white board and a projector screen. Below the whiteboards were three small bookcases used to store class notes, assignments and syllabi.

A podium was at the front centre of the class and next to it were a projector and a laptop. There were nine brown tables with 28 blue plastic chairs around them for student seating. The layout of the student seating area was fluid, and so it constantly changed. At the beginning of the school year, the tables were arranged in three long rows, with three tables each. However, during the study, this arrangement altered several times. By the end of the data collection period, the tables were scattered throughout the classroom, and students were seated around each table.

4.2. The Participants

At the beginning of the study, there were 26 students, 10 boys and 16 girls, in the Grade 8 classroom, but during the term, two girls transferred out. Most of the students lived within the school’s catchment area. However, there were students who did not. Of
the eight students I interviewed, two students, Nathaniel and Alexandra resided outside of the catchment area. The 26 students reflected the ethnic and socioeconomic diversity of the school. There was no one dominant ethnic group in the Grade 8 class and most of the students could be classified as middle class. The unique course offering of Angora, Philosophy, was a key source of attraction for many of them. There were, however, some like Nathaniel, Arthur and Bubba, who had applied for Angora on the recommendation of their siblings, who were alumni of the program. Angora was identified as a writing development program, so the students who enrolled in it were interested in writing and demonstrated some competence in it or had shown some writing potential. However, selection was primarily based on the applicant's level of philosophical thinking. This outlook of the program meant that students like James B, who has a learning disability, could be included due to his thinking rather than writing ability.

The class was a close-knit community. Grade 8s socialized freely with each other and often with other older students in the Angora Program. At lunch, the Grade 8s usually sat together in the hallway, as a group. The movement towards a tightly woven class community was facilitated by such activities as the Annual Angora two-day campout in October, a team-building activity for all members of the Angora Program, coordinated and managed by the students.

As mentioned in Chapter 3, Mr. Benedict and eight students, three boys (Nathaniel, James and Arthur) and five girls (Alexandra, Brianna, Evelyn, Courtney and Ingrid), participated in interviews. Their profiles are now presented as a way of understanding the context of the formative assessment activity.

4.2.1. Mr. Benedict

Mr. Benedict is a native of Vancouver. Italian by ethnic descent, he grew up and attended elementary and high school in a small city on the outskirts of Vancouver. He completed his undergraduate degree in Philosophy at Mountain University in Vancouver. He was led to Philosophy through English Literature. After he read Somerset

Mountain University is the pseudonym.
Maugham’s *Of Human Bondage*, a teaching assistant told him that the work was inspired by Spinoza’s discussion of ethics. Mr. Benedict recalled asking, “Who is Spinoza?” (Mr. Benedict, Interview 5). He credited this work with being the springboard for changing his undergraduate major to Philosophy. Mr. Benedict obtained a Masters in History from the same University and during this research period was studying for a doctorate in Education there. Mr. Benedict commended his past teachers as being invaluable in instilling in him a passion for learning. In particular, a university Philosophy professor, and his high school English teacher had been a source of inspiration and had served as mentors to him. Mr. Benedict described himself as a teacher learner, someone who continuously engaged in learning. Mr. Benedict believed that death should be the only reason why someone should stop learning.

Mr. Benedict is a charismatic and easily excitable teacher who loves his work. He had taught for 31 years and during that time, wore a number of “guises” and worked in a variety of contexts (Mr. Benedict, Interview 1). While completing his Bachelor of Arts degree, Mr. Benedict spent two years as a volunteer teacher in the Middle East and Africa. It was there that he met several other volunteers whose secondary school education included courses in Philosophy. Mr. Benedict identified these stints as one of the reasons for his interest in teaching. In the following year he completed his teaching degree.

While at university, Mr. Benedict worked as a Teacher on Call (TOC). He opted to do this because the salary was good and it gave him experience in the classroom. Mr. Benedict’s first full-time teaching assignment was in the elementary school system. He began his teaching career in the elementary school system because he “felt uncomfortable being a 23-year-old pretending to teach 18-year-olds”; “I needed a difference of age,” he remarked (Mr. Benedict, Interview 5). He spent five years there before temporarily transferring to an alternative program where he taught Mathematics and Physical Education to Grades 8 through 10. Three years later, Mr. Benedict returned to the elementary school system, where he stayed for two years before he accepted his current position. He was also seconded to work for one year as a faculty advisor in a teacher education program.
Since then, he had taught in the Social Studies department at PSS1 and for the past 12 years, he has served as head of the Social Studies department. As such, he acted as a mentor teacher to student teachers there. He also assisted in planning class trips for the Grade 10 and 12 classes. Mr. Benedict had experience in educational administration, having worked as a vice-principal and principal of summer schools in the district. The “guises” Mr. Benedict has worn refer not only to the different levels he taught over 31 years. They also included teaching several subject areas as Social Studies, Maths, Science, Physical Education, History and Philosophy.

4.2.2. Alexandra

Alexandra was a 14-year-old first generation Canadian, who was proud of her Chilean ancestry. She was the first student I asked to interview. She was selected because she possessed an air of maturity, which presented her as being older than her actual age of 14 years. This, I believed, would make her a key informant. During instruction, Alexandra was always attentive and focused on the activity. Unlike most of her classmates, she never traded seats. She sat in the second chair at the left front table, next to Nathaniel, with her back to the windows. This was on the same side of the classroom as Mr. Benedict’s desk. Alexandra was reserved, quiet and cautious. In whole class activities, she rarely spoke of her own volition, and when she did speak, it was because Mr. Benedict had asked her directly. During work periods, she displayed greater animation. However, her attention seemed more focused on the task rather than on social conversation. Despite her shy disposition, Alexandra was recognized as a valuable member of the Grade 8 community. Mr. Benedict assigned her key roles in classroom activities; for example, she was a volunteer for the Angora student intake for 2014-2015. Her classmates acknowledged her as one of the class leaders and often utilized her assessment and content expertise during instructional activities. They had high expectations of her. When Mr. Benedict introduced the word “pleonastic” to the class, he inquired if anyone knew what it meant. Immediately several faces turned towards Alexandra, looking to her for the answer. When she shrugged her shoulders, and said,” I don’t know,” Brittney responded, “Well, if Alexandra does not know what it means, then no one in the class will know” (Fieldnote 22).
Alexandra was the only student interviewed who had previous experience with formative assessment. As part of formative assessment activity, students in the elementary school that she had attended were not assessed using letter grades; rather, they received written evaluations of their learning. Report cards reflected equal contributions from both teacher and student, so Alexandra was accustomed to writing half of her evaluation. Her Grade 7 teacher had described formative assessment as a “celebration of learning” (Alexandra, Interview 2). The school’s ethos as well as her teacher’s belief about assessment had shaped Alexandra’s perspectives on grading. She believed that there was a kind of dishonesty in participating in assessment activity for the sole aim of attaining a high grade. This belief stemmed from her perception of assessment as diagnostic. She viewed its purpose as being to inform the teacher of the student’s level of understanding, so that the teacher could better facilitate student learning. The philosophy of that school and its impact on Alexandra’s academic development had made a great impression on her parents, who decided to keep Alexandra enrolled at the school even when they no longer lived in its catchment area and she had to travel some distance to get there. They subsequently enrolled Alexandra’s younger siblings in that elementary school. Although Alexandra lived outside of PSS1’s catchment area, she selected the school because she felt that the program “was for her” (Alexandra, Interview 1).

4.2.3. Arthur

At 13 years of age, Arthur was one of the youngest members of the class. He was an avid musician who loved to play the guitar and sing in the school’s choir. He had recently completed Grade 6 of the Royal Conservatory of Music program and spent the summer learning to play classical guitar. Arthur was shy but determined to do things correctly. To this end, he often asked several confirming questions about the assignments and tasks. This desire to “get it right”, resulted in Mr. Benedict saying to Arthur on a number of occasions, “Arthur, I explained this already” (Fieldnote 11). Arthur wanted to get it right because he saw assignments as a tool used by teachers to determine a student’s grades. Arthur asked these follow up questions in whole class sessions, but he rarely requested a personal audience with Mr. Benedict to confirm the task. He admitted that he was not comfortable approaching Mr. Benedict, so instead, he
directed his questions to others present in the class, including the researcher. Arthur’s sister was an alumna of the program. She was also a source of information on whom Arthur relied to assist him to navigate through the program. Although Arthur applied for the program on the recommendation of his sister, he felt that learning about Philosophy was a great honour, because it was a rich subject area. Since it was rarely included as a part of the public school system’s curriculum, Arthur considered being in Mr. Benedict’s class a privilege. Like Alexandra, Arthur emerged as a valuable member of the class community. He was nominated twice to be a group leader, and students often came to him for assistance with their assignments. Unlike Alexandra, Arthur had not attended an elementary school where formative assessment was practiced. His past assessment experiences included tests and assignments that were used solely to determine his grades. I selected Arthur as a participant to help me understand how collaboration functioned with a student who found it difficult to engage with the teacher in a one-to-one conversation.

4.2.4. Brianna

Brianna was a 14-year-old girl who had diverse interests and skills. She was bilingual, speaking French and English. She loved sport (soccer), music (saxophone), and dance (jazz and hip hop). She was the only child in her immediate family. Her parents were former journalists who wanted Brianna to do well, so they provided her with expert advice on her assignments. Participation in the Angora program was important to Brianna because she believed it would move her closer to her goal of becoming a psychologist. The program’s emphasis on writing and Philosophy provided her with the skills and knowledge to meet this career goal. However, her future career plans were not Brianna’s main reason for enrolling in the Angora Program. It was the prestige attached to the program, studying Philosophy in Grade 8, that attracted her to it. As early as Grade 4, Brianna knew that she wanted to enrol in the Angora Program, so when her Grade 7 teacher handed out mini-school applications, Brianna promptly applied to the program. Brianna sat in the back of the classroom, next to Evelyn. This friendship seemed very satisfying to her. Although she preferred to complete assignments independently, she collaborated with Evelyn because “she is my friend.” (Post-Observation Interview) Brianna willingly contributed to class discussions by
answering questions or sharing her thoughts. She also loved to ask questions. She constantly directed questions to Mr. Benedict, to ensure that she understood the requirements of the tasks, so that she had the knowledge to complete them perfectly. On several occasions, after having received feedback from Mr. Benedict on her assignment, Brianna waited until all the other students had received feedback and then approached Mr. Benedict again to inquire of him what she needed to do to perfect the assignment. Brianna’s desire to make the task perfect was the reason why I selected her as a participant. I wanted to understand how this desire for perfection worked within a system where submitted assignments were not viewed as finished products, but rather as texts in production.

4.2.5. Evelyn

Evelyn was a 13-year-old girl. She lived in the city with her parents, younger sister and dog. She attended Kia Elementary School along with Brianna and Kaya. This elementary school was within the PSS1 catchment area and had programs especially targeting the development of young artists. Kia nurtured Evelyn’s love for drawing. She strove for perfection in every piece that she created. For the first group work task, Evelyn assigned herself as the poster designer. She set about on her task and meticulously drew Confucius; all the while she repeated over and over, "I am not smart, but I can draw" (Fieldnote 19). One of her closest friends was Brianna, and they collaborated on assignments. She was a diligent student who desired to impress her mother and Mr. Benedict. Evelyn engaged in several extracurricular activities at PSS1, with her favourite being volleyball. Despite her active school life, Evelyn was shy. She sat at the back of the classroom and was usually quiet. She hoped that this would make her invisible, so she would not have to answer any questions (interview 2). However there were moments when Evelyn came out of her shell. During the first class debate on love, Evelyn contributed several times without being prompted to do so. She was excited about the topic and so ventured her opinion. That afternoon after the debate, she told her mother “Mum! I spoke in class today” (Evelyn, Interview, 1). Her strong vocalization and fierce defense of her ideas during the debate was the reason why I asked Evelyn to be interviewed. Her transformation from the girl who said nothing in class to one who voiced her opinion freely amazed me. I wanted to know if this was just a moment or
whether I was witnessing a metamorphosis occasioned by participation in the program. Evelyn applied for the Angora Program after a presentation at her elementary school by students in the program. She believed that the program was a good one, and that membership in it would facilitate her entry into university.

4.2.6. Ingrid

Ingrid was a voracious reader. Often, while class was in session, Mr. Benedict was heard saying to her, “Ingrid, I understand, I love to read and I applaud your desire to read, but now is not the appropriate time” (Fieldnote 35). She was also a “social butterfly” (Mr. Benedict, Interview 3), a friendly and outgoing person, who loved to make friends and chat. It was this personality trait that aided Mr. Benedict in his explanation of ‘territorial imperative’ to the class. He said to them, that Ashley’s territorial imperative was large, while Ingrid’s was small. After he finished teaching the concept, Ingrid approached him and stood close to him. He looked up at the class, grinned and told the class that Ingrid’s proximity to him proved his assessment of her was correct. Ingrid viewed her seating arrangement as temporary, so she moved from place to place. The criteria she used for selecting her seat were friendship and comfort, so whenever she had the opportunity, she sat on the couch at the back of the classroom. Ingrid was very anxious about her grades. This anxiety was the reason why she was selected for this study. In October, Mr. Benedict returned the first assignment. As he was doing so, he informed the students that he would provide them with feedback on the next Angora day. He explained that his reason for doing this was to provide them with time to read his comments. Ingrid, however, could not wait. She waited after class and insisted that Mr. Benedict provide her with feedback immediately. Her response suggested that she was very anxious about her performance. I selected Ingrid because I wanted to understand how Mr. Benedict’s approach to formative assessment was perceived by those students who were anxious about their grades. Ingrid was anxious about her performance in part because her mother wanted her to do well. Ingrid had been enrolled in a French Immersion elementary school, and her mother wanted her to continue her language development at secondary school. However, Ingrid wanted to register in the Angora Program. Mr. Benedict’s class was a unique educational experience for Ingrid. It was different from both the experiences that Ingrid had had at elementary school and in the
other classes in which she was to enroll at PSS1, so she convinced her mother that this was a good program for her.

4.2.7. James

James was a 14-year-old boy who loved to play the guitar. James had attended a French Immersion elementary school with Ingrid, Just, Brittney, and Catty. Although he spoke both Burmese and English, James found French difficult, and knew that he would not continue his development in this language at secondary school. He saw Philosophy as a distinctive subject area that not only offered him the opportunity to learn something new, but also added complexity and a critical perspective to his writing. James sat with the boys. At the beginning of the school year, he sat next to Nathaniel, Arthur, and Alexandra, but he changed his seat after the parents meeting in November. From November to the end of the study, he sat with Just, Isaac, and Luger, in the front middle of the class. James was one of the few students who saw that earning good grades as one’s primary goal was dishonest. Mr. Benedict described him as a deep thinker and openly encouraged him to read Philosophy at university. Once Mr. Benedict said to him, “If you are not doing Philosophy at university, I will hunt you down” (Observation 16). James had a learning disability and as a result, it was difficult for him to transfer his ideas to paper. I selected James because I wanted to understand how he perceived the role of formative assessment in his development.

4.2.8. Courtney

Courtney, a 14-year-old, is a second generation Canadian. Both sets of her grandparents migrated to Canada from Italy. Courtney spoke a little Italian. She loved swimming and was working on getting her Bronze Medallion so she could work as a lifeguard. Courtney also had a passion for cooking. Food Tech was her favourite class after Philosophy. Courtney applied for the Angora Program because she loved Philosophy and wanted an opportunity to learn more about it. She also liked the specialness and the prestige attached to the class. Mr. Benedict called Courtney one of his shy girls, but she was really not so. She was not afraid to approach Mr. Benedict and ask him questions. She was also an artist at heart, and Mr. Benedict’s open format policy allowed her to develop her skills. Every assignment that Courtney produced
included artwork. Her work left a lasting impression on Mr. Benedict, as one of her pieces has been included in the display of students' work on the walls in the classroom. Her love for art was the reason why I selected Courtney; I wanted to understand how a student's work was assessed when it was submitted as an artistic piece.

4.2.9. Nathaniel

Nathaniel was a 14-year-old boy with a passion for the theatre. His enrollment in the Angora Program meant that he could not take Drama as a subject at PSS1, because it was also scheduled for Day 1, the same day as the Angora subjects. Nathaniel spent his summer performing in lieu of holidaying. Despite this, he did not regret his decision to enrol in Angora. Nathaniel loved History and Philosophy, so being in Mr. Benedict's class was an opportunity to be engaged in a content area to which the average Grade 8 student was not exposed. Nathaniel enjoyed the class so much, that when a student transferred out, he recruited a former classmate for the program. Nathaniel was one of the students who resided outside of the school's catchment area. It took him approximately 40 minutes to get to school every day. He had applied for the program because Mr. Benedict's class offered a unique educational experience. It was different from the experience that Nathaniel had had at elementary school. Like Alexandra and Arthur, Nathaniel emerged as a class leader. He was knowledgeable and desired to share his understandings with others. He was unafraid to ask or answer questions or to tackle assignments. Often, Mr. Benedict could be heard saying, “Someone other than Nathaniel, please answer the question” (Fieldnote 2). Nathaniel never changed seats. He sat next to Mr. Benedict's table, in the first chair at the front left table. He was not the only student in the class who engaged with his work samples confidently, so his voice represented that outlook. Nathaniel's sister was also an alumna of the school.

4.2.10. Other Grade 8 Students

Ten other students, four boys, Alexander, Issac, Luger, Google, and five girls, Addelaed, Kaya, Emily, Brittney, Ashley and Luci agreed to participate in the study. Six students, three boys, Bubba, Ollie and Just, and four girls, Jamie, Cathy, Ignitia, and Hannah opted not to participate. As previously mentioned, the students selected their pseudonyms.
4.3. The Researcher

I spent five months in Mr. Benedict’s class. At first, the students were shy with me. For example, initially Evelyn looked at me, smiled and laughed nervously. However, by the end of the study she was quite at ease with me. When we met in the school’s hallway, she smiled and warmly said, “Hi Miss Kronberg, how are you?” As time passed, I developed a sense of being accepted as a member of the class. Mr. Benedict was also instrumental in this. He referred to me, asked for my opinions during instruction and included me in class events.

As I analyzed the data, I felt that I would not only be telling Mr. Benedict’s and the Grade 8 students’ story, but mine as well. Maxwell (2005) talked about the researcher as an important feature of the study. He argues that the researcher is also a participant because her actions influence actors and actions during the data collection. I feel that my presence, to some degree, undoubtedly affected classroom actions and that my interpretation of the data, my written fieldnotes, coding process and analysis reflected my beliefs and understandings. Maxwell (2005) discussed the researcher’s identity and experience as sources of credibility, validity and vision as well as complexity and complications within the research design.

Jazvac-Martek (2009), in his doctoral study on the formation of PhD students’ identities, described how his role as investigator, in particular his history, played in shaping his study. Like Martek, I recognize that my experiences and realities influenced the design, execution and narrative of this study. I am Trinidadian of mixed heritage. I am the third of four daughters born to my parents. Our family can be described as middle class, both my parents being teachers. I have spent all but eight years of my life in my father’s childhood home, in a small rural town in the north east of the island. I am also a third generation teacher. My grandfather, parents, and a number of my uncles, aunts, cousins and siblings have been, or are still, teachers. During my first three years in this profession, I worked in an inner-city, all-girls Roman Catholic High School in Trinidad and Tobago. I was also employed at a rural co-educational secondary school in Trinidad and Tobago, for seven years. I am a secondary school Social Studies teacher with over ten years of classroom teaching experience. My focus, in this study, on the secondary school Social Studies classroom, is in part influenced by my expertise and
experience in this subculture. The topic of this dissertation, assessment, was the area of specialization that I selected for the Masters of Education programme. My desire to understand formative assessment not only stemmed from my past struggles to implement it in my classroom practice, but also from my position as chairperson of the assessment committee at the last school in which I was employed. During five years of service on that committee, I scheduled and maintained quality control over the school’s examination processes and organized professional days on assessment practices. I saw the need for integrating formative assessment into the pedagogical practices of the school and faced many challenges in my attempts to do so. I spent many hours discussing with other teachers the best ways to introduce and integrate this practice into instruction. However, transferring these ideas into my practice proved to be more difficult than I had perceived. I had not taken into consideration the demands of the curriculum, or how deeply ingrained were the perceptions of the quality of the school, based on external examinations, or the difficulty in changing my teaching and learning practices. The limited success I achieved in infusing formative assessment into my classrooms fuelled my desire to understand formative assessment and how it works.

As a teacher, I believe that teaching is an awesome responsibility, in the sense that I mediate the development of a learner. In my mind, one of the most amazing experiences one can have is to be in a room full of students who are excited about learning. This is at the core of education: developing learners. I am mindful that teaching is also a responsibility, and it is my duty to facilitate students’ success. In Trinidad and Tobago, student success is measured through external achievement testing. It is a fine balance that the teacher must walk, to create moments of excitement in students and to generate their academic success. I see these two things, the awesomeness of teaching and its responsibility, as demanding two different types of actions from the teacher. The former frames teaching that is very much focused on the interests of the student, and it involves learning that takes time, that is experiential, discovery-based and unpredictable. The latter directs teaching towards meeting outcomes, by any means necessary, so that the student is successful. For me, it is difficult to reconcile these two things – difficult, but not impossible. That is why I implemented formative assessment in my classroom. I wanted that excitement that the literature presented, without sacrificing academic success. It is why I believed that I had
failed; because nothing changed, I was not able to create coherence between my beliefs. This belief not only influenced my decision to implement formative assessment in my classroom, but also determined many features of the study’s design. For example, my inclusion of observation stemmed from my desire to see the activity creating learning and success. It also influenced the predominance of the teacher’s voice, because I wanted to understand my failure. For me, formative assessment was very much a teacher-directed activity, in the sense, that I planned and executed it. Through data collection techniques, memoing in particular, and peer-debriefing, this belief and its impact on the study became visible. This was not the only belief that influenced my study design, as previously noted in chapter three, my belief in the classroom as exclusively a teacher-student space made me uneasy in my role as a researcher. The study’s theoretical lens, activity theory proposes that my social, cultural and historical context is inextricably bounded to the activity that I participate in. The research design, a qualitative interpretative case study, provides the tools for which to identify and make evident the impact of this context. Both the theoretical lens and the research design therefore allow for the inclusion of my context; to acknowledge and to address its impact.

My doctoral program also impacted on the design of this study. Through it, I was introduced to sociocultural and activity theories. These theories’ core proposition of the inextricable link between the phenomenon and its context was what attracted my attention. As a teacher, I am aware of the bond that exists between formative assessment and its context, and so I wanted to employ a theoretical lens that would shed light on this bond, and I wanted to contribute to the development an authentic picture of a classroom in which it is practiced. As I learned more about sociocultural and activity theories, I became aware of their utility as a theoretical lens and as tools for research inquiry of phenomenon like this one under study. These understandings were greatly influenced by my coursework.

There were many days that I left Mr. Benedict's classroom feeling deeply happy. The stories I heard and knew about, at present and in the past, about public school education had not always been pleasant, but being in Mr. Benedict's class restored my faith that there was success in the system, and it reaffirmed my desire to continue teaching in this system. This excitement was not only because of his success but also,
more importantly, because through his practice I saw the reasons for my own failure with formative assessment.

My identity as a researcher was reminiscent of those of the students in the classroom. I was a novice in that field, and in many respects, I was a learner, like the Grade 8 students, who desired to do things right but faced a steep learning curve. Their experiences resonated with mine. I empathized with Brianna’s feeling of “swimming in the Pacific” (Brianna, Interview 1) because she voiced my experience of being out of one’s depth and in a state of panic. And yet, as time passed, "swimming in the Pacific" became less scary and grew more intriguing. Questions emerged about what I was seeing and hearing, connections began to form, and I wanted to know more. This feeling did not dissipate during the data analysis stage. As I discovered themes, explained them to others, and justified my decisions, my budding identity as researcher was nurtured. I entered Mr. Benedict’s classroom wanting to understand my failures as a teacher, and as I observed, interviewed, analyzed the data, answered questions about my findings, shared the story with participants and listened to their responses, I experienced what I sought to understand. It was also my journey with formative assessment (K. Lauridsen, personal communication, October 25, 2014).

4.4. The Formative Assessment Activity

The formative assessment activity in the Grade 8 class involved a number of tasks during the five-months of data collection. These tasks were comprised on a number of assessment features that Mr. Benedict identified as crucial to the formative assessment activity. Together, these tasks and features formed a complete picture of the formative assessment activity in the Grade 8 class. The activity will be described in main two ways: (1) the work samples completed by the students and (2) the features of the work samples identified by Mr. Benedict as a part and parcel of his formative assessment activity. This description provides the context to understand the essential features of a class where formative assessment is being integrated.
4.4.1. The Work Samples Completed

The formative assessment activity in the Grade 8 classroom was a melded one, where there was no separation between assessment and instruction. Instruction fed classroom work samples, and work samples shaped the instruction. The graded work samples were intended by Mr. Benedict to create student learning. These were: (a) weekly journals; (b) monthly work samples; (c) examinations, and (d) a “binder interview” each term. Table 4-1 lists all the graded work samples completed during the period under study.

<table>
<thead>
<tr>
<th>Assessment Activity</th>
<th>Topic</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal 1</td>
<td>Free write on Philosophy topic</td>
<td>September</td>
</tr>
<tr>
<td>Journal 2</td>
<td>Free write on Philosophy quote</td>
<td>October</td>
</tr>
<tr>
<td>Assignment 1</td>
<td>Pre-Socratic Philosophy</td>
<td>October</td>
</tr>
<tr>
<td>Journal 3</td>
<td>Camp Evaluation</td>
<td>October</td>
</tr>
<tr>
<td>Exam 1</td>
<td>Pre-Socratic Philosophy</td>
<td>October</td>
</tr>
<tr>
<td>Journal 4</td>
<td>Aristotle Poetics</td>
<td>November</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>Ancient Greek Literature</td>
<td>November</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Ancient Greek Literature</td>
<td>November</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>Ancient Philosophies</td>
<td>December</td>
</tr>
<tr>
<td>Journal 5</td>
<td>Current Events</td>
<td>January</td>
</tr>
<tr>
<td>Journal 6</td>
<td>Current Events</td>
<td>February</td>
</tr>
<tr>
<td>Journal 7</td>
<td>Current Events</td>
<td>February</td>
</tr>
<tr>
<td>Assignment 4</td>
<td>Speech on Schools of Thought</td>
<td>February</td>
</tr>
<tr>
<td>Binder Interview</td>
<td></td>
<td>February</td>
</tr>
</tbody>
</table>

Table 4-1. A list of work samples completed during the period of data collection

The details of these work samples, including the criteria for the graded work samples, as well as the methods used during instruction, were presented to students in the Philosophy syllabus they received in September. Also in the syllabus were the “tentative” marking scheme and rubrics (Philosophy syllabus, p. 2).

Journals

Student journal entries provided Mr. Benedict with “snapshots” of students’ writing development (Mr. Benedict, interview). Entries were expected to be no more than
one type-written page in length and were to be submitted on a weekly basis. Students had a wide range of topics on which to write about. These topics included, but were not limited to, quotes, current events, poetic selections, and concepts. During the period of data collection the students submitted seven journal entries, of which one was an evaluation of the two-day camp and another a comment on a quote from Aristotle Poetics. Two entries were “open” to the students, meaning, students selected and wrote on topics that interested them (Mr. Benedict, interview). In the month of January, Mr. Benedict assigned three journal entries. These were to be based on any current event that interested the student, as long as the three submitted pieces included an international, national and local news story. As with the projects, Mr. Benedict tailored instructional sessions to meet the needs of the journals. He provided students with feedback on their submitted journals, and students could re-do journal entries if they desired. Journals accounted for 20% of students’ end-of-year grade.

**Projects**

Project work samples were the “major pieces” students submitted on a monthly basis (Mr. Benedict, Interview). Students could write on any concept or philosopher within a given time period. They were allowed to submit these in a format of their choosing. The specifications and the due date for each project were also included in the syllabus. Each project was to be “4-6 pages long, typed, single-sided, double-spaced, with source citations and bibliography” (Syllabus, p. 3). If students chose not to write an essay but to construct an artistic or performance piece, then the assignment had to be “equivalent” to a written piece that was 4-6 pages long (Mr. Benedict, Interview). During the period of data collection, the students submitted four work samples, with three of them based on the following topics: Pre-Socratics, Ancient Literature and Ancient Philosophy I & II. The fourth was the only one with a predetermined format. Students were asked to write and orate a speech; however, they could write and present the speech as individuals or in groups. Figure 4-1 graphically describes the process for completing a project and journal. Once a project was introduced, Mr. Benedict spent time making the criteria explicit. Students then began to construct their work samples, while simultaneously being engaged in instructional sessions that provided them with the knowledge required to construct the projects. Mr. Benedict provided students with feedback on their submitted pieces. He then adapted instruction and students re-did
their work samples. Students could re-do their work samples as many times as they wanted to. These project work samples accounted for 40% of the students’ final grade for the year.

Examinations

Examinations, like the projects, were conducted on a monthly basis. They tested students’ understandings of the concept explored during topic presentation. Examinations were a two-day affair. On Day 1, students were provided with the exam paper and were allowed to select a question and mentally construct an answer. They were also allowed to use the session to craft a “cheat sheet” that they could use to refer to during the examination (Fieldnote). On the second day, students wrote the examination. This examination, on Day 2, was divided into three sections. In the first section, students wrote the exam for 40 minutes. The second section involved peer edits, where students would exchange their examination papers and provide each other with feedback; and in the third section, students revised their responses.

On Day 1, students were provided with the exam paper and Mr. Benedict explained the criteria and his expectations. Once this step was complete and students understood the task, they engaged in the examination prep. The examination prep was a thinking process where students prepared mental answers for each test question. Students had the option of working independently or collaboratively during this activity. On Day 2, Mr. Benedict repeated the criteria, handed out writing paper, and gave students approximately 40 minutes to complete the test. At the conclusion of this time period, each student exchanged his or her written answers with a peer, and together they engaged in peer editing. Peer editing was a ten-minute period during which the
paired students received and provided feedback on their work. When peer editing was complete, the students redrafted their answers. The completed tests, as well as the drafts, were submitted to Mr. Benedict. He requested a copy of the drafts to assist him in understanding the development of the students’ writing and thinking. After the examination, the class engaged in a debriefing session where they provided feedback to the Mr. Benedict about the process.

Figure 4-2 represents the examination process. During the period of data collection, time permitted for only two of the four planned examinations, the first on the Pre-Socratic Philosophers and the second on Ancient Literature. Examinations accounted for 30% of the students’ final grade.

Binder Interviews

Mr. Benedict conducted “binder interviews” with students, where the students met with him and submitted their binders for review. Mr. Benedict examined the binders to ensure that students had written notes correctly, collected course and other relevant materials, kept an up-to-date vocabulary sheet, and filed their work samples. During the binder interviews, students provided Mr. Benedict with an evaluation of the course. One binder interview was conducted during the period. Binder interviews account for 10% of the final grade (see Table 4-1).

On a daily basis, Mr. Benedict employed a wide range of instructional tools to provide students with expertise and to enable him to amass and analyze evidence of students’ understanding. Lectures, discussions, debates, questions and answers, movies, group work and the independent work of students were those he used most.
4.4.2. The Features of Formative Assessment

There were seven key features guiding these assessment and instruction activities described in the preceding section. These features were identified, by Mr. Benedict, as the key components of the formative assessment activity in the Angora Program. The key components were the process constructs, open format, self-assessment, feedback, re-do, assignment preparation, a priori and independent learning. Some were specific to a particular assessment task. For example, the process constructs were used to construct projects. While others, for example, feedback, were present in all activities. Table 4.2 lists and describes the features of Mr. Benedict’s formative assessment activity.

<table>
<thead>
<tr>
<th>Elements</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process constructs</td>
<td>Projects</td>
</tr>
<tr>
<td>Open Format</td>
<td>Journals &amp; Projects</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>Work samples &amp; Binder Interviews</td>
</tr>
<tr>
<td>Feedback</td>
<td>Journals, Projects &amp; Binder Interviews</td>
</tr>
<tr>
<td>Revisions</td>
<td>Journals, Projects &amp; Exams</td>
</tr>
<tr>
<td>Assignment Preparation</td>
<td>Exams, projects, Journals &amp; Binder Interviews</td>
</tr>
<tr>
<td>Independent Work</td>
<td>Projects</td>
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<tr>
<td>A Priori</td>
<td>Projects</td>
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</tbody>
</table>

Table 4-2. The elements of formative assessment activity in Grade 8

Process constructs

The process constructs, another original phrase coined by Mr. Benedict, were the assessment criteria. They were based on the work of Peter Seixas’ “Big Six” historical concepts (Seixas, et al., 2013). These concepts served two functions. First, they married subject specific thinking and literacy; and second, they provided a framework for assessing students’ work samples. The “Big Six” were: (1) establishing historical significance; (2) using primary source evidence; (3) identifying continuity and change; (4) analyzing cause and consequence; (5) taking historical perspectives; and (6) understanding the moral dimension of historical interpretations. These concepts were modified in collaboration with the current Grade 12 students, two years ago, to meet the specific needs of the Angora Program. Mr. Benedict believed that if these principles were to become a feature of the formative assessment activity in the program, then
it must be relevant to the students. To do so, he provided the then Grade 10 students with the constructs and examples of rubrics. He and the class then talked about the purpose of the constructs and how assessment criteria are constructed. The process constructs were thus created from this collaborative activity with the then Grade 10, now Grade 12 students.

The adapted constructs were grouped according to three sets of criteria: Philosophical, Historical and Literary Criteria.

- There were four Philosophy criteria. These were philosophical interpretation, originality, evidence, and analysis and synthesis.

- The Literary criteria included originality; emotional and intellectual conceptualization; thematic analysis and synthesis; historical, social, cultural and intellectual contextual lens; and intention.

- The Historical thinking process constructs were historical significance; evidence, continuity and change; cause and consequence; historical perspective; and ethical dimension.

Students used the process constructs while planning their project assignments. Essays were built on these constructs. The first step in completing an assignment was to select the construct that the student wanted to use in her essay. The process constructs were the “determining factor” because they provided students with the “language, the tool and understanding and a meaningful way that they can see their own assessment and take ownership” (Mr. Benedict, interview). During the period of observation, students selected from the list of Philosophical criteria to complete Assignments 1, 3 and 4, and from the Literary criteria for Assignment 2.

**Open format**

Mr. Benedict  What is open format?
Google  The way that you do the assignment?
Mr. Benedict  Like what?
Google  Interpretative dance, essay
Mr. Benedict  Why would the first thing that would come to your mind is interpretative dance?
Laughter
Google You talked about that, you made a big deal about it the other day
Mr. Benedict I want to see Google do a dance one of these days (Observation Transcript 4)

The above passage reflected another unique formative assessment tool, open format. Open format, as defined by Mr. Benedict, meant that the students chose the focus as well as the medium of presentation for their assignments. Students could thus submit written, oral or artistic pieces or performances. Their written pieces could be submitted in French, English, Hebrew or Italian. There were two criteria for open format. First, the assignment must reflect the topic under study, and second, the assignment must be equivalent to four to six type-written pages. Mr. Benedict made it clear that students had complete design freedom in the construction of their assignments. When he explained this to the class, he mentioned that he once had a student who examined the identity of women in the 20th century by making visible the relationship between women’s fashion and the dynamic nature of identity. To accomplish this, the student dressed in several costumes that were popular, at different times during the 20th century and for each ensemble presented a five-minute talk about the identity of the woman during that particular period. Mr. Benedict believed that open format allowed students to “take ownership of what they were doing. They were investing themselves in the process” (Mr. Benedict, Interview 3) because they were relying on their interests and expertise. Students used open format for both their journals and projects.

**Self-assessment**

The self-assessment, as the name suggests, was an evaluation by the students of their own assignments. Students submitted their self-assessment with their work samples, and in it students reflected on how successful they were at using the process constructs to frame their assignments. Mr. Benedict identified the self-assessment as the student’s “discussion about the quality” of his argument. It built metacognition, because students must look at their work and critically reflect on its construction (Mr. Benedict, Interview). Mr. Benedict then employed this to grade the assignment. The self-assessment was a part of the assessment “conversation”. He used it to determine the quality of students’ work and as such, it was a mandatory assessment element. Mr. Benedict could not grade students’ work without it.
Feedback

Feedback was used in a variety of ways during the assignments. Mr. Benedict provided students with feedback on the performance of their assignments. This feedback was both written and oral and guided the students’ resubmissions of their assignments. Students were also provided with opportunities to dispense feedback. During the fourth assignment, the speech and the pair edits, they engaged in peer feedback, as described earlier. Pair edits were peer feedback moments at the mid-way point of examinations, when Mr. Benedict halted the exam and allowed the students to exchange comments on exam answers with the person with whom each was paired. Students had ten minutes to exchange papers, read each other's work and provide “constructive comments” on how their peers could revise their work. Students then resumed the exam as soon as the pair edit was over. Students also provided Mr. Benedict with oral and or written feedback on the progress of the class. This feedback was requested by Mr. Benedict and usually took place after students completed a major assessment, for example, binder interviews, assignments or examinations.

Re-do

Students were not only provided an opportunity to revisit their work and re-do work samples and journal entries after feedback from Mr. Benedict, they also were allowed to construct several drafts of their exam paragraph after pair edits. Mr. Benedict saw revisiting work as an important element of assessment. He believed that through re-doing, students “develop mastery” and so he provided opportunities for this. As he noted “the whole year is a formative one” (Mr. Benedict, interview), meaning that during the academic year, students could revisit work as many times as they wanted.

Assignment preparation

Preparation sessions were important to the development of students’ work, because they provided them with the skills and expertise for completing their assignments successfully. Preparation occurred during instruction, where Mr. Benedict intentionally targeted certain topics, themes and philosophers, on which the students were working. The debates and group work sessions allowed students to share their ideas on the work samples, read each others’ work and make suggestions. In the exam prep, Mr. Benedict provided students with the exam one day before its administration.
and gave them the class period to mentally write the paper, as a preparation activity. Students also worked independently, where they were given time to research their topics and prepare their work samples. Mr. Benedict believed that independent work was important because it provided students with ownership and gave them time to prepare their work and organize their thinking.

**A priori**

Mr. Benedict identified the assessment system that he employed for assignments and journals as an “a priori” process. This process was front-loaded. He gave students the assignment first and tailored instruction to meet the needs of the task. Thus, students made decisions about the process construct and the format of the task before instruction commenced. These two steps occurred prior to formative instruction. They provided students with “the language and a meaningful way” to understand the requirements of the task (interview, Mr. Benedict). When the work sample was completed, students submitted it along with a self-assessment. The purpose of this self-assessment was to explain a student’s thinking about the assignment and how she employed the selected process construct to develop her response. Mr. Benedict employed self-assessment to provide students with feedback, which they used to re-do the work sample. Students could re-do and receive feedback on the assignments as many times as they wanted during the academic year.

**Independent learning**

Independent learning involved pre-determined instructional times where students worked independently of Mr. Benedict on their assignments. The students could work as groups or individually. Mr. Benedict saw independent learning as important because it provided students with the opportunity to develop their ownership of the task. During this activity, Mr. Benedict remained in the class, thus making himself readily available if students required his assistance.

**4.5. Summary**

The beginnings of the formative assessment activity are the descriptions of the context within which it occurs. This context includes the people who participate in the
activity and the environment within which the activity occurs, as well as the features of the activity. It mediates our understanding of the activity. Sociocultural theory presents the activity as embedded in the context. It is shaped by and shapes the context. This chapter has begun to describe this relationship. In the next chapter, I describe the formative assessment activity that occurred in the Grade 8 Philosophy classroom and describe it as an activity system.
Chapter 5.

Data Interpretations

It would be nice if I can leave this building, and maybe not be able to spend the rest of my hours thinking about my day, which I constantly do, so I am in a practice of formative assessment. If you want to use the label of formative assessment, my life is formative assessment, and formative assessment is frustrating, can be extremely frustrating, because there is no end to it, there is no end to reaching deeper or getting better or further, or expressing yourself with more clarity. (Mr. Benedict, Interview 4)

At first, my inquiry was framed by the question, “How does formative assessment unfold in a Secondary School Social Studies classroom?” This question had professional significance for me, as it offered me the opportunity to observe a teacher, who, unlike me, was experienced at practicing formative assessment. However, during the data analysis process, I became aware that what I was observing was not the practice of formative assessment as I had defined it. It was something more meaningful to my professional quest – that is, the establishment of a learning environment, for both the students and the teacher that was conducive to formative assessment. From this realization, the following research question emerged, “What are the essential features of a class where formative assessment activity is being integrated?”

I begin the analysis with a description of the formative assessment activity system, as well as its components. Next, I discuss four themes that describe features of the Grade 8 classroom observed during the implementation of formative assessment. I begin exploring these findings with, A Piece of the Puzzle. This theme describes Mr. Benedict, the pedagogue, and the beliefs that shaped his practices. It places formative assessment as a piece in the puzzle of his pedagogical tenets. The theme of Aligning Motives is presented next. It describes both differences and similarities in the motives of the teacher and students, and also the strategies employed by the teacher to align students’ motives to his. I suggest Student Ownership as a symbiotic theme to
Reciprocity; as this theme proposes ownership of the process of formative assessment as key to its success. The final theme presented, Reciprocity identifies a possible core characteristic of Mr. Benedict’s formative assessment practice: reciprocity.

These themes, like the environment from which they emerged, are complex and interlocking. They are linked together by Mr. Benedict being, as the opening quote states, “in the practice of formative assessment.” (Mr. Benedict, Interview 4). Together, all four themes illustrate how the activity of formative assessment, as Mr. Benedict defined and practiced it, centred around learning that is situated, relational and in community. I used the word “suggested” to describe the themes because I am aware that these themes reflect my interpretation of the data (Merriam, 2014). These interpretations, while mine, also contain the voices of the participants and of the conceptual lens used. The former, in the form the teacher’s and the students’ words, offer thick and rich descriptions of their world and provide the reader with the evidence to support the veracity of the researcher’s interpretations. The latter, activity theory, emphasizes the inextricable bond between the activity of formative assessment and its context, and highlights the role of tools to mediate that activity.

Included in the presentation of each theme are the contradictions inherent to them. As previously noted, contradictions are “springboards” from with subjects’ practices alter, and they offer a possible explanation for this dynamic nature (Engeström & Miettinen, 1999, p. 9). They are a characteristic feature of all activity systems, and are not identified as a problem, but rather as “the motive force of change and development” of the formative assessment activity (p. 9). My intention in linking the themes with their respective contradictions is to present a realistic picture of Mr. Benedict’s formative assessment practice as messy and as he described it, "organic" (Mr. Benedict, Interview).

5.1. Formative Assessment Activity System

As I wrote the narratives for the activity system analysis, what became evident was the robustness of the relationship between the themes and the activity system. It seemed as if the themes were directly woven into the activity system analysis, and that
the activity system, its object, components and contradictions, framed the development of the themes. For example, I found that within the theme of aligning motives were descriptions of the role of students’ and teacher’s motives in shaping the object of the activity, whilst the tools used to mediate student ownership and student roles within the division of labour were greatly emphasized within the theme of ownership. The relationship was such that the themes made evident the functioning of the formative assessment activity system in Mr. Benedict’s Grade 8 Philosophy class. In other words, they functioned to identify the salient features of the class where formative assessment was being implemented, by describing the elements of its activity system and its dynamic nature.

Figure 5-1 depicts the summary of the formative assessment activity within the Grade 8 classroom. It shows how the subjects’ engagement with the object – writing at a first year university level – was mediated by the various components within the activity system. These components were a reflection of the social, cultural and historical context within which the activity occurred, and were by nature dynamic (Barab et al., 2002; Engeström, 1989; Engeström, 2001; Hyysalo, 2005).

Although the formative assessment activity was designed and enacted by Mr. Benedict, he created the activity to be a collaborative endeavour where the students were owners, producing their work samples in partnership with him. The subjects of the formative assessment activity were therefore both Mr. Benedict and the students, and as such, they were examined through one activity system: a formative assessment activity system.
Figure 5-1. The formative assessment activity system

The following were the features of the formative assessment activity within the Grade 8 Philosophy class as represented in Figure 5-1.

The subjects in the activity system were: (1) the teacher, Mr. Benedict, who is a PhD student with 31 years of teaching experience. He has been using formative assessment for his “entire career” (Mr. Benedict, interview); (2) the students, Grade 8 students, who are from the educational district catchment area. Of the eight students
interviewed, only one student, Alexandra, had prior experience with formative assessment.

The immediate and wider community of the activity system were: (1) Mr. Benedict; (2) the students; (3) Angora staff, including the History teacher, who taught an integrated curriculum with Mr. Benedict; (4) the wider PSS1 staff, the administration, teachers and student body; (5) Mountain University members, Mr. Benedict's PhD cohort and the student-teachers; and (6) me, the researcher. The students’ community included four additional features. They were (1) friendship communities/groups; (2) former elementary school communities; (3) siblings who were alumni of Angora; and (4) parents who edited and provided feedback on work samples.

The rules provided the guidelines for the assessment activity. These included PSS1 rules concerning the administering of the work samples and grades, Mr. Benedict's assignment criteria and processes, norms governing collaboration among classroom members, and guidelines on the validity of sources and the rules governing the development of a learner's mastery, as well as the process and products of assessment. The students added three rules which framed their actions. These were (1) usability of sources; (2) criteria determining the identification of an expert; and (3) the norms for submission of an assignment.

The rules also framed the roles and responsibilities of class members. Mr. Benedict's roles, for instance, embraced teacher instructing students, specialized expert in Philosophy and Writing, learner of pedagogy, facilitator of classroom discussions and student construction of knowledge, and assessor of and collaborator on work samples. Students' roles and responsibilities were very often complimentary to those of Mr. Benedict. For example, when Mr. Benedict assumed the role of the learner, students were evaluators of his pedagogy. Student roles covered that of learner, constructor of knowledge, owner, evaluator, friend, and collaborator. A major difference between the students' and the teacher's division of labour arose in the conceptualization of the responsibilities of students as owners.

The tools that mediated the object comprised: (1) instructional tools such as movies, discussions, lecturing, group work, individual study, and questioning; (2)
assessment tools involving feedback, self-assessment, assessment criteria, open format, drafting and re-doing, and writing process; (3) research tools, such as the International Encyclopedia of Philosophy, Sanford Encyclopedia of Philosophy, Biblioteka and relevant books; (4) the “salesman” tools, which included telling success stories, providing reasons, and “changeable” grades (Fieldnotes); and (5) the writing tools, inclusive of essays, journals and examination paragraphs. The students included two other tools: (1) communication tools, such as grades; and (2) research tools, for example Wikipedia.

Together, the elements of the activity system represent formative assessment in the Grade 8 Philosophy classroom. The top triangle summarised how the subjects, Mr. Benedict and the students in the Grade 8 class, employed tools, some specific to formative assessment, to mediate the object of the activity, which was writing at a first year university level. The bottom half of the triangle described the role of the context, the community involved in the activity, the rules that govern the activity and the division of labour, within which the activity occurred. The activity system served two purposes. First, it provided a holistic picture of the formative assessment activity. The arrows and lines within the system connected the elements to each other, producing the formative assessment activity. Second, the elements offer a medium to systemize and organize the analysis of the activity. The six elements were a “useful heuristic” (Crossouard & Pryor, 2008a, p.3) for organizing the activity. They facilitated my understanding each element and its function. As a result, I could describe each element and its relationship to the object of the activity and to other elements within the system. The activity system and its components were also useful in identifying those “misfit within elements” or contradictions (Kuutti, 1996, p. 34), that cause the subjects within the activity system to act differently towards the object. These contradictions, which are discussed within the chapter were the “the motive force of change and development” within the formative assessment activity system in the Grade 8 Philosophy classroom (Engestrom & Miettinen, 1999, p.9).
5.2. The Themes

Piece of the Puzzle, Aligning Motives, Student Ownership, and Reciprocity – are the four suggested themes presented in the findings. These constructs are what I have identified as the essential features of the Grade 8 Philosophy class where formative assessment was being implemented. They do not reflect the entire story of the formative assessment activity in the Grade 8 Philosophy class. This was not the intent. Rather, they provide a glimpse into the activity of formative assessment as it unfolded with enough detail to reveal the complex, dynamic, contextually specific and overall messy nature of the activity. They were constructed through a synthesis of codes and categories which drew its evidence from multiple data collection sources. These sources were used as “samples of the same process” (A. Wise, personal communication, April, 2, 2015) to demonstrate the essential features of the Grade 8 classroom where the formative assessment activity unfolded. I employ Mr. Benedict’s description of formative assessment to describe the themes. They were not something that could be “nicely packed up, neatly” (Mr. Benedict, Interview 4). This simply means that they were not independent of each other. Each theme only made sense when examined as one of four prongs that comprised the activity of formative assessment in the participants’ classroom.

5.2.1. “A Piece of the Puzzle”

In a one-to-one discussion with Mr. Benedict he described formative assessment by saying, “Let's think of the classroom as a puzzle,” and the assessment piece as “a piece of the puzzle. It can't stand alone” (Mr. Benedict, Interview 4). In Interview 5, he employed the metaphor of a “squishy amoeba” – a single cell organism – as an image of pedagogy, learning and assessment as a whole activity. These comments seemed to present an understanding of an integrity to teaching, learning and assessment, where none was a separate activity, but rather they comprised a melded dynamic practice. Formative assessment was inseparable from classroom life, and this made it complicated. It was complex, not merely because it was connected to teaching and learning, but also because it reflected the puzzle and all the diverse social, cultural, and historical variables that comprise teaching and learning.
The literature points to a number of social, cultural, and historical variables or the context which form the bottom half of the activity triangle, and which shape the piece of the puzzle. These include the participants’ histories and prior experiences with education, institutional culture and its requirements; education district mandates; community needs; the scarcity or abundance of educational resources and tools; students’ future academic and career plans; educational theories; classroom norms; and societal discourses. These variables shape the conceptualization and enactment of assessment (Black & Wiliam, 2006; McMillan, 2007; Popham, 2008; Stiggins, 2007; Torrance, 2012). In this section, I explore one of these variables, that of the teacher and student belief system. This variable emerged as a strong theme because the participants’ conceptualization of formative assessment reflected their belief systems about learning. In other words, there was an internal consistency between the classroom participants’ belief systems and their actions during formative assessment.

5.2.2. The Teacher’s Belief System

The literature identifies a teacher’s beliefs as a determinant of his assessment activity. It emphasizes the influence of beliefs on the teacher’s actions and roles. Beliefs are defined as sense-makers that provide a framework for teachers’ pedagogical conceptualization of classroom participants’ roles. They govern the nature of teaching and learning concepts and organize the teacher’s actions (Borg, 2001; Pajares, 1992; Xu, 2014). With this in mind, I wanted to understand Mr. Benedict’s pedagogical beliefs. During the first interview, we discussed his beliefs in general and, in particular, those relating to assessment. In subsequent interviews, in response to my inquiry about a particular practice or assessment activity, he replied, “I don’t know” and “I have always believed.” I interpreted these responses to mean that his pedagogy was underpinned by strong beliefs and in turn they had a weighty influence on his formative assessment activity. This belief system involved his beliefs not just about assessment, but also about teaching and learning, and there was an internal consistency between Mr. Benedict’s pedagogical beliefs and his assessment beliefs.

Mr. Benedict’s wider pedagogical beliefs were consistent with a sociocultural paradigm. This theory proposes a view of learning as being inseparably linked to activity. It occurs within a context and takes place as a result of mediation with tools. Mr.
Benedict aligned strongly with this perspective, and he argued that learning must reflect “this person, this teacher, this classroom, this school, this context, this neighbourhood, this community” (Mr. Benedict, Interview 4). Pedagogy is also situated, in that it is born from the social, cultural and historical context within which it is practiced (Crossouard & Pryor, 2008b; Marshall, & Drummond, 2006; McMillian, 2007). Mr. Benedict used the language associated with activity theory often, referring to teaching and learning strategies as “tools” (Mr. Benedict, Interview). He identified language as “the tool” for mediating learning and assessment activities. Mr. Benedict seemed to have a preference for activities where knowledge was gained through classroom interaction. He asserted that “we are so successful because we have figured out how to hunt down the mammoth as a group” (Mr. Benedict, Interview 5).

At the heart of his belief system was a view of that all the members of the Grade 8 classroom were learners. Learning involved “engagement” in activity that met the unique and common learning needs of all the members in the classroom (Mr. Benedict, interview). It had to be “relevant” to the learners’ present and future lives, so that they would become “invested” in lifelong learning (Mr. Benedict, interview). He believed that it was important to create an environment that supported all learners. Mr. Benedict’s statement, "My life is formative assessment," meant that he believed that he was, like his students, a learner, and as a result, he crafted a formative assessment system that reflected the needs of all learners in the classroom. Mr. Benedict identified three sources that had influenced his beliefs about teaching and learning. These were his past teachers – in particular, a university professor, and his secondary school English teacher – his time as an elementary school teacher, and the subject discipline of Philosophy.

Formative assessment was a “piece” in the sense that it emerged from his pedagogy, “the puzzle.” In the ensuing sections, I present the link between this belief and Mr. Benedict’s formative assessment conceptualization and beliefs about teaching and learning. This internal consistency between a teacher’s pedagogical beliefs and his assessment beliefs is identified, in the literature, as a key characteristic of teachers who are successful in implementing formative assessment practices in their classroom (Dixon, Hawe & Parr, 2011; James, & Pedder, 2006; Lumadi, 2013; Marshall & Drummond, 2006; Willis, 2009). It reduces the “powerful … wash back effect” of the
tensions arising from the interaction between different discourses that could “undermine effective teaching and learning” (James, 2006, p. 58)

5.2.3. Mr. Benedict’s Definition of Formative Assessment

Early in his career, Mr. Benedict recognized the potential of formative assessment to produce “a somatic, intellectual and emotional” connection with the text and ideas, so began “practicing it before I even knew its name” (Mr. Benedict Interview 1), because it was “vital and important” (Mr. Benedict, Interview). He perceived formative assessment as an educative, not merely evaluative tool. The purpose of formative assessment was not to measure learning but rather to foster it. For him, formative assessment was “a conversation; a dialogue, between the teacher and the student” (Mr. Benedict, Interview 2). It reflected that both parties were “mutually satisfied” (Mr. Benedict, Interview 1), having achieved the object of the activity. This definition placed formative assessment activity as a “process of learning” (Mr. Benedict, Interview 4). In his mind, it was an activity that “we can't separate” from learning (Mr. Benedict, Interview 4).

Mr. Benedict’s identification of formative assessment as being indistinct from pedagogy meant that “there is no one way” (Mr. Benedict, Interview) to practice formative assessment, and, therefore, formative assessment practices included a myriad of activities, all of which occurred during the production of a work sample. He identified several characteristics of formative assessment activity. These will be described further in the following section. However, he presented an example of engagement in a formative assessment task. He noted, “They hand in a piece of paper; they assess it; I assess it. We talk about it. I am not happy with this. This needs to be fixed. This needs to be tweaked and so they do it again” (Mr. Benedict, Interview 1). From Mr. Benedict’s perspective, a formative assessment task seemed to involve two elements. First, it offered students the opportunity to refine their work through the process of redrafting and rewriting their work samples; and second, the assignment was constructed through a series of actions, involving dialogue, negotiation and reflection, between the teacher and students. Formative assessment, as Mr. Benedict perceived it, appeared to be in line with the literature’s definition of the activity – that is, that it is a learning act, executed through a number of pedagogical activities. The central features of this learning act
include drafting and researching, feedback and self-assessment (Black & Wiliam, 2006; McMillan, 2007; Popham, 2008).

**Formative assessment is a process-oriented activity**

Mr. Benedict believed that learning was not a “one shot” activity but rather a long-term “journey” as students moved towards mastery (Mr. Benedict, Interview). He saw learning as a continuous lifelong activity where the learners were always in process. This belief greatly impacted the design of the Philosophy curriculum. For instance, he created a curriculum which enabled students to “see their whole path” (Mr. Benedict, Interview) by connecting the learning spaces in which students were engaged. He integrated into the curriculum opportunities for students to re-do work samples. This practice connected students' past experiences in elementary school, where the “ethos” was one of “no failure,” with their current ones (Mr. Benedict, Interview). He also turned the students’ gaze towards their future participation in education by constructing the object as writing at university level. This object prepared students for future success.

His conceptualization of formative assessment as a process-oriented activity emerged from his belief in learning as a journey towards mastery. This activity was not a single act of learning or “a one time label” (Mr. Benedict, Interview). Rather, it was a process involving a number of actions. During instruction, Mr. Benedict connected those beliefs: a process-oriented assessment, with the journey towards mastery. He constantly reminded students that education occurred during the lifelong journey towards expertise, as he noted,

Mr. Benedict: It’s all about the process. My goal is to move from here to here.

*Mr. Benedict creates a gap with his hands. He raises his left hand and says,*

Mr. Benedict: I am not interested in here.

*He pauses for a bit,*

Mr. Benedict: I need to clarify. I am interested in the starting point, but I am more interested in getting to the end point.
That's the point. It's the process, the journey, the long term.

(Fieldnote 9)

Mr. Benedict held that formative assessment, which entailed the production of a task that resulted in student learning, was by its very nature a process-oriented activity. This belief is similar to the descriptions of formative assessment as proposed by Popham (2011) and Wiliam (2011). They argue that formative assessment involves students engaging in a learning process that is flexible and adaptable to the demands of learning.

Although Mr. Benedict believed that a variety of process-oriented assessment tools could be used in the journey towards mastery, given the nature of the Angora Program and its object of writing development, he placed emphasis on re-doing and re-writing work samples. The journey towards mastery was described by Mr. Benedict, in our one-to-one conversations, as development through a process of "keep re-doing and improving" (Mr. Benedict, Interview 1) throughout the academic year, until the students were "demonstrating strong critical techniques in their writing" (Mr. Benedict, Interview 1).

He advanced a two-pronged approach, short-term and long-term, in this process-based activity. The short-term approach included the production of learning that occurred within a particular assignment, so students could re-write an "assignment over and over" (Mr. Benedict, Interview). All assessments, including examinations, involved a process of writing drafts. The long-term strategy was the process of learning occurring across tasks. Here each assignment was viewed as one step in a series of work samples that students could re-do, with each assignment moving students closer towards achieving writing mastery. As a result of these approaches, tasks "take a long time" (Alexandra, Interview) to complete but the process was "excellent. I think that it is fantastic that people get to re-visit and make corrections because I think that that is the only way that students are going to learn from their mistakes" (Brianna, Interview 2). Mr. Benedict believed that the process of re-doing work samples facilitated students' development by drawing to their attention to the continuous nature of learning. His
desire was that they would continue re-doing their work samples, driven by the goal of attaining mastery at university.

**Formative assessment is a collaborative activity**

During our one-to-one discussions, Mr. Benedict frequently used the word 'we' to refer to himself and the students engaging in formative assessment activity. He also used 'we' with the students, during instruction. I was curious to know why he did so and inquired about his use of the word; he responded:

> What other word would I use because 'we' is inclusive of both of us. All of us are involved in the process. It's not me making. What we are doing is trying to come to agreement on how well we think we are doing. (Mr. Benedict Interview 5)

His use of “we” seemed to reflect his pedagogical beliefs about the nature of learning: that it was a collective activity, involving interaction and cooperation between him (the teacher) and the students. This is consistent with Van Oers (2008) description of learning as a “collaborative … mediated process … based on the negotiation of meaning, exchange and the construction of new meaning” (p.9). Mr. Benedict's description of formative assessment as a “negotiated space, meaning there is mutual responsibility for how that assignment occurs, for how that assignment is shaped, how it looks at the end of it” (Mr. Benedict, Interview 1), seemed to cohere with this pedagogical belief that learning is a collective endeavour.

Language or conversation was identified as the tool that mediated formative assessment into a collaborative activity. Mr. Benedict described the essence of formative assessment conversation as, “You assess it, I assess it and then we talk about it” (Mr. Benedict, Fieldnotes 6). This conversation took the form of self-assessment and feedback. The former was produced by the student and submitted with her or his assignment, and was then employed by Mr. Benedict to guide his appropriation of the student’s assignment. Feedback was given to the student when Mr. Benedict and the student – “we” (Mr. Benedict, Fieldnote) – talked about how they could improve the assignment. Formative assessment therefore involved tasks that both teacher and student had to perform to complete the activity.
Mr. Benedict echoed his belief about the role that the “we” played in mediating formative assessment activity when he said: “To me formative assessment is the conversation between the teacher and student about arriving at that point where we are both mutually satisfied with the skill, content, inquiry” (Mr. Benedict, Interview 1). The use of the words “mutual,” “negotiated,” “two way street,” and constant “back and fro” (Mr. Benedict, Interview), to describe the mediation process, suggests that the interaction generated was perceived by Mr. Benedict to be less vertical than the traditional student-teacher relationship, where the teacher wields a significant proportion of power over the student. He believed that students “drive the conversation” (Mr. Benedict, Interview 5); they dominate “80%” of the talk (Mr. Benedict, Interview). Mr. Benedict’s belief about formative assessment as a negotiated conversation was evident in the classroom. He constantly referred to the process as a collaborative affair. One result of this was that some students mimicked his language. Evelyn, Alexandra and Brianna openly identified formative assessment conversations as important to their learning. Alexandra noted, “I feel we learn much more through the conversations we have with him. We like to discuss and debate and so I like that” (Alexandra, Interview 2). Both Evelyn and Brianna expressed a desire to have more conversations with Mr. Benedict.

**Formative assessment is a learner-centred activity**

Mr. Benedict recalled that it was his high school English teacher, Mr. White, who had fostered his love for learning by encouraging him to discover more about those topics that interested him. This, coupled with his experience of being an elementary school teacher, where he perceived the school culture to be focused on the “needs of the child” (Mr. Benedict, Interview), seemed to have shaped Mr. Benedict’s belief in a “child-centered” approach to learning (Mr. Benedict, Interview). He defined this approach as the engagement in learning activities that made possible the discovery of a student’s strengths and weaknesses in order to tailor pedagogy to address those needs. He believed that a child-centered approach to learning honoured the students’ learning differences and created pedagogical moments for their success by addressing both the collective and the unique needs of the individuals in the Grade 8 class.
Mr. Benedict regarded open format, an assignment element where students determined both the topic and structure of their work samples, to be a tool that fostered the students’ “investment” (Mr. Benedict, Interview) in their learning. Mr. Benedict provided an example of the connection between this assessment feature and his belief in a child-centered approach to learning. It allowed him to “find a way that they can get a way to understand.” (Mr. Benedict, Interview 5). Mr. Benedict described what “way” meant. He gave the example of the student who loved Math, could explore her enthusiasm for the content area by researching and constructing a work sample on Pythagoras. Adopting a child-centered approach to learning involved “following the learning, wherever it may lead” (Interview) in order to address students’ needs in a meaningful way. He believed that it was his professional responsibility to place emphasis on a student’s interests over subject matter boundaries, so he encouraged students to construct their work samples by drawing on topics learned and resources acquired in other subject classes. He created an integrated curriculum with the History teacher so that students could “take what they learn in History class and bring it into this classroom” (Mr. Benedict, Interview 3).

Mr. Benedict’s formative assessment beliefs were also connected to his pedagogical belief in a child-centred approach to learning. The tool Mr. Benedict regarded as facilitating student needs was feedback. This formative assessment device lived in the “little conversations” (Fieldnote) that he conducted with individual students, based on his evaluation of their draft work samples. In, and because of these conversations, Mr. Benedict tailored his teaching to meet the students’ particular needs. Feedback was provided for individualized learning. He commented during Interview 5:

With James, it’s going to look different. James and I may end up; I am hoping we will have more conversations than say Alexandra, because we will have to dialogue what it looks like. The conversation, only what it feels like but with Alexandra, she is in a different place. My job will be to push herself, get her to be less critical of her work than I.

**Formative assessment produces metacognitive thinking**

Mr. Benedict used formative assessment because he believed in its potential to develop students’ metacognitive thinking. He used the phrases “big analytical thinking” (Interview), and “mindfulness” (Fieldnote) to describe such a process. He defined
metacognition as a student’s ability to trace and evaluate her thinking about the assessment process, as well as to have thinking tools to “follow the learning” (Interview). Mr. Benedict perceived the a priori system of formative assessment as useful for generating this type of thinking in students. The system was comprised of process constructs and the self-assessment, and it served to guide students’ thinking about the assignment. A priori formative assessment was not the only metacognitive mechanism that Mr. Benedict employed in his classroom. Instructional tools such as questioning, mindfulness and discussion were also used to develop students’ evaluation skills and produce an awareness of the requirements of the task. Mr. Benedict particularly identified the a priori system as an element of formative assessment that worked with the major goal of Philosophy, which is the production of big analytical thinking. He pointed to this as a requirement specific to Philosophy, which seeks to develop a community of inquiry where students are transformed into autonomous learners. Mr. Benedict identified formative assessment as a tool that made this possible.

**Formative assessment is an authentic activity**

A point of intersection between Mr. Benedict’s pedagogical belief system and his conceptualization of formative assessment was context-specific learning. As previously noted, he believed that learning activity must be tailored to reflect the nuances of the environment within which the activity unfolded. This belief expressed itself in the word “authentic” (Interview) in his description of the Grade 8s’ formative assessment activity. Mr. Benedict explained “authentic” as a formative assessment activity shaped by the unique context of PSS1. It was one that met the needs of the Grade 8 students at PSS1. He held that “if formative assessment is to be real, then it must fit the attributes of the community to which it is applied” (Mr. Benedict, Interview 4). Mr. Benedict also offered the words “organic,” “homegrown” and “real” to describe an authentic formative assessment (interview). Formative assessment had to be relevant to the lives of his students.

The metaphor of a squishy amoeba, not only signified the integration of assessment and learning, but also represented a classroom which could be “morphed into many shapes” (Mr. Benedict, Interview 4), where assessment was flexible and adaptable to meet the needs of a particular situation or student so that it was “relevant to
real life experiences” or promoted success (Mr. Benedict, Interview 5). Formative instruction, especially those unplanned conversations that arose to aid students in the construction of their work samples, was identified by Mr. Benedict as facilitating authenticity. These “homegrown” conversations were “important” in providing students with the requisite knowledge to construct their work samples (Mr. Benedict, Interview). For instance, after students were given their first assignment, Mr. Benedict inquired of the class, “Is anyone writing on Pythagoras?” Three students indicated that they were, so Mr. Benedict began a conversation on the topic (Fieldnotes). A belief that learning, and by extension formative assessment, was authentic emerged as a strong theme. He told the class that authentic learning was “most interesting. The detours are important. I want to find more time to explore these detours. It’s good … the unexpected” (Fieldnote). His belief that assessment must be relevant to students’ lives seemed to be aligned with the sociocultural theoretical perspective that formative assessment is a situated activity (Crossouard & Pryor, 2008c; Marshall, & Drummond, 2006; McMillan, 2007). Mr. Benedict’s belief in authentic formative assessment meant that to him, even the most static of actions could be made flexible. An example was when the students misinterpreted his instructions for the first examination and did not spend the majority of their time on Question No. 4, as he had instructed them. Mr. Benedict responded by saying, “My fault, we will continue the exams the next Angora day” (Fieldnote, 5). In discussing the incident, Mr. Benedict pointed to the influence of the sociocultural context on his actions:

The type of kids that I am dealing with, when you put something in front of them and it’s called an exams, they are going to try to do everything to the best of their ability, which meant they are spending too much time with questions that did not require their time (Mr. Benedict, Interview 2)

Mr. Benedict traced his belief in learning and formative assessment that is “authentic” to the subject discipline, Philosophy, which he believed was adaptable to the messiness of life:

Here is another influence of Philosophy, that we like everything nicely packed up, neatly, so here is formative assessment. It would be nice to say, "This is what formative assessment looks like", but this is the problem. For It to be real and organic, maybe we can't say, this is always the way it is going to be… maybe it has to be shaped by the conversation discourse that the individuals have in the process… and I guess that is
(what) one of the ironies is. Formative assessment is something that cannot be placed in a box. (Mr. Benedict, Interview 4)

Mr. Benedict placed emphasis on authenticity because it facilitated students’ ownership of their assignments, which he regarded as the outcome of the Grade 8 learning space. He noted that students who identify themselves as owners have a “purchase” (Interview) in their learning; they are invested in their work samples. Student ownership as a feature of the Grade 8 classroom, where formative assessment was being implemented, will be discussed later in this chapter.

5.2.4. A Unified Conceptualization of Assessment

Mr. Benedict believed in a unified conception of assessment, where the distinctions between formative and summative were collapsed, and assessment fluidly transitioned into both forms. Mr. Benedict’s personal experience of witnessing the transformation of students into engaged learners and his understanding of such authors as D. Royce Sadler (1981, 1983, 1985, 1987) led him to emphasize assessment’s formative function over its summative purpose. As a result, in the Grade 8 classroom, “the whole year is a formative year. I mean the summative grade is the last grade for the term” (Mr. Benedict, Interview). However, this conceptualization of assessment was not always easy to transfer into practice. The discourse of grading influenced the power of the summative function of assessment. Consequently, Mr. Benedict frequently discussed assessment in terms of its product, the grade. In a one-to-one discussion with me, he reflected that he was “struggling against what was done to us, tendency for me to . . . just forget, then I end up doing the thing that I . . . try not to do and . . . that’s the one way, downloading the stamp” (Mr. Benedict, Interview 4). His description of this struggle echoed the sentiments of George, a teacher in a study conducted by Delandshere and Jones (1999). In that study, the researchers assisted George to implement formative assessment activity in his classroom, but George’s belief system was as a barrier to his progress.
5.2.5. Mr. Benedict’s Beliefs about his Pedagogical Role

Mr. Benedict visualized himself as a conductor who simply guided the conversation to make beautiful dialogue. As a conductor, he described his role as free-flowing:

... Like Miles Davis ... I am .... a jazz conductor. Yeah jazz, it is more (like) that. You know music that is played from a note or idea. You know, like what Miles Davis does ..... Improv, yeah that's what I do. A lot of what I do in the classroom is improv. I have no idea where we are going, the kids direct it. Sometimes we end up in places where I never thought that we would end up. (Mr. Benedict, Interview 4).

The jazz conductor is an expert improviser. He can lead a piece without reading from the music sheets but by following the music as it is played. The conductor does not perform stiffly but moves to the music as it is being played. This analogy seemed to connect smoothly with Mr. Benedict’s belief about formative assessment that it is a collaborative ongoing process. Mr. Benedict’s perception of himself as a jazz conductor suggested that he viewed his role as a teacher to be one of facilitating the improvisation formative assessment. Mr. Benedict saw that his role was to “follow the learning wherever it may lead” (Mr. Benedict, Interview 4). He believed that his role was to collaborate with his students, to work with them via feedback, in the production of their assignments. Mr. Benedict’s child-centered approach suggested that the child’s interests were to be put into the spotlight, like the jazz conductor who often steps out of the way when a soloist is playing so that attention is given to the soloist and to the piece performed.

5.2.6. The Students’ Beliefs about Assessments

Like Mr. Benedict, students’ perceptions about assessment and producing work samples were connected to their larger belief system about learning and teaching. It was also a piece of their puzzle. Our one-to-one conversations revealed that the students perceived education as preparing them for their future life, and Mr. Benedict’s class as preparing them for university. Assessments played a key role in this preparation; they acted as the determinant of students’ success. As a consequence, high grades were a “valuable” commodity (Nathaniel, Courtney, Interview), something that was “beneficial”
(Brianna, Arthur, Interview) to them. As the teacher, the students believed that Mr. Benedict was the “expert” (Brianna, Alexandra, Interview), whose responsibilities were to determine if their assessments were “good or bad” (Evelyn, Interview), and to “help” (Ingrid, James, Interview) them “do their best” (Nathaniel, Interview). The students’ role was that of learners, whose responsibility was to acquire knowledge and to get their work “right” (Arthur, Brianna, Interview). This established a vertical division of labour in the classroom, where Mr. Benedict as expert and evaluator held greater power than the learner. These beliefs were shaped by the students’ present and past educational experiences where grades determined the next step in their learning. The students’ responses echoed the findings of Ramesal (2009) and Cowie (2009) that students’ beliefs played an important role in the practice of assessment. Furthermore, Ramesal (2009) noted that students’ beliefs systems were “socially constructed”, influenced by the context, in particular by societal beliefs about the role of the teacher. Students perceived teachers as experts who imbued learners with knowledge. They believed, given the teacher’s possession of knowledge, that it was important to align their belief system with to those of their teacher’s.
5.2.7. Tension between Students’ and Mr. Benedict’s Beliefs about Work Samples and Re-do

Using the activity system, one can trace how the subjects, Mr. Benedict and the Grade 8 students, belief systems shaped their actions towards the object of writing at a first year university level. In particular, how contradictions or “deviations from this scripted procedure” emerged within the system as a result of the subject’s belief systems. Figure 5-2 depicts one such contradiction. It emerged as a result of the interactions between Mr. Benedict’s beliefs and those of the students. In the main, students believed that their submitted work samples must be perfect, which differed from Mr. Benedict’s belief that work samples were under construction. The unbroken arrow in
Figure 5-2 identifies the elements of the activity system involved in the contradiction that of the tool used by Mr. Benedict to engage students in process-oriented learning, and the rule students employed to construct their assignment.

The students I interviewed seemed to conclude that work samples served grading purposes and that the submission of a work sample signified its culmination. This thinking appeared to have stemmed from their past and even some present experiences with assessments, where the work samples in other classes were treated as a product rather than a process. All of the students indicated that Mr. Benedict’s class was the only class where they could resubmit work samples. The norms that students developed which guided their actions during the construction and submission of work samples in Mr. Benedict’s classroom were greatly influenced by this context, and as a result, most of them developed a rule that submitted pieces must be “perfect” (Alexandra, Nathaniel, Courtney, Evelyn, Brianna, Arthur, Interview). Even Alexandra, who had prior experience with formative assessment, and who believed that her work reflected a process of learning, also believed that her submitted work samples had to be perfect. An example of this was a discussion she had with Nathaniel and Brittney concerning the fourth assignment, the speech. On Day 1 of speech oration, Alexandra decided not to present her speech because it was not “perfect” (Alexandra, Interview). Brittney, her co-presenter, and Nathaniel tried to get her to present the piece but she refused. They reminded her that Mr. Benedict believed in learning as a progression and as such, she would have the opportunity to re-do the speech, but Alexandra remained firm in her resolve, that she needed more time to prepare, to make it perfect for Mr. Benedict. In reflection, Alexandra noted her belief that submitted pieces must be perfect.

It must be good, perfect, that's why I do drafts. I don't like to wing things. I know a couple of people who winged it that day and it makes me nervous to do that. I like to think about it, write it down, do a couple of drafts before I submit. (Alexandra, Post-observation Interview)

This rule was a deep-seated one. It was developed by the students and it not only shaped students’ actions during the construction of work samples, but also instructional tasks. As an example, when students were given the group task of preparing a poster on a specific philosopher, Evelyn, who was assigned the job in her
group of drawing a picture of Confucius, spent a great deal of time working on this drawing because it had to be “perfect” (Evelyn, Observation).

Students’ belief system seemed to be different from that of Mr. Benedict who held that learning and assessment were process-oriented activities. Ramesal (2009) notes the impact of the lack of a “shared belief system” (p. 6), between the teacher and the student during assessment activity. She argues that it could be a source of tension in the assessment activity. This was the case in the Grade 8 classroom on at least one occasion. A contradiction surfaced between the students’ rule for the submission of a work sample and Mr. Benedict’s belief that mastery was a process that could only be achieved through the tool of re-doing work samples. This rule prevented many students from employing the tools of feedback and re-do to generate expertise. Instead, Alexandra, Arthur, Brianna, and Courtney submitted perfect first drafts by rewriting their work samples several times before submitting them. The students struggled with the notion of an assessment being process-oriented. While they were aware of Mr. Benedict’s belief and of the availability of the tool re-do, Arthur noted that “perfection is not a requirement” (Arthur, Interview 2) and Nathaniel indicated that the assignment “does not have to be perfect,” they could not transfer this knowledge into practice. Nathaniel, who had tried to convince Alexandra to present her work sample even though she was unsatisfied with it, asked to postpone his speech because he was “not ready” (Nathaniel, Fieldnote). Perhaps Arthur best epitomized this struggle. During our discussion about his exam performance he said, “I knew my exam wasn’t perfect. Oh man, I know I just talked about all this don’t have to be perfect stuff” (Arthur, Interview 2). This belief system in perfection and its resulting rule thus had a “powerful wash back effect” on students’ actions (James, 2006, p. 38).

Interestingly, the rule that submitted pieces had to be perfect seemed to have been fuelled by Mr. Benedict's rule for the examinations. One of the criteria Mr. Benedict introduced for the examination was that students’ responses to the questions had to be perfect. His instructions to the class were,

This paragraph has to be so perfect, so coherent, so tightly wound over one idea, so all those questions have one idea, you have to pull, you have to pull that idea out, you have to have an original take on it, and using the Presocratic fragment you have to have a very tight, clean and
coherent. Every one of your sentences has to be perfect, and not just perfect in the syntax sense, not in the structural sense, but it has to be coherent, just like your syllogism each sentence should act as an antecedent or as a consequent to the final sentence. Every sentence should have a completely economical, and I mean economic by meaning economical in that it is clear and has a relation to your topic sentence. You can't veer off anywhere. (Observation Transcript, 5)

He believed that perfection would emerge from students writing and re-writing the paragraph several times during the examination. This rule may have influenced the students’ rules for submitting work samples. The examination was the first graded task, and so Mr. Benedict’s insistence on the “perfect paragraph” may have guided their actions in all other work samples.

Students’ belief that the submission of a work sample signified its culmination resulted in the rule that all work samples submitted must be perfect. The rule was contradicted by the tool of re-do, a tool that emerged from Mr. Benedict's belief that formative assessment was a process-oriented activity. The contradictions that emerged were consistent with Filer’s (2002) and Willis’ (2009) descriptions of students’ belief systems about teaching and learning. That is, it guided their actions during assessment activity and determine the ways in which it unfolds.

5.2.8. Summary

Mr. Benedict’s pedagogy, the puzzle, and students’ experiences with assessment were the source from which their beliefs about formative assessment emerged; therefore, as he saw it, formative assessment could not “stand alone” (Mr. Benedict, Interview). This relationship between Mr. Benedict’s pedagogy and his formative assessment beliefs provided legitimacy for his brand of formative assessment activity. It facilitated his inclusion of new elements or emphasis on particular features of the formative assessment activity, because it reflected his beliefs. Students’ beliefs were also powerful. Their previous experiences with assessment shaped these belief systems. Belief systems do not exist in a vacuum; rather, they are framed by and reflect the social cultural and historical context within which the assessment is located (Filer, 2000). As a consequence, Mr. Benedict’s experiences of being an elementary school teacher and his experiences as a student, as well as the subject discipline of Philosophy,
together shaped his beliefs. Formative assessment, as conceptualized by Mr. Benedict, emerged as a collaborative, process-oriented, learner-centred, “authentic” activity of metacognitive development which was born from a belief that learning is a collective journey towards mastery. As for the students, their beliefs reflected both ends of the spectrum. They held that assessment was process-oriented activity and also that it was an activity which should result in a perfect product.

5.3. Motives

Leont’ev’s (1981) example of the primeval hunt illustrated the role motives play in human activity. He posits that motives are the driving force behind an individual’s actions. Motives compel the individual to engage in collective activity and they influence her actions during the activity. Kaptelinin (2005) states that motives are the “ultimate reason behind various behaviours of individuals, groups or organizations … the sense maker which gives meaning and determines value of the various entities and phenomena” (p. 5). Given their importance, I endeavoured to discover classroom participants’ motives. During the first interviews with Mr. Benedict and the students, I asked for their reasons, their “sense maker[s]” or motives, for engaging in assessment. Once identified, in the subsequent interviews I investigated those reasons and attempted to fully understand them. In this way, the interview and observations complemented each other. One data source identified the motives for participants’ engagement in formative assessment activity, while the other revealed how these reasons appeared in the activity of formative assessment. The identification of the participants’ motives was significant in pinpointing, as well as tracing, the object of the activity. During the course of the study, several motives emerged as the driving forces behind the students’ and the teacher’s actions. Among those identified were student academic success, high grades, development of learning, and impressing the teacher, which have been highlighted in the literature as being common to classrooms (Hedegaard, 2002).
5.3.1. The Motives in the Grade 8 Philosophy Classroom

Mr. Benedict’s motives

Mr. Benedict identified two sense makers or motives that guided his actions. They were: (1) constructing a distinct learning environment; and (2) creating successful learners.

A distinct learning environment

The formative assessment activity was driven by Mr. Benedict’s motive of creating a distinct learning environment. He defined this environment as one “different” from the other learning spaces experienced by the student (Mr. Benedict, Interview). This desire to create a distinct experience resulted in Mr. Benedict’s decision to restructure the Angora Program, to distinguish it from Arena, another program at PSS1, and to “make it my own” (Mr. Benedict, Interview).

Two characteristics that distinguished the environment as distinct were the subject, Philosophy, and formative assessment. Mr. Benedict desired to create a learning environment where students developed a “somatic, emotional and intellectual engagement” (Mr. Benedict, Interview) with texts. To accomplish this, he introduced Philosophy into the program’s curriculum. Mr. Benedict was convinced that this content area would captivate and inspire students and spark their curiosity in a way that the typical Grade 8 Social Studies curriculum did not. He had first noticed how some learners responded to this subject when he introduced it in his elementary school classroom. It transformed “smart” but “bored” students into “excited” learners (Mr. Benedict, Interview). None of the Grade 8 students interviewed had had any previous experience with Philosophy prior to entering into Mr. Benedict’s class as it was a content area offered to a select few in public schools and only at the higher grades.

Although teachers in the school district were encouraged to adopt formative assessment activities in their classrooms, it seemed that very few teachers actually employed the activity. From the interviews with the students, I discovered that only one of the students, Alexandra, had experienced formative assessment in elementary school, and that Mr. Benedict was the only Grade 8 teacher who used formative assessment activity. Although Mr. Benedict admitted that he was not aware of all
pedagogical practices at PSS1, he noted that many teachers preferred the “worksheet approach” and “summative assessment” (Mr. Benedict, Interview). He seemed not to be content just to practice formative assessment as prescribed by the text, but he made it his own with the introduction of such elements as open format, pair edits and re-writes during examinations. His use of formative assessment, aided by adaptations to the activity, complemented his motive and as a result, his classroom became a different learning experience for the students.

**Creating successful students**

The desire to create *successful students* was another motive that drove Mr. Benedict's actions in formative assessment activity. He defined student success as students leading a “flourishing” life. This success was not immediate, but rather, was a long-term, lifelong endeavour. In an interview, Mr. Benedict described a student who was flourishing as someone who was:

> Unfixed… complex, creative, unsecured person, and I mean unsecured in the sense that she is not...she is unfixing herself from a building, she is unfixing herself from a position to go where, I don't know and nor does she know (Mr. Benedict, Interview 2).

Academically, student success was tantamount to being an independent learner. This learner was “someone who can think about. They have information. They know but they are not ideologically fixed. They can defend their position in a credible way” (Mr. Benedict, Interview 2). The students were expected to develop into independent learners over the three-year period in the program. Mr. Benedict provided an illustration of independent learners:

> They have no issues coming up to me and sitting down and getting into an argument with me ... They just tell me what they are doing, that they are unhappy with it and that they are going to re-do it, or they need more time, and with them, they know the piece, they will come and show me and tell me that the piece is not good enough. In their mind ... and they will go back and will re-do it. These kids in Grade 12, it is completely in the decision making process, how they shape their work. (Mr. Benedict Interview 3)

He envisioned independent learners as students who had developed a wealth of philosophical knowledge and skill, were confident and passionate enough to challenge their teacher, and could evaluate their work and determine its quality. Again, Mr.
Benedict's motive was influenced by Philosophy. Autonomous thinking is the desired outcome of teaching Philosophy (Lipman, 2003), and Mr. Benedict regarded formative assessment as being of service in achieving this outcome. He perceived formative assessment as providing students with the thinking and evaluation tools to mediate their development into independent thinkers. This motive was connected to his belief that learning was an ongoing process.

**Students’ motives**

Like Mr. Benedict, the students interviewed possessed multiple motives for engaging in formative assessment activity. Perhaps the most dominant motive was to attain high grades. Nathaniel, Courtney, Evelyn, Brianna, Ingrid, and Arthur were all driven by achieving a “good mark” (Arthur, Courtney Interview) or by an “A” in their work samples (Brianna, Ingrid). They perceived this as the “most important thing” (Nathaniel, Interview) to consider when submitting assessments. Students offered different reasons for wanting good grades. Nathaniel, Arthur and Ingrid viewed poor grades as a barrier to entry into university. Brianna wanted good grades to secure a place on the Principal’s List and Evelyn desired good grades so her parents would reward her. Two students perceived a motive of good grades as “dishonest” (Alexandra Interview). James stated, “If you are just doing it for the grade, it’s not, it’s, I guess, kind of like disgenuine, not honest” (James Interview 1). Alexandra’s elementary school experience, where students were provided with feedback rather than a letter grade, and where “learning was celebrated” (Interview), was probably influential in determining her motives.

The desire to impress important adults in their lives was another motive students presented for engaging in formative assessment activity. Alexandra, Courtney, Nathaniel and Arthur wanted to impress Mr. Benedict. Alexandra stated, “I do want to impress Mr. Benedict. It must be good, perfect, that’s why I do drafts” (Alexandra, Interview 2). Arthur desired to appear “smart” (Arthur, Interview) to Mr. Benedict, to confirm that his decision to award Arthur a spot in the class was a correct one. Evelyn wanted to impress the adults in her life, including Mr. Benedict and her Mum. She noted, “I try to impress her, I try to impress Mr. Benedict . . . I don't really try to impress myself, 'cause it's kind of . . . like I'm not grading my own paper” (Evelyn Interview 1). Similarly, Brianna also was driven by the motive of impressing her parents.
Nathaniel, Brianna and Alexandra completed work samples because they facilitated the development of the skills and knowledge necessary for the future. Nathaniel participated in assessment activity because it would prepare him for university. During the interviews, Nathaniel revealed that his sister attended university and was enrolled in a Philosophy course there. He concluded that he would succeed in that course when he attended university because he was being exposed to the same topics that his sister was studying in her program. Similarly, Ingrid noted that she was motivated by the idea of doing “well in university” (Ingrid, Interview). Brianna felt that the writing activities and work samples would “provide me with the skills to move me closer to my goal of being a Psychologist” (Brianna, Interview 1). Two students identified a desire to learn as a motive for engaging in formative assessment. Alexandra wanted to learn how to write a great essay: “I want to improve my writing. I am pretty proud of my writing skills and I would like to take it as far as I can go” (Alexandra, Interview 2). James desired a challenge; he stated, “I find the class enjoyable, I want to learn new things” (James, Interview 1).

5.3.2. The Tension between Students’ Motives and their Impact on the Object

Kaptelinin (2005) proposes that the object of an activity and subjects’ motives are distinct elements of the activity system. For him, they are distinct because subject’s individual motives act upon the collective object of the activity and transform it. In the Grade 8 class, the teacher and students possessed specific reasons or motives, as noted above, for participating in formative assessment activity. These motives determined their actions towards achieving the object. The object was “valued” and “prioritized” by classroom participants (Kaptelinin, 2005, p.5). In the Grade 8 Philosophy class, the object of the formative assessment activity was the production of writing that is at a first year university level. Mr. Benedict's and the students' actions during formative assessment activity were thus directed towards this “problem space” of university writing preparation (Engeström & Sannino, 2010, p. 6).

This object was constructed during the development of the Philosophy curriculum. Formative assessment activity occurred through a series of several actions, each of which was driven by a particular goal. The goals that governed Mr. Benedict’s
actions towards developing students’ writing were: (a) the development of essay writing skills effected through construction of assessment pieces that possessed a clear structure and were easy to read because they flowed expertly, and through economical writing that illustrated an advanced vocabulary word set and contained few grammatical errors; (b) the development of student competency at APA format; (c) the development of analytical and scholarly writing that provided evidence for arguments presented and employed relevant illustrations to explore philosophical concepts; and (d) the development of Philosophy-specific writing – that is, assessment pieces which employed such models as Transliteration Critique and the Hermeneutical Model accurately (Class Syllabus, p. 1).

The object and these goals framed the formative assessment activity and consequently, Mr. Benedict’s and the students’ actions. For example, the object of developing writing at a first year university level led Mr. Benedict to create an examination that would both assess and develop students’ writing ability. One of the criteria that governed the exam was “economical writing,” where every antecedent and consequent used by the student would be linked directly to their conclusion (Mr. Benedict, Fieldnote). This criteria, Mr. Benedict believed, would prepare students for the task of writing “perfect paragraphs” (Mr. Benedict, Fieldnote) in those “high pressure circumstances” (Mr. Benedict, Interview) at university. This goal guided students’ actions of drafting and redrafting the paragraph several times before submitting the examination. The students were aware of the constructed object and the goals that drove their actions because Mr. Benedict continuously articulated them during assessment activity. Included in the identification of the object were the reasons for this objective and his motives.
Figure 5-3. The co-construction of the object

The data revealed that the students’ and Mr. Benedict’s motives shaped the object of the activity in distinct ways. For example, Arthur’s motives for engaging in formative assessment activity, high grades, drove his object of formative assessment activity, which was to “get it right” or create the perfect assignment (Arthur, Fieldnote). This affected his responses to Mr. Benedict's feedback, and instead of engaging with it to develop his writing, in general. He employed it to correct the errors in his assignment. In the second assignment’s self-assessment he wrote,

I fixed everything you pointed out to be incoherent or not included into my intro. My assessment is relatively the same because I believed I fixed the mistakes I made. I will not be happy if you tell me my ideas need work because nothing was acknowledged to be bad and I would have patched any holes. If of course though there are things still unclear or grammatical errors, I can accept that. (Arthur, Work Sample)

Arthur’s motives colluded with the object of writing at a university level that had been determined by Mr. Benedict, to produce a shared object. Arthur’s actions seemed to echo Kaptelinin’s (2005) writings that the participants’ motives and objects “excite and direct” the formation of the shared object (p. 18) and cause it to be unstable and dynamic.

The co-constructed object also seemed to be constructed from differing motives. The most common divergence was between the students’ drive for good grades and to impress Mr. Benedict, and Mr. Benedict’s desire for student learning. A case in point was Ashley, who for her third assignment had produced a Transliteration Critique. In his feedback, Mr. Benedict identified her misconceptions about the model, namely, that she did not use “anchors,” nor did she “translate” the artifact (Mr. Benedict, Fieldnotes). However, Ashley opted not to re-do the piece because she had received the grade she
desired. During a post-observation interview, she stated that she had got a “good grade … I will use the feedback in the next assignment” (Ashley, Post-observation interview 34). Engeström (2010) argued that differences in motives serve as a source of tension within the object and can produce it as “inherently contradictory” and subject to transformation (p. 4). This was evidenced in Ashley’s actions. Her desire to get good grades seemed contradictory to Mr. Benedict’s desire for her to develop Philosophy-specific writing. The shared object thus became one of writing that attains a good grade and eventually develops into university level writing.

Furthermore, student motives were not static; they changed in order of importance depending on the nature of the activity. Nathaniel indicated that his motive for engaging in work samples was to achieve “high grades” (Nathaniel, Interview). However, during the third assignment, he switched topics from Plato to Confucius, although he had already collected research on Plato. I inquired why, and he responded, “I wanted to learn more about him [Confucius], so I wrote an essay about him” (Nathaniel, Post-Observation Interview 22). Nathaniel’s actions seemed to confirm the conclusions made by Hedegaard (2002) and Leont’ev (1974) that activity participants possess a hierarchy of motives, the order of which can alter depending on the nature of the activity. Another example of this was Brianna, whose order of motives altered. Her dominant motive, like most of the students interviewed, was high grades. However, during the fourth assignment, Brianna, who preferred working independently to complete tasks, opted to work with Evelyn, because she knew that Evelyn had fears about speaking in public and “she’s my friend” (Brianna, Interview 2). This change in the hierarchy of motives altered the shared object from writing at a university level to achieve a high grade to helping a friend to write at a university level. As a consequence of the movement of the motives, the object seemed to be continuously “in transition and under construction” (Miettinen, 2005, p. 56). The dynamic nature of the object created contradictions within the activity, in particular, in the division of labour component within the activity system.

5.3.3. Students’ Motives and “Reading Bat Sonar”

I can’t say what their motives are. I can’t read bat sonar, so I have no idea, …whatever their motives are, what is driving them, everyone is
going to be different. I think someone like Alexandra ..she is going to do the best that she can do and she will do extremely well, but I don’t think that she is doing it for grades. It’s too real for her, its too, ...too, its a point of pride. (Mr. Benedict, Interview 2)

Mr. Benedict made the above comment, when I inquired if he knew what students’ motives were and how their motives impacted upon formative assessment activity. I interpreted this to mean that he was aware of students’ motives for engaging in work samples and that they may have been different from his, but he was not particularly interested in them. What seemed to matter to Mr. Benedict was the eventual transformation of students’ motives to align with his. To accomplish this task, Mr. Benedict adopted a three-prong approach. He became a salesman and sold the students formative assessment. He altered the pacing of the curriculum and he adopted a relationship with his students, and in so doing, students engaged in the activity because they trusted him.

**Mr. Benedict the salesman**

During our one-to-one conversations, Mr. Benedict made evident his salesman persona. He said that he was constantly looking for a “way for them to purchase in the product” (Mr. Benedict, Interview 3). And he “hope[d] that students will buy my product” (Mr. Benedict, Interview 2). For Mr. Benedict the salesman role was important because the students’ idea of what it meant to be successful differed from his. Nathaniel, Evelyn, Ingrid, Courtney, Arthur defined success as a short-term and tangible experience. Students’ past educational experiences determined how they defined success. Similar conclusions were drawn by Filer (2002), Gipps (2002) and Sheppard (2000). They found that students’ past educational experiences and the discourse of grading shaped how students define failure and success. Even students like Alexandra, who had experience with formative assessment and a looping classroom, perceived “good grades” as a measure of success (Alexandra, Interview). Mr. Benedict noted the power of the discourse of grades: “It is a struggle against, I guess, a priori social . . . frames. They have been . . . even in their short lifespan, been so shaped and inundated with the idea that ... assessment is a one way, downloaded street” (Mr. Benedict, Interview 4). Mr. Benedict’s use of the word “struggle” suggested that he was aware of the difficulty involved in selling students his product. As a result, he employed students’ motives as
his sales pitch. He enticed them to try his product by using the things that drove their actions. Mr. Benedict assumed this identity of a salesman prior to the students’ entry into the program and it remained in his character throughout the Angora Program. He retained this identity because he was aware that students did not become “invested in their learning” (Mr. Benedict, Interview) at the commencement of the program or simultaneously.

**Salesman technique of identifying the object**

One of the tools employed by Mr. Benedict to sell students his product was to alert them to his “product” the object. This sales pitch was constant and informative. The first time I heard him talk about the object, writing at a university level, was during Week 2 of data collection. He was explaining the assessment criteria for the first assignment, and after he discussed the writing rules, he shared his vision with the class. “My aim is to perfect your writing to the standards of the university, not to the standards of Grades 8, 9, or 10. I want you to develop your writing” (Observation Transcript 7). Throughout the semester, with every assignment given, Mr. Benedict reminded the students of the object for engaging with assessments. There were times when he was direct in his statements. For example, he once told the class, "By the end of the year you will be writing for university. That is my goal" (Fieldnote 16). Sometimes he used other strategies. On several other occasions, he directed students to the writing tools employed by university students and informed them that they should include them in their writing. For example, he introduced students to Mendele, a citation manager, because referencing and citations were mandatory for all university work samples. His choice of Mendele was based on its cost as it was free and used by university students. He also told Nathaniel, during one of their feedback sessions to develop a less “boring introduction” and that he needed to write one that would draw in the reader, as this would catch the attention of his professors at university (Nathaniel, Interview 1). As a way of alerting students to the object, Mr. Benedict identified behaviours that university students practiced. One day, Emily approached him for feedback and he informed the class that approaching the professor “if you don’t understand what is written on your paper” (Mr. Benedict, Fieldnote 11) was a university behaviour.
It seemed that Mr. Benedict was using students’ motive of preparation for university as a way to transform their motives, by making evident to them the connection between their motives and the object of the activity. All eight students were aware of this salespitch. James reported, “He wants to prepare us for university. He wants us to write at a university level” (James, Interview 1) and Ingrid noted:

I really think he wants us to improve all the way to Grade 10, so that we will be advanced. He wants us to be advanced at university. He does not want us to have a tough time at university (Ingrid, Interview 1).

It seemed that Mr. Benedict’s sales pitch may have been what Hedegaard (2002) identifies as the “first step,” the “precondition” for creating shared motives, that is, alerting students to his object for formative assessment activity (p.66).

**Salesman technique of using grades as the bait for aligning motives**

Mr. Benedict used the very motive that he was trying to change, the attainment of high grades, as a tool to align students’ motives. He held that writing development was derived from re-doing work samples, “I believe that in order for a child to become a master of something, be it content, skill or inquiry, they need to go at it again and again” (Mr. Benedict, Interview 1). Adopting his salesman persona, he enticed the students into prolonged engagement by offering them the possibility of attaining a better score. His sales pitch was, “If you don’t like your mark, you can re-do it until you are happy. Is that okay?” (Fieldnote 10). This was intended to transform grades, for them to become in the mind of the students, something changeable and “not static, a one time label” (Mr. Benedict, Interview 2). As a result, the academic year was a “formative year” where students could “re-do work samples as many times as they wanted to” (Mr. Benedict, Interview 1). By the end of the data collection, this rule was firmly entrenched in the class, and most students re-did their work samples willingly.

Changeable grades seemed to be an easy sell for Mr. Benedict. Arthur, Courtney, Nathaniel, Evelyn, Brianna and Ingrid revealed that they engaged in activities because it allowed them to attain better grades. Evelyn reported, “It is reassuring that I can, if I get a crappy grade, that makes me want to cry, then I can get better by re-doing it” (Evelyn, Interview 2). This was important when other factors, like time, limited the quality of students’ work. As Nathaniel noted “It’s like, you don’t have the time to do the
essay and you think you did a bad job and you think that you can do better, then you have another shot at it” (Nathaniel, Interview 1). Three students, Courtney, James and Brianna, saw the educational value of changeable grades. Courtney perceived changeable grades as an avenue towards her “success.” Revisiting a work sample was “useful” for “making it better” (James, Interview). As Brianna noted, “it is fantastic … that is the only way that students are going to learn from their mistakes” (Brianna, Interview 2). Mr. Benedict’s actions seemed to be what Hedegaard (2002) describes as enticing students by focusing on their “dominant motives” to spark their “interest” in learning (p.67).

**Tweaking with the pace of learning**

One of the ways that Mr. Benedict aligned students’ motives to his was to manipulate the pace of learning in the class. He did this in two ways. He provided a looping environment when students had the course of the Angora Program, three years to engage with the activity, and he used a step-by-step approach, introducing students slowly to formative assessment activity.

**Long-term engagement with formative assessment**

Mr. Benedict acknowledged the difficulty involved in altering students’ motives. He described it as “a long-term pursuit” (Mr. Benedict, Interview). For him, it was “easier when you have kids for a longer period of time” for them to become “comfortable” and acclimatized (Mr. Benedict, Interview 2). As a result, he designed the program to be long term, by creating a looping classroom, where he would teach the class throughout their three-year enrolment in the Angora Program. Alexandra, the only student who had a previous experience with a looping environment, saw this long-term pursuit as beneficial to her. She noted,

... I have a teacher for one year. You don’t build much of a relationship so you don’t feel comfortable talking to them and you …. become more comfortable with them and …. asking them for feedback because you know they are going to be honest when you have them for longer. I think having a long term relationship with a teacher is important.

(Alexandra, Interview 2).

Mr. Benedict employed this three-year timeframe in a number of ways. One of the ways was simply remind students of the length of the program. The observation
transcript below was the feedback session that Mr. Benedict conducted with Kaya after he marked the second draft of the assignment. In this session, he tried to draw a response from Kaya. He wanted her to argue with him; however, Kaya was not yet comfortable enough to do this.

Mr. Benedict: Do you have any questions about your paper?

*Kaya shakes her head*

Mr. Benedict: Why? Are you happy? Tell me. I want you to argue with me!

*Kaya shakes head again then shyly smiles.*

Mr. Benedict: It’s okay. You have 3-years to get it, to argue with me.

(Observation Transcript no. 35)

Mr. Benedict’s action of informing students that they would get it right with time, provided students sufficient time to get comfortable with the activity. This may have served to alleviate some of the anxiety students could have had about the progress of their learning. With Kaya, Mr. Benedict seemed to have utilized the advantages associated with the looping classroom, as noted in the literature, to offer students a sense of stability and control over the pace of their learning (Franz, Fuller, Miller, & Walker, 2000; Hedge & Cassidy, 2004).

**A step by step process**

As noted, Mr. Benedict used long-term engagement in a number of ways. One of the ways was to adopt a step-by-step approach to teaching and learning, where students were introduced to new tools and concepts slowly and progressively. For Mr. Benedict, the idea was not to overwhelm the students but to imbue them with the confidence to approach him of their own volition and engage him in conversation. He envisioned that these conversations would be student-driven so that they would “drive the conversation” (Mr. Benedict, Interview)
Instructional activity that specifically sought to provide students with knowledge to construct their work samples was one of the areas in which Mr. Benedict employed a step-by-step approach. Over the semester, he created tasks where his voice gradually faded over time and those of the students’ gained prominence. At the beginning of the term, Mr. Benedict’s instructional activity was almost exclusively lecturing. By December, there was a noticeable change in who was leading these activities in the classroom. He began to employ more student-led activities, such as group work, debates, class discussions and speeches. By employing these methods, he increasingly offered students more opportunity to drive the conversation.

Instruction was not the only activity where Mr. Benedict employed a step-by-step approach. The assessment process was also taught using that approach. In particular, it was used to teach the assessment criteria and to provide feedback to the students. Mr. Benedict believed that the students should know and understand the criteria associated with work samples and examinations. The criteria were the rules governing the assessment and Mr. Benedict believed that knowing the rules of a task was a prerequisite for success. To teach the students the rules, he employed a two-step approach. The first step was to identify the assessment criteria or “Mr. Benedict’s writing process” (Fieldnote) to students. To do this he made the criteria visible, including them on the syllabus and posting them on Bibloteka, the class wiki page. His intention was to grant students easy access to the criteria. Once the criteria were made visible, he then spent time identifying them. Mr. Benedict identified the criteria for every assignment. To do so, he spent 10-15 minutes during a number of instructional sessions explaining the criteria and fielding students’ questions. One technique employed to ensure that students knew the criteria was to ask confirming questions.

Mr. Benedict: Title of today's notes, Mr. Benedict’s process of writing. Hurry up, Bubba

Mr. Benedict: Let’s go through it. Step no 1- Alexander?

Alexander: Theme,

Mr. Benedict: Select your theme. What’s your theme Adelaide?

(Observation Transcript, no. 6)
In the above illustration, Mr. Benedict was ensuring that students knew the criteria. He believed that this type of questioning would facilitate students’ internalization of the criteria as it was his intention that students know the criteria intuitively. In our first interview, he noted the importance of internalization:

It is just like the student-teacher. You want detailed, thorough, clearly marked out lesson plans at first, until it becomes second nature. It is the same with this process. I want them to fully understand how, to see this process of writing and this process of assessment roll out, so that in time it will become like riding the bike. They will never forget it.

(Mr. Benedict, Interview 1)

Torrance and Pryor (1989) define this type of questioning as convergent formative assessment, where the teacher determines whether a student “knows or can do a particular thing” (p. 153). They acknowledge that while this type of formative assessment does not create student learning, it acts as a “kind of scaffolding whereby the teacher played a crucial role in enabling the learners to do with help that which they would not have been able to do alone” (Crossouard & Pryor, 2008a, p.3). From our discussion, it seemed that Mr. Benedict employed confirming questions in a manner similar to convergent assessment. He was ensuring that students knew the criteria, so that they could access it easily.

The second step was to ensure that students understood the criteria. To accomplish this, Mr. Benedict employed a tool he called “mindfulness” (Mr. Benedict, Observation Transcript). Mindfulness was a two-minute thinking time, where after Mr. Benedict explained the criteria, then students were provided with time to think about the task and its requirements. When the two-minute period was over, students could ask questions about the task. This was another step in establishing the culture of formative assessment in the classroom. It marked the movement towards the development of the students’ metacognitive skills, where they could discuss the nature of the assignment. Crossouard and Pryor (2008a) advance this as an important step in completing formative assessment activity. They argue that demystifying criteria reveals to the students the invisible rules that govern work samples.

Feedback was another assessment element in which Mr. Benedict employed the step-by-step approach. At first, he provided feedback on things that were “fixable” (Mr. Benedict, Interview). Mr. Benedict defined fixable feedback as identifying those
mistakes that students made in their work samples that could be easily corrected. These included having no title page, wrong font size, weak thesis, or an ambiguous essay structure. Mr. Benedict felt that these simple elements were powerful because they imbued the students’ work with a scholarly feel.

Providing fixable feedback was the first stage in the development of university quality writing. It preceded engaging students in conversation on their ideas. As Mr. Benedict noted:

I will focus on idea development … but in the first few pieces that I get from them … if I find that they have structural issues, I fix those first because … if I don’t do that, they will get hampered along the line.  
(Mr. Benedict, Interview 5)

By the end of the data collection period, the nature of Mr. Benedict’s feedback was just beginning to alter. He began to suggest books that students could read to develop their arguments. In addition, he proposed concepts they could include in their re-dos.

**Building trust between Mr. Benedict and the students**

During the second interview, we discussed Mr. Benedict’s relationship with the Grade 8 students. He indicated to me that they were just “starting” their journey as secondary school students; so, many of them were “unfamiliar” with the norms and culture of secondary school, in particular being taught by different subject teachers (Mr. Benedict, Interview). They also needed to become comfortable with the distinct culture of PSS1 and with the Angora Program. The students were still trying to “get to know him” and “each other” (Mr. Benedict, Interview). He was aware that unfamiliarity with the Grade 8 classroom environment could produce a feeling of being vulnerable, as he stated, “You don’t know the person and you're working in an area that you're not familiar with” (Mr. Benedict, interview, 2). As a result, the first few months were a period of acclimatization, where students were provided with the “time” they required to become “comfortable” with him, the learning space and the subject matter (Mr. Benedict, Interview 2). Mr. Benedict identified building a relationship with students as necessary for the success of formative assessment activity. In the interview, he discussed the dominant role that summative assessment played in other classrooms. He pointed out that students were “accustomed” to a product approach to assessment and that for
many students, formative assessment was a risky enterprise. He believed that students’ comfort with him made it easier for them to adopt formative assessment practices.

Mr. Benedict noted the importance of the production of work samples to students because they determined their grades. Given the importance of assessments, these new roles could only be adopted if the students trusted him. He believed that students could only drive the conversation if they believed he had their best interests at heart. As I spent more time with the Grade 8 class, I came to understand his insistence on building a relationship with his students. During the first interview, Evelyn said the following when I inquired as to how she was coping in the class:

When I come to my class, I just walk to my seat, listen to what he has to say and then walk out. Cause that is … I don’t really talk. It was easy to talk to teachers in elementary school because you had the same teacher for the whole day, and year. But we only see Mr. Benedict for an hour and twenty minutes every other day, so I don’t feel comfortable talking to … like teachers in high school (Evelyn, Interview 1)

I asked her that question again in our second interview, after Mr. Benedict had taken several actions to establish a relationship with his students, and she responded, “He connects with his students and understands what they’re going through” (Evelyn, Interview 2). The difference in the two responses furnished validity to the claim made by Mr. Benedict that it was important to build a relationship with the students and to have “understandings of who they are” (Mr. Benedict, Interview 2), including knowing their anxieties and stresses, hidden skills and interests, and academic capabilities. This understanding fostered “trust” (Evelyn, Interview), which Mr. Benedict identified as important to altering their motives and producing in them a willingness to engage in formative assessment activity. To build their trust, Mr. Benedict participated with the students in several academic and non-academic activities. He planned various social activities, including the Angora potluck, field trips, snow days and the two-day camping trip to build a relationship with them. For Evelyn, these social activities were important because they created that bond between her and Mr. Benedict. This “social bond” between the teacher and student has been identified by Hedegaard (2002) as an important tool for altering students’ motives (p. 66).
One of the ways that Mr. Benedict built trust was to tell the students stories about the successes achieved by his former students. The content of these stories were similar. He identified students who had been successful in their endeavours, who had gotten good grades at university. Students like Ruth who, at that time, was an “A” student at university, featured in his stories. In one of them, Mr. Benedict noted that usually students “drop a grade in their first year of university,” but his students were “not going to be in that boat” (Mr. Benedict, Fieldnote). Willis (2011) notes the power of stories to student ownership. In her study, she found teachers who shared learning experiences with students acted as “a broker who could create connections across multiple communities of practice and move students along a trajectory of expertise through ownership of the language of the community of practice” (p. 409). It was interesting, through these stories, Mr. Benedict legitimized grades as a communication tool, over the formative assessment tool of feedback. These stories seemed to reassure students of Mr. Benedict’s experience and expertise. Courtney believed that they were of “great … benefit” to her (Interview 2). Nathaniel, who envisioned a connection between his present and future learning, proffered, “We are going to do just as well so that is reassuring and he is doing this for a reason and we are not going to completely fail after high school” (Nathaniel, Interview 2). Evelyn, who also perceived this connection noted, “[it] lets me know that this is useful, that this is going to be beneficial to my life” (Evelyn, Interview 2). Similarly James said, “He is doing [it] to show us he will get us to the places where we should be” (James, Interview 2). These actions were not formative assessment activity per se. However, from Mr. Benedict’s perspective, they were inseparable from formative assessment activity. As Mr. Benedict noted in the third interview, these strategies “builds the dialogue. Well, because there’s dialogue. If you talk about assessment with each other you open the gates for the feeling that … hoping that I feel that – kids feel . . . empowered to . . . debate, discuss.”(Mr. Benedict, Interview 3)

Providing reasons for assessment activity was another way that Mr. Benedict built trust between himself and the students. Explaining to students his reasons for the activity was a common practice of his. His reasons revealed his thinking about the instructional activities, as well as the choices he made. Providing reasons for his decisions was an unspoken rule in Mr. Benedict’s class, so, after the students
participated in the debate, Mr. Benedict explained to them his intent for the activity. The goal of the activity was that of developing their argumentation skills. Mr. Benedict noted “The point of everything what I am trying to do, is to show you the other side, how to argue. I want you to question your argument, sift through the argument” (Observation Transcript 21). Mr. Benedict believed that it was a student’s right, as a collaborator, to understand the rationale for the activity. He noted, “I consciously provide reasons for everything you do. You should, as a teacher, because I think they deserve reasons for everything you do. They are human and they deserve them” (Mr. Benedict, Interview 5).

Another tool employed by Mr. Benedict was to take responsibility for instructional mishaps. Several times during the data collection, when he made an error, Mr. Benedict would say to the students, “my fault” (Fieldnote), and he would then take steps to rectify the incident. Mr. Benedict’s actions during the first examination, which was explored in the theme piece of the puzzle, are an example of him taking responsibility. In her study, Zwozdiak-Myers (2012) concluded that teachers who “carefully consider the consequences of actions and a willingness to accept the consequence” (p. 6) create environments that are conducive to learning. By accepting responsibility, Mr. Benedict seemed to be facilitating the students’ understanding of the task. He provided students with a vision of how his beliefs and actions were coherent and this made students feel safe and comfortable with him. As Alexandra and Ingrid noted, Mr. Benedict’s actions made them “trust him” (Alexandra, Interview) because he “cared” for them (Ingrid, interview).

5.3.4. The Contradictions Arising from Differing Motives

Aligning motives did not occur without contradictions. These contradictions demonstrated, as the literature suggests, that students’ motives are born from and reflect students’ social cultural and historical context (Hedegaard, 2002; Wardekker, Boersma, Ten Dam, & Volman, 2012; Wells, 2011). Contradictions are therefore a “social construction” (Torrance & Pryor, 1998, p. 10). As Mr. Benedict attempted to align students’ motives to his, three contradictions occurred. These were: (1) students’ rejection of the tools used to align motives because they were unfamiliar with them; (2) students’ ability to internalize the criteria being limited by the step-by-step approach; and (3) tension between the old communication tool, (grades), and the new tool, (feedback).
Figure 5-4 illustrates these contradictions within the Grade 8 formative assessment activity system. The contradictions labelled A and B were secondary contradictions, or contradictions that occurred between the various nodes within the activity system. They occurred between components in the activity system: the former between the components, tool and community, and the latter between the tools and the rules. The contradiction C was a primary contradiction, one which occurred within a component of the activity system. Contradiction C occurred within the component of tools between the communication tools of grades and feedback.

Figure 5-4. Tensions arising from use of tools to align motives

**Contradiction A: Rejecting the tools**

All the students interviewed perceived Mr. Benedict’s actions as “unique” (Nathaniel, Arthur, Interview) and “different” (James, Courtney, Evelyn, Interview) from those of their present and past teachers. As noted before, with the exception of
Alexandra, none of the students interviewed had any experience with formative assessment. This was the first time they were using specific formative assessment tools. Furthermore, Mr. Benedict introduced tools to the formative assessment activity -- a priori, open format and examinations tools – which were different from the “worksheet” approach employed by the other teachers who taught the students (Brianna, Nathaniel, Alexandra, Interview). There also seemed to be no general school community support to reinforce the students’ use of formative assessment tools. Elwood and Klenowski (2002) note the importance of creating a “culture of practice” (p. 246) for getting students comfortable with employing formative assessment tools. In their study, they found that a lack of community to support and nurture this culture of practice hindered students’ adoption of these tools. Mr. Benedict’s students did not possess such a community and as a result, they would “forget” (Adelaide, James, Nathaniel, Brianna, Ingrid, Interview) to use the tools. Two tools that they seemed to forget frequently were the self-assessments and the process constructs. These tools played an important role in mediating students’ ownership over their work samples. A tension thus emerged between the introduction of new tools and a lack of community support to facilitate their becoming a culture of practice. Adelaide, who never remembered to include her self-assessment, during the study reported,

Oh I always forget my self-assessment. I am not accustomed to that … I get so caught up in writing the essay and forget that I am supposed to do something else. because its not like something that my parents had to do and like they remind me of what I have to do. They would say, did you remember to do this, and this, do you have a bibliography? Did you remember to cite, but they never say where is your self assessment.

(Adelaide, Post-observation Interview 27)

Adelaide’s comments revealed an important aspect of students “buying” Mr. Benedict’s product. It required not just the aligning of motives but also support from the wider community, including parents, to facilitate internalization of the tools (Willis, 2009). Dunn and Mulvenon (2009) and Stiggins, (2002) identify the unfortunate lack of a larger community practicing formative assessment within schools, as a common experience for many teachers implementing formative assessment activity. They argue that this wider community is crucial in facilitating students’ integration into the culture of practice. An example of the impact of the wider community on formative assessment activity was illustrated in the actions of Alexandra, Brianna and Evelyn, who relied on their parents to
provide them with feedback on their work samples and therefore expected the same from Mr. Benedict.

Mr. Benedict was aware of this lack of community support for students’ use of the tools. He noted that students in only one elementary school in the district had an easier time aligning their motives to his, because of their history with the tools he used (Interview). He therefore designed a long-term program that he hoped would provide all students time to incorporate these tools into their learning routine.

**Contradiction B: the step-by-step approach vs. the criteria**

The alignment of students’ motives to Mr. Benedict’s was transacted through a step-by-step approach to assessment. Because Mr. Benedict’s goal for the first assignment was to introduce students to the assessment criteria and get them comfortable with using them, he did not penalize students for forgetting to use the process construct or self-assessment but, rather reminded them of the criteria and then marked the piece and provided the students with feedback. His response to those students who did not follow instructions was, “Don’t forget it next time” (Fieldnote). This made some students feel as if these formative assessment tools were “unnecessary” (James, Interview) and “unimportant” (Arthur, Nathaniel, Interview), and as a result, they disregarded them. The contradiction that emerged was between the tool of using a gradual approach and the rules of the assignment. In this contradiction, the tool used to create congruency between Mr. Benedict and the students’ motives, and to engage students in formative assessment, produced the opposite effect and as a result, the students often forgot to use the process constructs to build their work samples.

**Contradiction C: The communication tools of feedback and grades**

Mr. Benedict introduced students to a new tool to communicate their progress in the task, that of feedback. This tool was different from the one used previously, grades. While Mr. Benedict employed grades to attract students to engage students in there-do process, he did not see their merit as a communication tool; rather, he used feedback. An example of using grades to attract students was his promise to Kaya of a “bonus” (Fieldnote) if she re-did her assignment. However, students’ present and past educational experiences included the use of grades as a tool that communicated their
progress, and so they did not know how to respond to the new communication system. For Example, Courtney received a perfect score of 10 on her third assignment, but during the feedback session, Mr. Benedict informed her of some problems in her work, namely a weak thesis statement, several grammatical errors and the need to restructure several paragraphs. He then asked her to re-do the piece: “I know you received a great score, but there is room for improvement” (Observation Transcript 29). Reflecting on this conversation, Courtney revealed that she believed that his feedback was “silly”, since having received a perfect score, “there was no higher expectation of a mark to build on” (Courtney, Interview 2). Re-doing the piece would have made sense to her if she had not received a perfect score: “I would be satisfied, I would have looked forward to getting a ten. But for me, what was the point of re-doing it” (Courtney, Interview, 2). The tool of grades, rather than feedback, communicated her performance on the task. Courtney, Alexandra, Brianna, and Evelyn admitted that grades informed them of their progress in the course. As Walvoord and Anderson (2000) stated, grades are a “powerful” and “effective” tool for communicating to students the quality of their performance (p.1). In their study, Smith and Gorard (2005) found that students felt “confused” (p. 32) when feedback was used to communicate their performance instead of grades.

5.3.5. Summary

Mr. Benedict’s motives seemed to direct the activity. His object of having students writing at university level in Grade 8 secured students’ academic success and created a distinct learning space. It also resulted in the object being different from the norm – that is, developing writing that was five years beyond that expected of Grade 8 students. These multiple motives “cooperatively” defined and “directed” all his pedagogical actions, including those directed towards aligning students’ motives to his own (Kaptelinin, 2005, p. 18).

Mr. Benedict’s actions of selling his product to the students appeared to be connected to establishing a community of practice with his students. Wenger, McDermott, and Snyder (2002) describe this community as a group ‘who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (p. 4). From my perspective, the establishment of a community was tied to Mr. Benedict’s motive to
create a different learning space, one with a distinct set of practices, scripts and norms. However, the context, in particular the student’s motives and the tools used by Mr. Benedict to align their motives to his, shaped the nature of the activity (Gallego & Cole, 2001).

5.4. Student Ownership

During our first interview, I inquired of Mr. Benedict, “What roles do students adopt as a result of their engagement in formative assessment?” His response focused on what he perceived the benefits of formative assessment activity to be, in particular its ability to foster a collaborative relationship between himself and the students. During subsequent interviews, I probed deeper into his understanding of the role formative assessment played in establishing a collaborative activity. These discussions and the classroom observations revealed that the “we” Mr. Benedict imagined was only possible if students shared ownership of the formative assessment activity.

Mr. Benedict defined student ownership as a personal “investment” by the student in learning, so that it (learning) became “theirs” (Mr. Benedict, Interview). This “theirs”, was not juxtaposed to the “we,” but rather complemented it. Ownership was a mandatory condition for collaboration, and collaboration with him could not occur unless the students had a “purchase” in their work samples (Mr. Benedict, Interview). Mr. Benedict’s intent seemed to be to make his students into “active learners [who] are agents of their own learning and relate their own experiences to new knowledge, making the learning their own” (Rainer & Matthews, 2002, p. 22). In his mind, ownership was therefore a prerequisite for formative assessment activity. Interestingly, Mr. Benedict employed formative assessment activity to produce student ownership. He believed that students’ “investment” (Mr. Benedict, Interview) in their learning and their development of expertise in the subject could be generated through the use of such tools as open format, feedback, peer-assessment and re-doing work samples. These tools offered students the opportunity to take “responsibility” for the production of work samples so that the work samples would reflect their “voices” (Mr. Benedict, Interview). Ownership was thus a condition for, and was created in and through, formative assessment activity.
5.4.1. **Tools that Mediated Student Ownership**

The formative assessment elements of open format, feedback, self-assessment, and the a priori system were intentionally introduced by Mr. Benedict to develop students’ ownership. They impacted ownership in different ways. Open format created an avenue for students to incorporate their interests and stories into their work samples, feedback and self-assessment strengthened students’ voices, and the a priori system involved them in decision-making about their work samples. Together, these elements provided students with the means by which they could become owners of and collaborators in the Grade 8 Philosophy formative assessment activity. In the paragraphs below, I discuss these tools and their mediation of formative assessment activity.

**Developing ownership through student interest.**

A most important theme was the development of ownership through the incorporation of students’ interests into their work samples. Mr. Benedict described the function of students’ interest as being to engage them in meaningful and critical thinking about the assignment, and in doing so, he “scaffolded” (Post-observation interview) their learning. Daniels (2001) notes that the purpose of a scaffold is to facilitate transformation in students’ learning, by developing their metacognitive ability. In all, these tools emphasized what Chan, Graham-Day, Ressa, Peters, and Konrad (2014) identify as a key characteristic of formative assessment, the generation of students’ agency by “[making] the learning their own” (p. 106). To use students’ interests as a scaffold for their development, Mr. Benedict employed the tools of open format and musing. These tools rendered the work samples as “theirs” (students’) because they facilitated the students’ “investment” of themselves in learning (Mr. Benedict, Interview). Neither open format nor musings were actually formative assessment activity tools, but they were directly related to formative assessment because they offered students ownership over their learning and development.

During an interview, Mr. Benedict provided an example of the purpose of open format:

For example Kant, I am looking at his ideas. Just watching a Grade 10 take the idea of Kant and make the decision that the easiest way to handle it is to look at how he handled women in terms of ethical proposition. So scaffolding … she [the Grade 10] is making decisions of
how, what is her easiest way for her to get an entry point. She is interested in women and women rights, so she does an interview with Kant and does a dialogue and then critiques his positions. To look at what he thought about women, and in terms of his ethical proposition, so the scaffolding here is that she is making a decisions about what is her easiest entry point. She is interested in women and women’s rights, so she does an interview with Kant. Kant and does the she creates dialogue and she critiques His position … So, she found her way through the materials from something that were her interests.  

(Mr. Benedict, Interview 2)

Open format provided students with the freedom to select the topic and structure of their work samples. The purpose of this tool was twofold. It equipped students with the power to make choices about their work samples; as well, it invited them to incorporate their interests into their work samples and develop expertise in those areas.

Musings were 15-minute instructional sessions designed to explore topics and ideas in which students were interested. They were employed as an instructional tool, in conjunction with open format to develop students’ expertise. In the classroom observation extract below, from a musing session, Brittney was interested in the concept of empathy. So, she approached Mr. Benedict and asked that the class discuss it.


Mr. Benedict:    So, what do you want to talk about?
Brittney:        I watched The Butler last night and I was struck by the idea of compassion. We are not compassionate. We have pack mentality.

Mr. Benedict walks over to the board, he writes the word, Empathy.

Mr. Benedict:    Have we always been empathetic?

Nathaniel:       Yes and no, but we are getting better at it. We treat animals better and we now have gay rights. There is a movement towards empathy but for most part we are still apathetic

Mr. Benedict writes, Apathetic, on the board

Adelaide:        Humans have a history of oppression. Look at how we have treated Blacks and Women. We have no empathy.

(Observation Transcript no 31)
Mr. Benedict created the conditions to develop students’ voice by asking questions. In the dialogue, Brittney was interested in empathy, and through discussion, she was provided with information on the topic. The students shared their understandings of empathy, so Brittney’s new understanding was based on these shared understandings. The information gained could then be employed by Brittney in her assignment. Tools such as open format and musings, caused the work samples to become “theirs” because they facilitated the students’ “investment” of themselves in learning (Mr. Benedict, Interview).

**Developing ownership through engaging students in conversation**

It was interesting that Mr. Benedict perceived student ownership as being generated from “collaboration” between himself and the students and being “built on conversation” (Mr. Benedict, Interview). For him, this conversation held a special place within the classroom. He stated:

> Because I think that education can be best expressed as the art of conversation and I don’t think that we do it enough, as teachers and students in class. We don’t converse. We really don’t talk … learning occurs within these conversations. (Observation Transcript 33)

This esteem for conversation may have been as a result of the subject, Philosophy, which privileges dialogue.

Mr. Benedict employed two words to characterize the nature of conversation in his classroom. They were, “organic” and “negotiated” (Mr. Benedict, Interview). The former referred to a natural development, where the conversation followed the learning journey of the student. In an organic space, the teacher and the student “learn together” while conversing on topics that reflect the student’s interest. From my perspective, it is a learner-centered conversation. The latter term, “negotiated,” described the relationship between both parties in the conversation — mutuality, where the teacher and the student were identified as equally important contributors to the conversation, where Mr. Benedict and the students “negotiate[d] in terms of doing critically, deep, um … honest and reflective, and demonstrating deep knowledge in terms of what we can get in respect to a topic or idea” (Mr. Benedict, Interview 3). Engaging students in evaluative
conversation, via teacher feedback and peer feedback on the progress of their work, was a way in which students became owners of their learning.

In Grade 8, teacher feedback from Mr. Benedict was “constant,” “on the fly”, mostly verbal and supplied to students after they had submitted their work samples, but before they engaged in the re-do process (Mr. Benedict, Interview). Below is an extract from a feedback session between Mr. Benedict and Kaya.

Mr. Benedict: Kaya, lovely piece of work, I love it, but I am guessing whose it is. It is trivial, I know, but it helps.

There are several students approaching Mr. Benedict, so he stops talking to Kaya and addresses the students.

Mr. Benedict: I need some space to talk to Kaya.

He waits for the students to leave before he returns to the conversation

Mr. Benedict: You have to re-write this. The whole paper.

He points to a section on the paper

Mr. Benedict: Build around this quote. Look at the quote, then turn the paper upside down and write from here.

He points to her heart

Mr. Benedict: Re-build the paragraph.

He points to another section on the paper.

Mr. Benedict: Same thing here, use the quote as the starting point. Tell me why this is important, but you have to write it in your own words.

Mr. Benedict then turns to the computer screen. He opens Stanford Encyclopedia of Philosophy and points to something on the screen.

Mr. Benedict: Look at this, read it.

He looks at her as he addresses her.
Mr. Benedict: You tell me what the main idea is

She is soft so I cannot hear what she says.

Mr. Benedict: Okay you have chosen the idea, now you have to discuss it. Write it in your own words. It says every action, every inquiry. You have to ask yourself what that means, perhaps it means every thought, word, feeling. I am not interested in what Aristotle said. I want to know what you understand by it. I don’t care how long it takes. This is what we are working on. Take your time, and we will work on this, piece by piece, Don’t worry, I will teach you. What mark did you receive?

(Observation Transcript 22)

The above observation transcript demonstrated Mr. Benedict’s standard format of feedback. The process began with returning students' work samples and providing them with time to “digest” the written comments, then holding one-to-one conversations with each student on the progress of the piece. During the one-to-one conversation, Mr. Benedict asked the student for the awarded mark which he entered into the mark sheet. He usually complimented the student on the assignment using such words as “brilliant,” “blew me away” or “beautifully written” (Observation, 35). Next, he highlighted the “fixable” sections of the text, explaining his written comments as he scrolled through the assignment (Mr. Benedict, interview). Mr. Benedict framed the feedback as a conversation, so students could interrupt him to justify their responses or ask him questions at anytime during the session.

The conversation with Kaya exhibited Mr. Benedict’s core belief about feedback: that the feedback session was most effective when it was used to “build trust” with the student and made them “feel comfortable” with him (Mr. Benedict, Interview). This approach seemed to correspond with Peterson’s (2010) proposal that when providing feedback, teachers should find an “appropriate” way to complete the task, one that develops students into independent learners while it “nurture[s]” the students and builds their “confidence” (Peterson, 2010, p.2). This was the approach that Mr. Benedict adopted for all his feedback sessions, as evidenced by the way that the interviewed students described the feedback sessions as making them less “anxious” (Ingrid,
Evelyn, Brianna, Interview) and “stressed” (Arthur, Interview) about the evaluation. This “prepared” them to complete the re-do (Nathaniel, James, Interview).

From my discussions with the students, I noted their use of the tool of feedback to scaffold their learning. They all found that the conversations that they engaged in helped them to target the areas in their writing that could be “improved” (Nathaniel, Alexandra, Courtney, Arthur, Interview), and identified their “mistakes” (Brianna, Ingrid, Interview). James, who had writing difficulties, reported that the feedback furnished him with the confidence to “write better” (James, Interview). From my perspective, the way they employed feedback was consistent with Todd and McIlroy’s (2014) proposal that feedback should “support” learners and create “pathways” for students to develop expertise in the task (p. 143).

The conversation above also illustrated the practice of formative assessment as a conversation. In it, Mr. Benedict addressed two aspects of the work samples. First, he identified Kaya’s mistakes, the kind that Sadler (2010) terms 'sharp criteria' or obvious errors that are easy to understand and to fix. Second, he drew her attention to the development of her writing. Sadler (2010) noted the difficulty in facilitating understanding in what he terms "fuzzy" criteria. In the second part of the conversation, that difficulty was made evident. However, this difficulty was addressed by Mr. Benedict through the use of the word "we". By using that word, he alerted students to the construction of work samples as being a shared process.

**Peer feedback**

Peer feedback was enacted in two main ways - through peer edits and whole class feedback. Students engaged in peer edits during the examinations, where for 5-10 minutes, self-paired students exchanged papers and provided and received feedback on them. During these sessions, students reminded each other to follow criteria, offered reasons for their responses, explained their ideas fully, and corrected grammatical errors. Alexandra, Arthur, Nathaniel and James welcomed the opportunity to get and give feedback. Arthur reported

I kind of wanted to continue with the peer editing because I really… cause that helps… that helps a lot when someone … when someone looks beyond your view. Cause when you have your view … you only think
about that and you don’t think about other views that could possibly
destroy your argument. (Arthur, Interview 1)

James added, “The peer editing is also good, ’cause like, they’ll point out something like, uh, well, this is redundant here. W-what does this mean?” (Interview 2)

The other form of peer feedback was whole class feedback. In it, the whole class provided feedback to their peers on their work samples. This type of peer feedback was conducted during the fourth assignment, the speeches. During this feedback session, most of the students’ comments were focused on the orator’s presence, mainly on the volume, forcefulness and assertiveness of the speaker.

Mr. Benedict used peer feedback because he believed that it developed students’ insights and understandings of the concepts, as well as affording them the opportunity to contribute positively to each other’s work from the position of experts, with the voice of authority. Evelyn’s feedback to one of the students seemed to be an example of the potential of peer feedback for student development. Evelyn, one of the more reticent students in the class and who rarely spoke in public, volunteered to give a student feedback on his speech. It was apparent that she was nervous. Her voice and body were visibly shaking. However, she commended the student’s confidence as a speaker and the flow of his presentation. Evelyn said that she felt compelled to provide the student with feedback on his speech because he did something competently, something that she struggled with which was speaking in public. Of the experience, Evelyn noted

I was really nervous. I don’t know how people could just go up there. He was great because he just went up there. He did not really care about … what he was talking about. He was, you could tell that he was saying it loosely, and not as seriously as I think he should have, but it was better than I think that I could have talked. I think that I would have scripted it better, but his stage presence and his connection with the audience, just like the way he talks, like I don’t think I could ever do that, because he is so out there. (Evelyn Interview 2)

Evelyn’s actions reflect confidence gained through what Willis (2011) terms “participatory appropriation” (p. 408), which allows students to “negotiate” their participation in classroom activities (p. 408).
These two formative assessment tools, teacher feedback and peer-assessment, seemed to complement each other. On one hand, teacher feedback facilitated students’ ownership by providing students with expert knowledge to strengthen their work samples and in doing so, developed the accuracy in their voices that made them powerful. On the other, peer assessment afforded students the opportunity to comment critically on the work of their peers. It taught students how to employ their voices appropriately. Together, both tools mediated students’ development by building their confidence in their voices.

**Developing ownership through decision-making**

Students’ active engagement in the formative assessment decision-making process was another way to induce student ownership. Mr. Benedict held the view that the inclusion of students in decision-making about the assignment was crucial for getting students to identify themselves as owners. It gave them a sense of “responsibility” and demonstrated to them that the assignment was “theirs” (Mr. Benedict, Interview). In Mr. Benedict’s mind, this could be accomplished by small assessment tasks, like assisting in setting the deadlines for work samples, or larger ones, such as the “moment of happiness” and the independent work periods (Mr. Benedict, Interview).

There was a strong connection between assignment tasks and student power over the decision-making process in the Grade 8 classroom. As an extension of his child-centred approach to learning, Mr. Benedict believed that decision-making was both a right and a responsibility of students. As a consequence, he designed work samples to put control over the nature of the student’s assignments squarely in their own hands. This was the function of the a priori system. As previously noted, this system commenced with the selection of a process construct that acted as a foundation, upon which the students built their work samples. Next, students selected the format of their work samples, including structure, topic and the type research materials to be used. On completion of the assignment, they constructed a self-assessment which described their “thinking” behind the assignment (Mr. Benedict, Interview). The a priori system, from beginning to end, was designed to provide students with some control over the conceptualization, creation and completion of their work samples. In our one-to-one discussion, Mr. Benedict described this system.
So assessment becomes part of the process, and pushing kids, starting them off with the idea that it is a metacognitive approach, and then looking at what they think they are doing, and then looking back to see how they had going about this. So the ... the focus is on their thinking, and not only on their ability to organize, analyze and critique it. It is taking it that extra level to say what does it mean now, what does it mean to analyze and critique.  

(Mr. Benedict, Interview 4)

By itself, the a priori system was not a formative assessment activity; however, it invested students with the "control" over their assessment (Mr. Benedict, Interview) that made possible their ownership, if they chose to accept it. Mr. Benedict noted the importance of this opportunity to choose, "I am trying to teach them to choose them beforehand because I believe that this will have an impact on what they are going to do and how they are going to do it" (Mr. Benedict, Interview 5). Mr. Benedict's actions seemed to be a reflection of Brookheart, Moss, and Long's (2009) argument that ownership is a prerequisite of formative assessment, because it transforms students into being partners in the learning process. The students were not unaware of their decision-making power and favourably commented on this system when compared to the "worksheet" approach (Ingrid, Arthur, Brianna) adopted by their other teachers, Alexandra noted, "We can choose ... I like how we get to think about things" (Alexandra, Interview). This decision-making power rendered the work samples as "mine" (Courtney, Nathaniel, Brianna, Ingrid, Evelyn, Alexandra, Interview).

Of the students interviewed, only Alexandra, Arthur and Courtney employed the system as Mr. Benedict had intended. The other students either "forgot" (James, Ingrid, Interview) to select the process constructs or write their self-assessments, or were "confused" (Evelyn, Brianna, Interview) by it because this was the first time they were using this assessment tool. Alexandra found the a priori system easy to understand, because it was similar to the assessment system she had used during elementary school.

Mr. Benedict used "happiness" to refer to the mutual satisfaction of both the teacher and student in the quality of the learner's work. Mr. Benedict viewed this as a source of empowerment, a confidence development tool for the students, because it meant that they had a voice in the satisfactory completion of the assignment. Although "happiness" was presented as a joint decision, Mr. Benedict usually allowed the students
to determine the moment of happiness. The decision on happiness occurred at the end of the teacher’s feedback session. When Mr. Benedict asked the student, “Are you happy?” If the student’s response was positive, then the assignment was determined as complete. During our discussions, Mr. Benedict described “happiness” as follows:

If they are happy with the product or if they are happy with their mark and they don’t need to do anything more with the product, they just move on to the next assignment. If they are not, they will be able to re-do it, re-do it, and re-do it, until we are both happy. (Mr. Benedict, Interview 4)

Students’ motives for engaging in the assessment dictated the moment of happiness. For Nathaniel, Evelyn, Courtney, Ingrid and Arthur, “happiness” was determined by the “good” grades that they received (Interview). For Alexandra and James, happiness came from the feeling of having achieved, that they benefitted from the project, that they learned something. Alexandra revealed:

I remember struggling with it a lot. I am ashamed to admit it, but I wrote it the night before it was due and that I was not proud of and so I told Mr. Benedict that I am going to re-do it…. I understand that what I wrote was not my best, I rewrote it. There was only a couple of things that I needed to fix but that a feeling of okay, I know that I did a much better job, I just felt more calm. It’s kind of hard to explain (Alexandra, Interview 2).

Alexandra’s comments implied the value of happiness. It served as a source of motivation for her to reproduce a better piece. Stefanou, Perencevich, DiCintio, and Turner (2004) discuss the value of the re-do process. They point out that it removes some of the “pressure” students may experience with one-shot work samples (p. 99). In my discussion with Alexandra, I sensed that determining the moment of happiness seemed to reproduce a similar effect. It “calm[ed]” her by providing her with the opportunity to produce a piece in accord with her personal standards.

The student space, where students worked independently of Mr. Benedict, was another tool used by Mr. Benedict through which students exercised decision-making (Mr. Benedict, Interview). In this space, students engaged either in group work, where they worked together on their work samples, or individually, to complete a work sample. The students managed this space with little intervention from Mr. Benedict. Mr. Benedict’s long-term plan was that by Grade 12, students would have been transformed into independent learners and he would not be “laying it out for them” (Mr. Benedict,
Interview). Although this space was one of the mechanisms used to develop student independence, its primary purpose was to promote student ownership of their work, so in this space the students acted as both expert and learner and Mr. Benedict’s involvement was minimal. He only entered the space if the class became too noisy or if he needed to monitor the students’ progress with a task. When he did the latter, he kept the conversations short. He inquired about their progress and whether they required assistance from him. Since the space was designed for students to engage independently with their learning, students had freedom to determine the space’s activities. This space was not a formative assessment activity per se, but it was attached to formative assessment activity because it was used by students to gain expertise on their assignment topics and to construct their work samples. Mr. Benedict believed that providing students with decision-making power by the gaining of expertise developed their self-regulation and metacognitive skills, which Stefanou et al., (2004) found were key skills required and developed during formative assessment activity.

5.4.2. Ownership and the Division of Labour

Mr. Benedict envisioned a particular division of labour with formative assessment. He saw the teacher-student relationship as similar to that of Socrates and Plato, whereby Socrates, the mentor, provided the conditions for Plato, the student, to actualize his potential. He held that ownership was a right of all students and that it was his responsibility, as the teacher, to provide them with the tools to achieve and exercise this right. His role was to become “part of the path” (Mr. Benedict, Interview) that facilitated the pre-eminence of the students’ voice, and the students’ role was to lead the journey. He pointed out that “the kids take you places that you could not plan for. You are just playing catch up to where the kids are” (Mr. Benedict, Interview 3). In our third discussion, he supplied an example of his students assuming the role of owners. He described an incident that had occurred three years before, when he first decided to use the process construct as an element of assessment. At that time, Mr. Benedict was attending a district-sponsored conference on Peter Sexias’ “Big Six” (Seixas, et al., 2013) and he wondered how to use this tool in his classroom in a manner that would facilitate students’ control of their assignments. He decided to collaborate with his
Grade 10 students at the time, to create the process constructs. Mr. Benedict described the process in some detail:

They actually kicked me out of the classroom, which was pretty cool. They said they could handle it .... I came in and tried to interfere and K said to me, "No, we can handle this, go finish your coffee, we can do this alone" and I thought that's interesting. It's what I consider the most important moments of my life as a teacher, is when you come into the classroom and the kids are actually running the show and they don't want me in there. They have kicked me out of the classroom, and they don't need me in there and I know what they are doing and they are completely and absolutely invested in the whole process .... when they were done, we refined them together until we agreed on them. So I brought out some of my templates and worked on it together. The final product was something that we agreed on, worked on it together. So it took about two months  
(Mr. Benedict, Interview 4).

Mr. Benedict’s comments illustrate his commitment to student ownership and its benefits to student collaboration. Their taking ownership of the task facilitated the “we” that is characteristic of how Mr. Benedict defined formative assessment tasks, where he and the students collaborated on the task. This collaboration echoed Crossouard & Pryor’s (2008a) notion that formative assessment is not “done to the learner”, but rather, with him or her (p.13). Crossouard and Pryor (2008c) note the importance of students assuming the role of owners in the classroom. They submit that it transforms the vertical nature of the student-teacher relationship, where the teacher, as the expert, possesses greater power than the students, as learners, to one where there is “power with” or a teacher-student relationship characterized by “collaboration, sharing and mutuality” (p. 61).

As the teacher, Mr. Benedict was continuously creating the conditions for students to become owners, but to him, there was no certainty as to when and how students would transform into owners. He said hopefully:

I don’t know when they take ownership. I hope that they will. Some take it on quicker than others, some don’t take it on at all. I don’t know, it may come in university, but it does not mean that it won’t happen and that I am not successful. It’s when the child figures it out...um.. and it does not mean that I don’t keep trying, I keep trying to create the conditions for it.  
(Mr. Benedict, Interview 5)
One of the ways that students demonstrated ownership was in their choice of the process construct. Alexandra, Courtney, Brianna, Nathaniel and Arthur always opted for the process construct ‘Originality’ to frame their work samples, because “originality is making it my own” (Arthur, Interview). As Alexandra said, “The originality was also very simple because I didn’t want to talk about someone else’s view on it.” (Alexandra, Interview 1) Taking ownership through this tool amplified the student’s voice and prepared it for dialogue with Mr. Benedict.

All students responded positively to Mr. Benedict’s use of formative assessment tools that promoted their ownership. They felt that it empowered them because it allowed them to engage with the work samples in a manner that was “fun” (Nathaniel, Interview) and “relevant” (Alexandra, Interview) to them. Through these tools, the work samples became “theirs” because they reflected their “opinions” (Brianna, Evelyn, James, Ingrid, Interview), “ideas” (Alexandra, Arthur, Nathaniel, Interview) and stories. As Arthur stated, “The way we do essays is different, in that our essays detail our thoughts and our ideas rather than facts or what someone already stated in history” (Arthur, Interview). These tools – open format, musings, happiness, and student space – gave the students the “freedom to choose” (Ingrid Interview), and with that liberty, they took possession of the work samples. The work samples became “mine” (Arthur, Ingrid, Alexandra, Evelyn, Interview) instead of Mr. Benedict’s, “because I had my own voice on it and how I feel and think about free will. It’s about your opinion on the topic and what I like” (Courtney, Interview).
5.4.3. **Tension between Students’ Conceptualization of Ownership and Mr. Benedict’s**

![Diagram showing relationships between Wikipedia, Tools, Object, Writing at a first year University level, Rules, Community, Division of Labour, Mr. Benedict, The Students, and Student’s definition of ownership vs. Mr. Benedict, Students’ definition of the characteristics of ownership vs. Mr. Benedict’s.]

**Figure 5-5. Contradictions in conceptions of ownership**

Figure 5-5 represents the contradictions that emerged as students developed their identity as owners. At the heart of these contradictions was a difference in the conceptualization of ownership between the teacher and the student. This manifested itself in three ways: (1) who determined the tools employed; (2) who determined the responsibilities attached to ownership; and (3) the teacher’s power overshadowing that of the students. Contradiction A was a secondary contradiction or a contradiction between the components of the activity system, namely between the rules and tools, whilst contradictions B and C were primary contradictions, or contradictions within a component of the activity system. These contradictions were located within the division of labour component.
Contradiction A: Determining the tools

Like Mr. Benedict, the students had a conceptualization of what it meant to be an owner. For them, this included the right to make decisions about which formative assessment tools could be used to construct the assignment. Students saw this as their right since the assignment had to originate “from them” or it had to be “mine” (Courtney, Brianna, Evelyn, Nathaniel, Ingrid, Alexandra, Arthur, James). One of the ways that students demonstrated that the assignment was indeed theirs was through their selection of sources to be used to craft the work samples. Mr. Benedict was adamant in his instructions that students ought to employ valid research sources to construct their work samples. Mr. Benedict encouraged students to use the Sanford Encyclopedia of Philosophy (SEP) and the International Encyclopedia of Philosophy (IEP). He identified them as reliable research tools that were employed in university settings. One of the sources identified as invalid was Wikipedia. This was deemed so because it could not be “verified” (James, Observation), and it did not provide the reader with contextual information. However, some of the students found the SEP and IEP “difficult” to understand and as a result preferred a “simple” tool such as Wikipedia (Evelyn, Ingrid, Arthur, Interview). The students were aware of Wikipedia’s categorization and they echoed Mr. Benedict’s sentiment about the quality of information available through Wikipedia. As Brittney noted, “Wikipedia is crap” (Fieldnote); however, it did not stop them from employing that tool to craft their assignments. Nathaniel, Ingrid, Evelyn and Arthur referenced the use of Wikipedia in their work samples’ bibliographies. Evelyn, one of the students who opted to use it, explained her decision:

I know he says do not use it because it’s unreliable but sometimes, I don’t care. He is going to tell us don’t use it. I use Wikipedia…I love it. I always use it… no matter what subject we are doing. I know he is going to say, I don’t like Wikipedia, but I love Wikipedia, so, I use it. I understand that it gives you a shallow understanding of it than other websites, but if I did not use Wikipedia, I would not know what is going on…it explains it for beginners. I know he says don’t use it, but I am going to use it. I will hide it in the bibliography, I don’t put it last and I don’t put it first so he won’t say, Wikipedia, “I don’t like it, don’t use it. So he does not know that it is there”. I don’t care. I will use it. (Evelyn, Interview 1)

During the interview, the tone in her voice when she said, “I don’t care” suggested to me that Evelyn felt it was her right to make decisions about her work
samples. She made these choices somewhat boldly, including them in her work samples’ references. A contradiction thus emerged between the rules established for sources used in task construction and the students’ use of tools. The students seemed to have rejected a legitimate tool with which to transact learning in favour of one not recommended, based on their belief that they had a right to select the tools they wanted. Willis (2011) noted the benefits of students’ autonomy at decision-making. She believed that these actions “helped students become more central rather than peripheral participants in the learning experiences” (p. 408). She perceived this to be a step in the process of students adopting their “identity as autonomous learners” (p. 408).

Contradiction B: Determining the responsibility of owners

Black and Wiliam (1998), Burner (2014), and Volante and Beckett (2011) identify students’ resistance to formative assessment activity as a reason for its ineffectiveness in the classroom. They note that the power of summative norms is the source of students’ resistance. Their studies revealed that students identified the actions associated with summative assessment as legitimate and as a result, they rejected formative assessment activity. An example of students’ resistance to formative assessment as a result of the existing classroom norms, which privileged the voice of the teacher, can be illustrated in students’ response to ownership. An important responsibility of ownership was that of developing expertise. To Mr. Benedict, expertise was a journey that began with a desire for knowledge. It was a “coming to know” (Mr. Benedict, Interview) that contributed to the development of students’ self-regulation skills, where students’ desire to learn inspired their acquisition of knowledge. Mr. Benedict believed that students had the ability to develop both expertise and self-regulation. In his mind, students were “extremely self aware and conscious of their thinking processes … more nuanced; they can be more self-critical” (Mr. Benedict, Interview 4). As a consequence, he used the formative assessment tools of group work and peer-assessment to assist students in developing these skills.

Students however, did not define expertise in the same way as Mr. Benedict. They saw it as a static concept and as a result did not identify themselves as expert. To them, an expert was an “adult” (Brianna, Interview) who “knows” (Evelyn, Courtney, James, Interview) someone like Mr. Benedict. Brianna stated that expertise came with
years of “training” (Brianna, Interview). Alexandra excluded herself from been classified an expert because she was “learning” and still made “mistakes” (Alexandra, Interview). The students’ rejection of themselves as experts had implications for tools used to develop their expertise. Some students rejected the spaces that Mr. Benedict created for them to develop their expertise independently of him. Students found these tools, in particular group work, to be “disorganized” (Brianna, Nathaniel Interview) and “counter-productive,” (James, Interview) “chaotic” and not beneficial to their learning (Alexandra, James, Evelyn, Interview). Brianna felt that Mr. Benedict provided students with “too much freedom” in this space. Evelyn felt the student space was “unnecessary” (Evelyn, Interview). Brianna noted that this space would be more productive if Mr. Benedict lectured. As a consequence, they did not employ the space to develop their self-regulation skills and expertise as was intended. These students also found the identification of other students as experts who could provide quality feedback to be problematic. Nathaniel, Courtney, Alexandra and Brianna did not see the group sessions as “useful,” as they felt that peers did not possess the expertise or the experience to offer useful and valuable insight. Instead, they contended that the provision of knowledge should be the responsibility of Mr. Benedict, as the expert. The contradiction that emerged was within the division of labour, where students defined their responsibility as owners differently from Mr. Benedict.

**Contradiction C: The power of ownership**

Students’ ownership was particularly evident in their power to determine the end of an assignment task. Mr. Benedict asked the students, “Are you happy?” (Fieldnote) and if the student said, “Yes,” then the task was complete. A negative response resulted in the student being allowed to re-do the assignment. The students’ role in the determination of happiness was an established norm in the classroom. It seemed to have provided students with power over the work samples, to determine when it was complete. While Mr. Benedict, for the most part, seemed willing to allow students the right to control their happiness with the assignment, as the teacher he had the final say. He could decide whether students or a student needed to be “pushed” by asking them to re-do their work samples (Mr. Benedict, Interview). A contradiction emerged where Mr. Benedict, as assessor, had the power to overrule happiness, and because of it, he wielded tremendous power in the classroom. An example of him using his power was
with Courtney, when he insisted that she re-do the assignment. She complied, despite believing that his request was “silly” (Courtney, Interview). Ownership suggests that students wield power over their creations, power over all aspects of the things they owned. However, as assessor, Mr. Benedict not only possessed power over the evaluation of the task, but also the determination of its completion. While it is my opinion, based on my experience as a teacher, that the Grade 8 students’ voices were powerful, Mr. Benedict’s role as the final arbiter limited the power of their voices. As noted by Crossouard and Pryor’s (2008b, 2008c) many descriptions of formative assessment, especially those that propose formative assessment to be a partnership and a collaboration tend to “wish away or hide power” of the teacher (Crossouard & Pryor, 2008a, p. 10). They propose that this paints an unrealistic picture of formative assessment. They argue that studies must explore the various roles that the teacher and students assume and the power that is inherent within each role. While the role of the student is a powerful one, the role of the teacher is not less, and sometimes, even more. This contradiction needs to be further explored, because Mr. Benedict presented formative assessment as a collaborative or “we” activity (Fieldnote).

5.4.4. Summary

Mr. Benedict’s beliefs about formative assessment seemed to influenced his actions. The notion of formative assessment as a joint activity, a collaborative conversation, suggested that students’ roles were not peripheral, but rather that they were fully participating in the community’s activities. This seemed possible, to Mr. Benedict only if there was a sense of mutuality. Ownership of students’ learning seemed one way to accomplish this. From my perspective, Mr. Benedict’s beliefs seemed to influence the tools used to establish the learning environment. His belief in a child-centred approach, which gave pre-eminence to the students’ voices, seemed to influence his use of the tool of ownership. His belief structures therefore seemed to legitimize his actions for practicing formative assessment. Ownership, however, was a double-edged sword. It not only served to empower the students’ voices so that they could confidently engage Mr. Benedict in conversation but also fostered students’ commitment to the processes of formative assessment as they made their work samples
their own. However, its enactment was not simple. Tensions emerged over what it meant to be an owner, and this shaped the legitimacy of students’ actions in the classroom.

5.5. Reciprocity

A few weeks into the data collection, I recognized a pattern in Mr. Benedict’s practice. He constantly asked of the students: “Are you enjoying class?”; "Are you understanding the material?”; “How did it go today?”; and “What do you think of the exercise?” At first, these questions seemed to be Step 3 in the formative assessment cycle that Harlen (2007) describes. This step is the judgment of students’ progress, which is followed by Step 4, “the next stage in learning” (p. 76). However, when Mr. Benedict posed these questions to me, I decided to investigate this pattern of questioning.

In my third interview with him, I inquired, "On a number of occasions you have asked the students and myself “How is it going?; Why do you ask?” He explained in detail that feedback was a crucial element of his pedagogy, and that it was the responsibility of anyone entering his class to provide him with feedback on his teaching. He also said, “because I need that assessment. It’s my assessment. I can apply formative assessment honestly … I can’t use formative assessment on the students if it is not being applied to me” (Mr. Benedict, Interview 4). His words suggested a new dimension of the popular phrase, "formative assessment is done with students" (Black & Wiliam, 2009; Filer, 2002; Harlen, 2007; James, 2006; McMillan, 2007; Popham, 2006; Shepard, 2005). It meant to me that as his students engaged with formative assessment, so too did Mr. Benedict. I began to understand his statement, “I am in the practice of formative assessment …my life is formative assessment,” (Mr. Benedict, Interview) and that formative assessment was important both to his development and that of his students, as learners. With this in mind as I observed his formative assessment activity, I sought to identify ways in which formative assessment was beneficial to him as a learner. It appeared to me that Mr. Benedict was drawing on his beliefs about teaching and learning to guide his praxis. As Freire (2000) has stated, “action and reflection: it is praxis: it is transformation of the world” (p. 125). Mr. Benedict’s formative assessment activity involved classroom participants evaluating his teaching, and him reflecting on
that evaluation and then acting on what he learned. Through praxis, Mr. Benedict assumed the identity of learner, with his students being regarded as experts who were “valued” for their knowledge and insight (Mr. Benedict, interview). In this section, I describe the themes related to Mr. Benedict’s use of formative assessment to engage in praxis.

5.5.1. Formative Assessment is Reciprocal

Mr. Benedict’s engagement with formative assessment was similar to the formative assessment activity that he designed for the students in three ways. First, they both involved a progression towards mastery. Applied to Mr. Benedict, mastery involved attaining “the best pedagogical practices,” (Mr. Benedict, Interview 1) through a process of constant revision. Of this journey towards expertise, Mr. Benedict posited, “There is no end to reaching deeper or getting better or further, or expressing yourself with more clarity” (Mr. Benedict, Interview 4). Second, the teacher and students were actively engaged in the formative assessment activity. Their feedback on his practice served as a tool that Mr. Benedict used to guide his reflection. He gave recognition to the important role students played by stating emphatically, “I need that assessment” (Mr. Benedict, Interview 4). His formative assessment was thus a collaborative endeavour. The role of the student in Mr. Benedict’s formative assessment activity might be connected to Mr. Benedict’s beliefs in a collaborative learning where there was a “partnership” (Mr. Benedict, Interview) of shared experiences and activities between him and the students. Third, it involved Mr. Benedict employing self-reflection as a metacognitive tool to think about and make changes to his practices. The formative assessment activity thus involved a movement towards pedagogical expertise through feedback and self-reflection on his teaching.

Mr. Benedict’s decision to apply formative assessment to his teaching was intended to create a culture of reciprocity in the classroom, where he sought feedback on his practices as well as engaging in self-assessment; this was in line with a sociocultural definition of formative assessment. This definition proposes that formative assessment is a process of learning where the expert gauges the learner’s current level of learning and alters instructional activity so that the learner can successfully complete the task (Bennett, 2011; Black & Wiliam, 2009; Cizek, 2010; Nolen, 2011). The primary
tool for reciprocity is language, and so it involved Mr. Benedict engaging in conversation with the students and other classroom participants. It seemed to me that there was a vulnerability involved in this reciprocity when he exposed his identity as a teacher to critical review from those over whom he had power. He did not, however, view this as being powerless; rather, he perceived it as an opportunity to learn about his practice. As a result, he encouraged the students to engage honestly with him so that he could transform his teaching. This process helped him to understand his practice. This, in turn, affected the formative assessment activity. Through students’ feedback, Mr. Benedict modified his instructional activities so that he more effectively targeted gaps in the students’ development. His assumption of the role of learner meant that students adopted the roles of evaluators. This changed the power dynamic in the class, and it provided students with the confidence to engage him in dialogue. Reciprocity was strong and an essential feature of the Grade 8 class where formative assessment activity was being implemented.

Mr. Benedict perceived formative assessment to be a “two-way street” (Mr. Benedict, Interview) where he employed student feedback on his practices to transform his pedagogy. That was different from an approach where the teacher was the sole provider of feedback. As a result, feedback on his practice, like feedback on the students’ assessment, was “constant” (Mr. Benedict, Interview). Students were asked to provide feedback on a number of occasions, including after examinations, during binder interviews and feedback sessions on the various work samples, and after classroom instruction. This feedback was both oral and written and could be provided within group settings or during one-to-one conversations. It seemed to me that Mr. Benedict was establishing a culture of reciprocity, in which it was important for him to have the same experiences as his students. The culture of reciprocity was connected to his belief that all members of the classroom were learners. James noticed that Mr. Benedict perceived himself as a learner. He said, “I think that is good he actively makes himself as useful as possible and ask for feedback. It’s like how we do the peer-assessment and the self-assessment. It’s like him doing that for himself” (James, Interview 2).
5.5.2. The Influence of Context on Mr. Benedict’s Formative Assessment Activity

Mr. Benedict’s use of formative assessment was not an isolated act. It was shaped by the context in which he was situated. One activity in particular, Mr. Benedict's enrolment in a PhD program, contributed to the shape of his formative assessment activity. During the study, Mr. Benedict was taking doctoral courses in Education. He began his program in September, 2013. He described his learning there as professionally “enriching” (Mr. Benedict, Interview). His studies provided opportunities for him to “reflect on his practice from a deep philosophical basis” (Interview 4). This reflection and excitement was evident in the classroom, where his identity as a learner was visible.

Reflection on his learning, as a student, resulted in the modification of his formative assessment practices in a number of ways. Mr. Benedict reshaped the first examination questions in order to develop the students’ paragraph writing skills. He shared with the students the difficulty he was experiencing at university with this task and also the writing tool he used to ensure success:

Mr. Benedict: The challenge I have had with Paul's class is to condense what I want to say in one paragraph, in terms of context, grammar and structure. What I have been doing for the last three days is I am writing a paragraph on Locke in my head. I am thinking about it constantly in my head.

(Pre-Observation interview 6)

Mr. Benedict: I have not even put it on paper yet, so it's really neat. I enjoy this process immensely, because I can go through it in my head then script it out. So what I am going to ask you to do, is think about it in your head, you can jot down ideas, you can create a web of all the ideas in your head. I got all that planned out in my head, then tomorrow night you can do whatever research you need to do to back up.

(Observation Transcript no. 5)

By doing this, Mr. Benedict created a connection between himself and his students. They perceived him as the only teacher who knew what it was like to be a student. James articulated this:
I find that helpful... it makes him more understanding about the essays. Of course, he is a teacher, so he has an understanding about the essay. I think it helps with our writing because he points out things he is doing in his essay and how that can help us. It is helpful. (James, Interview 2)

5.5.3. Assessment Tools Mediate His “Struggle”

For Mr. Benedict, formative assessment involved a “struggle” (Mr. Benedict, Interview). This struggle was “constant,” “frustrating” and “difficult,” but ultimately “positive” because it resulted in the transformation of his practice. It was “something you strive for constantly to improve, and that in itself implies that you are going to struggle with ideas and concepts” (Mr. Benedict, Interview 4). The struggle Mr. Benedict engaged in was as a result of his engagement in self-reflection on the feedback he received about his teaching.

The feedback was a mediating tool used to facilitate reflection. Below is an extract from Alexandra’s feedback session for her first assignment. After she and Mr. Benedict discussed the assignment, they talked about his teaching.

Mr. Benedict: How did it go today?

Alexandra: I think the reason that people have so many questions is that you need to go in-depth with explaining the assignment

Mr. Benedict: I know, I need to go in-depth. Did I do that today?

Alexandra: Yes.

(Fieldnote 8)

The feedback Alexandra provided centred on Mr. Benedict’s strengths and weaknesses at the task. This feedback helped him improve his pedagogy. The next day, Mr. Benedict retaught the criteria. He began by writing on the board, “Mr. Benedict’s writing process.” He then proceeded to identify and explain each step of the process, all the while asking students questions to ensure that they understood the purpose of each step before moving to the next one. He employed Alexandra’s advice to successfully adapt his pedagogy. On this feedback, he reflected, “Part of the assessment is the information that
I get back on my own teaching – how I can improve and what weakness that I need to look at and improve” (Mr. Benedict, Interview 3).

Mr. Benedict’s self-reflection echoed Hoffman-Kipp et al., (2003) advocacy that a teacher’s reflection must be “embedded” in classroom activities (p. 250). It emerged from the feedback he received from classroom participants in conjunction with his own evaluation of the activity. He used these as tools to transact his self-reflection. Feedback and self-reflection seemed to have a symbiotic nature. Feedback prompted his reflection, which in turn led to the transformation of his practice. The purpose of this self-reflection was a part of his search for mastery. Mr. Benedict characterized this self-reflection as a “struggle” because it was an intentional act of constant reflection on his practice. Mr. Benedict’s use of “struggle” seemed to be similar to Hoffman-Kipp, et al., notion of reflection as a “metacognitive mechanism” where teachers evaluate their actions and change their activity (p. 251). Mr. Benedict’s self-reflection seemed to serve a similar purpose as a student’s self-assessment. It was a process by which Mr. Benedict evaluated his pedagogy, a process through which he discerned his development as a teacher. He was constantly engaging students in feedback so as to reflect on his practice. He even used our one-to-one discussions for that purpose – self-reflection. As an example, he approached me the day after I had conducted the fourth interview and told me that I had “got to him.” This meant, that our one-to-one discussion was used as a tool to mediate his self-reflection.

5.5.4. The Student as an Assessor

The culture of reciprocity, which was significant in generating Mr. Benedict’s self-reflection and metacognitive thinking, seemed to have influenced students’ roles, in that it established them as assessors.

Mr. Benedict perceived student feedback as “valuable” (Mr. Benedict, Interview). He believed that learners were expert consumers of teaching, thus they were capable of articulating the effectiveness of the instruction received. As a result, Mr. Benedict encouraged students to provide him with feedback on his teaching. The request for feedback was a part of his official instructional policy and it was included in course documents, such as the Philosophy syllabus. “I welcome feedback but only in an
appropriate manner. Standing at the window and screaming that you won't take it any more will not be effective” (Course Syllabus, p. 2). This was the only criterion established for providing feedback. This meant that students provided Mr. Benedict with feedback on many aspects of his pedagogy. For example, Emily discussed his whiteboard presentation skills, Brianna, noted that lecturing would be a more effective instructional tool than group work, and Ashley informed Mr. Benedict that his questioning skills helped her to understand her work. As evaluators, students constructed the criteria and they seemed to base it on how his teaching addressed their needs as learners.

Shepard (2005) notes the difficulty students have experienced in providing teachers feedback on their practice. She points out that students are very much aware of the power their teachers hold to determine students’ educational failure or success, and so may not provide critical and honest feedback. Mr. Benedict was also aware of his power as a teacher, and so one way that he encouraged student feedback was by offering students a bonus mark:

If you're looking for bonus points, give me critical feedback about the class. Don't make it personal about me. Be constructive how you feel the class is going. Does it need to be more linear? It is a report card. You have to give me feedback in your interviews, so you might as well.

(Observation transcript no 8)

Being allowed to provide feedback transformed students into assessors who had the power to actively shape their environment and to help Mr. Benedict “improve himself as a teacher” (Brianna). Students took time to adjust to this role. At first, their feedback was validating. Mr. Benedict was “doing everything right” (Arthur, Ingrid). However, as the semester progressed and the students became more comfortable in the class, the students were “glad” (Nathaniel) to assume this role. Even Mr. Benedict’s “shy girls” (Fieldnote) were providing him with critical feedback. Emily, who seldom spoke in class, gave Mr. Benedict feedback. She pointed out how she personally benefited from open format and re-do. She stated that she loved the journals because she could explore topics that she was interested in. She also added that she found his use of the white board was “disorganized” because it reflected his thinking patterns that were “all over the place and confusing” (Fieldnote 36). Similarly, Brianna informed Mr. Benedict of her desire for “more notes” and that she felt that class activities could have greater structure (Interview).
The provision of student feedback also changed Mr. Benedict. He became a learner, whose teaching was being transformed. A case in point was his actions after Emily’s feedback. Following her comments, he inquired from the other students about his whiteboard organization. It seemed as if he was trying to understand the problem, to determine if other students had the same experience as Emily, so that he could find a way to “tweak” his whiteboard presentation (Mr. Benedict, Interview). This was an activity that Mr. Benedict continuously engaged in. He would inquire from the students as to the nature of the problem. This was how he “changed” and “grew” as a teacher (Mr. Benedict, interview). Mr. Benedict was a learner, and this identity, as well as the students’ role in promoting it, was visible in the classroom. He often informed the students that they were helping him to improve his teaching practices. He told Alexandra, “Thank you, I have learned a lot from you” (Fieldnote). The students also identified Mr. Benedict as a learner. They thought that it was a “good thing” (Ingrid) that he wanted to “improve himself as a teacher” (Brianna). They saw it as being beneficial to them. Evelyn was convinced “that he wants us to learn and it is good that he is willing to change his teaching style for us.” (Evelyn, Interview 2)

Mr. Benedict’s requests for feedback from his students and employing it to transform his practice seemed to create a sense of community between himself and his students. It may have been responsible for the students’ honesty in their feedback to him. Arthur implied this in his interview, “He is not like other teachers. He wants us to think. He is making us free thinkers, be more expressive and all of that” (Interview 2). Both Alexandra and Evelyn, viewed Mr. Benedict’s request as a validation of their importance as learners and that it was of great value in making them feel “comfortable” (Alexandra, Interview). Interestingly, Mr. Benedict's learner identity did not alter the students’ identifying him as an expert. All students viewed him as possessing “knowledge” (Nathaniel, Evelyn, Brianna, Courtney, Interview) both in Philosophy and in Education. Students’ role as assessor produced a classroom dynamic where students confidently engaged with Mr. Benedict about their work samples and his teaching. This dialogue occurred within a context where the contributions of all participants were recognized as significant.
5.5.5. Mr. Benedict as a Learner and Teacher who “Make[s] it My Own”

Throughout our one-to-one discussions, Mr. Benedict employed the phrase, “in my mind” (Mr. Benedict, Interview). It seemed to me that these words were the way he established the conceptualization of an idea or practice as distinctly his. He appropriated pedagogical tools to “make things my own” or to take ownership of it (Mr. Benedict, Interview). This ownership manifested itself in many ways.

As a Coordinator, Mr. Benedict made his imprint on the Angora Program. He replaced Mathematics, Science and English Language with Art, Spanish and Philosophy and collaborated with the History teacher to design an “integrated” History and Philosophy curriculum (Mr. Benedict, Interview). Formative assessment activity in the Grade 8 classroom was also made distinctly Mr. Benedict's, through the inclusion of such elements as a priori, open format, and the mixed examination, where he integrated formative assessment elements into the tests. It seemed to me that at the heart of these “tweaks” was his belief in the classroom as a space of and for learners (interview). To this end, he adapted the practice of formative assessment so that it was contextually specific and relevant to the needs of the Philosophy Grade 8 learning space and could transform the students into independent learners (Mr. Benedict, Interview).

In taking ownership of his teaching, Mr. Benedict seemed to distinguished his formative assessment activity from that of other teachers. He described his practice as “real” and other teachers’ as “packaged” and “cookie cutter” (Interview). From his perspective, there was no “one way” to practice formative assessment and even teachers who employed a prescribed model of formative assessment could create successful learning environments. He thought that there was value in adopting such an approach; it was less “frustrating” because it did not involve continuously thinking about formative assessment (Mr. Benedict). Despite this benefit, he knew that that approach was “just not I” (Mr. Benedict, Interview). I interpreted this perspective to mean that researching formative assessment was important to assuming ownership of his learning. His practice involved discerning the utility of a pedagogical activity within a particular context and modifying it, so that it became relevant to the students and to him. This use
of theory seemed to be a model of the behaviour that he required from his students -- that is, to read the literature and make it their own.

Mr. Benedict’s efforts to make formative assessment his own did not go unrecognized by his students. From Ingrid’s perspective, the difference between Mr. Benedict and the other teachers was one of nurturing, “A lot of my other teachers in my other classes are just, I don't know. They are not as understanding as Mr. Benedict” (Ingrid, Interview 2). Similarly, Brianna and Alexandra felt that his practice was “unique” (Brianna, Alexandra, Interview). Brianna implied that Mr. Benedict provided students with a modicum of control over their learning: “In my Day 2 classes, I guess, you are just writing facts that you learn and you have to explain why it works. It's not the same in Mr. Benedict’s class” (Brianna, Interview 2). Alexandra explained that Mr. Benedict established partnerships with his students:

I don't think that any other teacher treats us so. Even in History, class is structured differently. She treats us like adults, but its different. Not like Mr. Benedict, he really trusts us. Not many Grade 8s get to experience trust from adults (Alexandra, Interview).

It seemed to me that the culture of reciprocity not only extended to Mr. Benedict engaging in formative assessment of his teaching, but also included assuming the identity of an owner. As an owner, like the students, Mr. Benedict had to make his practice, including formative assessment, markedly his.

5.5.6. The Impact of Mr. Benedict as a PhD. Learner on the Formative Assessment Activity System

Figures 5-6 and 5-7 represent a quaternary contradiction, one that occurs between the main activity system and a neighbouring one (University of Helsinki, 2005). This contradiction emerged between Mr. Benedict as a PhD learner and the formative assessment activity system of the Grade 8 class. Figure 5-6 represents Mr. Benedict’s actions as a PhD student. The object of this activity system was learning. Two components in this activity system were important to the development of formative assessment in the Grade 8 classroom. These were Mr. Benedict's role as student and learner, and the metacognitive and writing tools employed in the PhD course on the History of Educational Thought. Figure 5-7 illustrates this relationship.
There were two ways in which Mr. Benedict’s activity system as a PhD student networked with the formative assessment activity system of the Grade 8 classroom. These were: (a) the tools used during Mr. Benedict’s PhD class impacted on the tools in the formative assessment activity system of the Grade 8 classroom, and (b) the tools used in Mr. Benedict’s PhD class impacted on the division of labour in the formative assessment activity system of the Grade 8 classroom (see Figure 5-7).

Figure 5-6. Mr. Benedict’s actions as a PhD learner.
Figure 5-7. The impact of Mr. Benedict’s actions as a PhD learner on the Grade 8 formative assessment activity system
Mr. Benedict’s sense of satisfaction with his doctoral studies was evident in the Grade 8 classroom. He repeated constantly talked about what he was learning and the tools he used to construct knowledge. He found utility in some of the tools being used in the program and so he included them in the Grade 8 classroom. For example, he reshaped the examination to include the exam prep and re-writing paragraph responses as a result of his PhD experience. As he introduced these tools, he talked about his own experience with them:

Mr. Benedict: The challenge I have had with Paul’s class is to condense what I want to say in one paragraph, in terms of context, grammar and structure.

(Observation Transcript 6)

Mr. Benedict also adjusted the curriculum to include topics that he was studying in his courses. As a result, he included readings from Bauman, Locke, Rousseau, Ricoeur, and Egan into his classroom instruction. Mr. Benedict read and discussed his “homework” with the class and was amazed and excited by the students’ ability to “handle it” in a manner that compared favorably with some of his university classmates (Mr. Benedict, Interview). He pointed out excitedly:

To bring some of the ideas that we are working with into the classroom. To finding kids that we are talking about, you know the ideas of physical co presence, and having one of my Grade 9 saying, "Yes, we have a pressing need for immediacy that does not require for the person to be present." Have my Grade 9s saying things like that. (Interview)

Mr. Benedict’s PhD learner actions also impacted on the division of labour in the classroom. He was a student, like the Grade 8s; consequently he could collaborate with them, as a student. They helped him “do … [his] homework” and he, in turn, could highlight the commonalities in their experiences as learners (Fieldnote). For instance, after a student spoke in class, he said to her, “That is so well expressed, so impressive, it resonates with me in the past few weeks because I have so much to say with my homework, but I have to shut up and not say it” (Observation Transcript No. 5). The interviewed students identified Mr. Benedict as a student. They perceived him as a learner like them, and this perception made it easier for them to approach him confidently and argue with him. As James noted:
I find that helpful. It makes him more understanding about the essays. Of course he is a teacher so he has an understanding about the essay. I think it helps with our writing because he points out things he is doing in his essay and how that helps us. It is helpful. (James, Interview 2)

Mr. Benedict’s experiences as a student facilitated his ability to be cognizant of the social and emotional aspects of learning. It alerted him to Ingrid’s state of mind when she begged him to provide her with immediate feedback for the first assignment. Mr. Benedict recognized her anxiety and took steps to alleviate its. Interventions such as this built the relationship between Mr. Benedict and the students:

She wanted to talk about her assignment, explore it with me. She wanted. I mean I totally understood, at a personal level, "I want". I am anxious about what Paul is going to think about my essay so particularly when you don't know the person and you're working in an area that you're not familiar with. (Mr. Benedict, Interview 2)

It seemed that this identity as a student rendered Mr. Benedict somewhat vulnerable. It provided space for him to acknowledge the connectedness of his stories, identities and practices with those of his students. Pignatelli (2011) argues that when teachers assume a learner identity, it creates a common identity in the classroom, a “mutual responsiveness; an active, attentive kind of listening; the exposure of the self in the presence of the other” (Pignatelli, 2011, p. 221). This appeared to be the case in the classroom.

5.6. Summary

Crossouard and Pryor (2008a) posit that a critical aspect of a formative assessment is “metacognitive reflection” where participants think about the activity and “deconstruct” it (p. 17). This deconstruction brings to the fore issues of power between the teacher and the student. They hold that this reflection piece is necessary, as assessment power can be invisible and tacit. My interpretation of Mr. Benedict’s practices suggested that he was engaged in such a reflection. This reflection occurred with the Grade 8 class. I did not witness it occurring with his peers as my study was limited to interactions within the Grade 8 classroom. Mr. Benedict’s belief systems and his definition of formative assessment provided him with the legitimacy for such an
action; after all, he defined formative assessment as an act of reciprocity. In doing so, Mr. Benedict was redefining labour relationships in his classroom. The establishment of new labour roles, of the student as owner, the student as evaluator and the teacher as learner, seemed to be an essential feature of Mr. Benedict’s formative assessment practice.

5.7. Synthesis

The four themes – Piece of the puzzle, Aligning motives, Student ownership and Reciprocity — represented the essential features of a classroom where formative assessment was being implemented. Their essence can be articulated in this chapter’s opening quote from Mr. Benedict, which he offered to me in our fourth interview:

......, my life is formative assessment, and formative assessment is frustrating, can be extremely frustrating, because there is no end to it, there is no end to reaching deeper or getting better or further, or expressing yourself with more clarity (Mr. Benedict, Interview 4).

The commitment to the deep connection that Mr. Benedict shared with formative assessment can be traced to his beliefs about praxis. These beliefs were framed by sociocultural theory, and at their core was the idea that all members of the Philosophy classroom were learners, himself included. Together, the community constructed knowledge that was relevant to their lives. Learning was thus defined by Mr. Benedict as a communal, relational and situated activity. Mr. Benedict’s formative assessment beliefs were formed from this belief system. As a result, Mr. Benedict believed that formative assessment was a “collaborative,” “authentic,” “learner-centred” and “process-oriented” activity that developed students’ metacognitive skills. This connection between his belief system and formative assessment caused it to be an integral part of his pedagogy, so formative assessment became “[his]life”.

The motives that drove the formative assessment activity in Mr. Benedict’s classroom could also be traced to this belief system. His desire to create students’ success and a distinct learning space can be linked to his belief that learning must be relevant to the students. This theme not only described the motives that guided Mr. Benedict’s formative assessment activity, but also explored the students’ motives for
participating in formative assessment activity. A strong feature of this theme was that the object of the formative assessment activity was co-constructed, and as such was subject to change. In other words, the object of the formative assessment activity in the Grade 8 Philosophy classroom was dynamic.

Ownership" was an important characteristic of learning. This characteristic can also be traced to Mr. Benedict’s belief system that learning must be learner-centred. This ownership was fostered both by the learner-centred nature of formative assessment and by collaboration, an essential requirement of formative assessment activity. It was through ownership that learners were transformed into collaborators. This theme highlighted the relational nature of formative assessment, where both the students and the teacher determine roles and responsibilities in the classroom. Finally, Mr. Benedict's belief that all members in his class were learners meant that he too was a learner and, as a consequence, participated in formative assessment activity like his students. For Mr. Benedict, formative assessment was a “struggle” that was worth it, a struggle deeply shaped by the network of activity systems in which he participated. Mr. Benedict engaged in praxis as a learner. This ultimately benefited everyone in the community.

Engeström’s (1999) activity system offers a useful lens from which to identify the essential elements of formative assessment. Its emphasis on the object of and the motives for activity highlight the role of the context in shaping classroom practice and the dynamic nature of any activity. Activities, even when constructed solely by Mr. Benedict, were a social product. This had implications for his practice of formative assessment, in particular his imagining of formative assessment tools and how they would function to mediate learning, as well as for the division of labour he established, which was shaped by the motives of the students and the sociocultural context of the classroom. It determined which construct pointed to the activity, its object, and the components that shaped this object as a negotiated activity. It also revealed the dynamic nature of formative assessment activity; that it was neither static nor stable, but in transition and constantly evolving.
Chapter 6.

Conclusions – The Assembled Puzzle

6.1. A Synopsis of the Study

This inquiry originated from my feeling of failure to successfully incorporate formative assessment into my practice as a secondary school Social Studies teacher. I therefore desired to understand this experience by exploring the activity in a classroom where the “spirit” of formative assessment was successfully implemented (Marshall & Drummond, 2006, p.137). Based on the literature available to me, I believed success with this activity would produce an increase in student achievement, develop students’ skills in metacognition, self-regulation and critical thinking; and generate an excitement in students about their learning. The study thus sought to investigate what I considered to be a successful enactment of formative assessment activity within a Grade 8 Philosophy classroom.

The literature indicated that I was not alone in the struggle to implement formative assessment. There were many teachers who experienced difficulty in enacting formative assessment activity. The studies that explored the practice of formative assessment found the activity to be powerful, playing a central role in meeting the missions of schools, to develop the learner’s mastery at a task (Noyce, 2011). However, the activity’s situational and relational nature produced it as complicated and complex, so that it was not always powerful. As a way to facilitate teachers’ integration of formative assessment in their classes, researchers call for studies that explore the activity. They argue that these studies not only help us to “map and understand the dynamics” of formative assessment (McMillan, 2013, p. 12) but also provide “contextual and practical guidance” (Willis, 2007, p. 59) that teachers can use to mediate their implementation of the activity. This study seeks to meet such a mandate, to add to our
understanding of formative assessment and to provide a “living example” of implementation (Black & Wiliam, 1998, p. 15).

To explore the activity, I designed an interpretative qualitative case study using Engeström’s (1989) activity theory as its theoretical lens. Because of its design features, activity theory facilitated an investigation of the formative assessment activity in its entirety. This included its complexities and idiosyncrasies, as well as the cultural, historical and social context within which the activity occurred. It served as a rationale for the use of multiple data collection devices, such as classroom observations, interviews, documents and researcher notes. These, in turn, captured every dimension of the formative assessment activity, the work samples, formative instruction, the teacher-student relationship and interactions during the activity, and the assessments conducted. Activity theory purports that the development of student learning occurs through activity, as a result of mediation while using cultural tools, within a social, cultural and historical context. These assumptions directed the data collection and analysis. Accordingly, assessment activity formed the study’s unit of analysis. The investigation centered upon gaining an understanding of the context of the assessment activity, the teacher’s and students’ motives and goals for engaging in the activity, the actions undertaken during formative assessment activity, the cultural norms which guided these actions, and the contradictions inherent in the activity.

During the inquiry, I became aware that not all of Mr. Benedict’s actions were aligning to formative assessment as I had initially defined it. Instead of mainly being engaged in teaching, Mr. Benedict was creating a context for learning that was conducive to formative assessment activity. When questioned, he offered the inexperience of the Grade 8 students, in particular to the school, to the Angora Program, to the subject matter and to him as a teacher, as the rationale for his actions. Given this newness, he felt that it was necessary that he spend time building relationships with the students and introducing them to formative assessment activity gradually. From this context, a new question emerged. The question shifted from “How does formative assessment unfold in a Social Studies secondary school class” to “What are the essential features of a class where formative assessment activity is being integrated?” emerged. This question sought to investigate the processes and actions involved in building the foundations for formative assessment activity with the class.
This chapter represents the last stages of the investigative process. It contains a discussion of the interpretations, reflections on the design and execution of the inquiry, and recommendations for future research. I commence with a reiteration of the themes described in the preceding chapter. The connections between the themes will be discussed in relation to the literature. The literature is also employed to illustrate commonalities and inconsistencies between this study’s findings and the current research on formative assessment. Following this are the implications of these results, in particular those related to a teacher’s practice of formative assessment. In the final sections I reflect on the process of research and draw attention to the limitations of the inquiry, as well as present recommendations for future research and my concluding thoughts.

6.2. Highlights of the Findings

As already noted, the study sought to document formative assessment activity. I believed that this inquiry would offer some insight into my own failings as a teacher with the activity and perhaps supply me with pedagogical tools to employ in my classrooms, in order to successfully create activity appropriate for students' learning. Instead, I witnessed a teacher who had embraced the “struggle” (Mr. Benedict, Interview) of practicing formative assessment; a teacher who demonstrated “praxis.” That is, Mr. Benedict learned from his teaching through a process of assessment, reflection, and action. “Reciprocity” was a strong theme in this study. Through “Reciprocity,” Mr. Benedict assumed the role of a learner, and he, like the students, engaged in formative assessment. His actions created a sense of reciprocity, where both he and the students engaged in formative assessment activity as learners. This was a huge shift in my thinking. Formative assessment was something they did together, not something he did.

To my surprise, the belief systems of Mr. Benedict and the students served as a foundation for such an approach. Formative assessment was not imposed upon his teaching and learning, but rather, it was an integral part of it. To use Mr. Benedict’s words, it was a piece of the puzzle. Mr. Benedict’s belief in process-based and child-centred learning, which seemed to be aligned to a constructivist paradigm, as well as his belief about the nature of Philosophy, shaped his formative assessment practices and
his conviction in formative assessment as an authentic process and a tool for the development of metacognitive thinking. This shaped his pedagogy. His beliefs and his conceptualization of formative assessment complemented each other to produce a holistic picture of a pedagogy that was distinctive to him. As with Mr. Benedict, the students’ formative assessment actions where attached to their belief systems. Their belief in education as a medium for life preparation shaped the way they conceptualized assessment as a determinant of success. This view informed their actions during assessment activity.

Mr. Benedict embraced the complexity of assessment. He recognized the dissonance between classroom participants’ motives, both his and the students’. Believing that students’ motives were shaped by their past and present experiences with assessment, he adopted a salesman persona to align motives, so that students could become “fully engaged” in learning (Mr. Benedict, Interview). This persona was a revelation, in that he did not attempt to cajole or use his power to transform students’ motives, but rather he attempted to sell them an attractive product. Students’ motives, in particular those related to academic success were the attraction used to develop students’ interest in the task. These measures surprised me because of the literature’s disdain for extrinsic motivation, especially grades (Black & Wiliam, 2007; McMillan, 2012; Popham, 2008). Two other strategies for aligning motives were employed, with the dominant one being the developing of a class program designed for long-term engagement where, over time, students’ motives would be transformed. The other was the development of the teacher/student relationship, where the students to know and trust the teacher. The theme “motives” revealed the dynamic nature of the object, that it was transformed from the interaction between Mr. Benedict’s and the students’ motives. As a consequence, students’ motives were important to determining the nature of the assessment activity.

Performance goals, such as grades, enticed students to participate in the assessment activity, while the transformation of the division of labor secured their commitment to the task. The new division of labour made possible the conversation that Mr. Benedict hoped to have with his students, because taking “ownership” of their learning provided students with the confidence to “argue” with him (Mr. Benedict,
interview). It altered the traditional vertical teacher-student relationship, resulting in it being more horizontal. Student ownership was a dominant theme in this study. It was a condition for engaging in formative assessment, as well as being a product of the activity, and it was demanded of every participant in the class. As a result, the students’ work samples had to be “theirs” (Mr. Benedict, Interview). Student ownership was a strong feature of the class as it was a prerequisite for collaboration.

The object of the activity, writing at a first year university level, was transformed by students’ motives. The division of labour also shaped the nature of the activity. Students’ perceptions of the roles and responsibilities of ownership determined the effectiveness of such formative assessment tools as feedback, peer review, and group work. Both contexts, the students’ and Mr. Benedict’s, also shaped the activity. For instance, the students’ lack of experience with formative assessment resulted in them forgetting to apply the assessment criterion to write self-assessments. I was fascinated by the nature of the tools used to mediate formative assessment activity. They reflected the context of the classroom. For example, Mr. Benedict’s doctoral studies resulted in him adding such pedagogical tools as peer editing, and changing the object of the exam to writing a perfect paragraph. The tools also served to foster the relationships among classroom participants. Thus, student feedback not only provided Mr. Benedict with information which he could use to adapt his teaching but also served to establish a connection, as fellow learners, among him and his students.

6.3. Analysis of Interpretations

An underlying current evident in all the themes was the importance of class relationships to successful formative assessment activity. These relationships, among the teacher and students, and the students and students, served as a connecting thread that wove the themes together. For example, Mr. Benedict’s beliefs in a child-centered approach to learning and in process-oriented learning shaped his conceptions of the teacher-student relationship. His actions of aligning students’ motives to his were aimed at transforming their pre-determined conceptions of this relationship, and the division of labour roles that he established for the formative assessment activity shaped student-
teacher interactions. Students’ relationships with each other, in particularly peer friendship, also determined the hierarchy of their motives and affected student actions.

From the commencement of data collection, Mr. Benedict stressed the importance of this relationship to formative assessment activity. The goal of his initial teaching activities was to build relationships with his students (Mr. Benedict, Interview). He believed that establishing relationships with his students was essential to the enactment of the formative assessment tools of formative instruction and feedback. The utility of these tools to tailor instruction to meet the needs of individual students was predicated on his knowledge of them, the students. The literature, connected with a sociocultural perspective on formative assessment and also identifies the importance of the student-teacher relationship (Ash & Levitt, 2003; Elwood, 2006; Gipps, 1999; Lunt, 1993; Marshall, & Drummond, 2006; Nolen, 2011; Crossouard & Pryor, 2008b). Elwood (2007) described this relationship, noting: “The teacher and learner are entangled ... learning cannot be viewed in isolation, but only in the relationship between learning and the teacher” (p. 264).

Activity theory proved to be useful in identifying and describing this relationship because it was formed in the activity and embedded in the social, cultural and historical context. The activity theory framework highlighted the multiple and diverse voices that were involved in this relationship and provided me with the tools to understand the complex nature of this relationship (Cole & Engstrom, 1993). I found Crossouard and Pryor’s (2008a, 2008b, 2009) discussion of the division of labour and the rule nodes within formative assessment activity useful for understanding the student-teacher relationship. They advocate that researchers problematize the relationship by analyzing different roles adopted by both the teacher and student, how these roles interact with each other, and the power inherent in teacher roles. They proposed that during formative assessment activity, the teacher adopts the identities of assessor, teacher, subject expert, learner, and collaborator, just to name few; whilst the students assume reciprocal roles to the teacher. Their identities include assessed, learner, subject novice, assessor, owner and collaborator. Each of these roles “develops different relationships ... [and] govern[s] interaction” (p. 10) between the teacher and student. In this study, Crossouard and Pryor’s (2008a) theorization served as a starting point from which to explore the teacher-student relationship during the implementation of formative assessment activity.
in the classroom. Mr. Benedict and the Grade 8 students adopted several different identities. I discuss the insight that I gained into the teacher-student relationship during formative assessment activity, and in doing so, I attended to the students’ identity as owners and the teacher’s identity as a learner.

6.3.1. The Formative Assessment Activity

At the center or the heart of the formative assessment activity in the Grade 8 Philosophy class was the learner’s success. For the students, as learners, success was defined as by Mr. Benedict as writing at a first year university level. This object determined their actions within the activity system. The actions taken by Mr. Benedict and the students during the formative assessment activity were a reflection of that object. These actions included making the criteria explicit, engaging in a task, such as group work, classroom discussions, watching movies, or lecturing, which were a few of the tasks that provided students with the requisite knowledge to complete their work successfully. Other activities undertaken were the internalization and appropriation of Mr. Benedict’s actions by the students, which he used to provide him with feedback on his teaching; the development of the work-product by the students; the submission of their work-product in draft form by the students; the internalization and appropriation of students’ understanding of Mr. Benedict’s assessment; the provision of feedback on their work-product to the students by Mr. Benedict; the provision of feedback on his teaching or work-product; to Mr. Benedict by the students the application of student feedback by Mr. Benedict to adapt his practice; and the application of Mr. Benedict’s feedback by the students to re-construct the work-product. These actions were in no way linear. For example, making the criteria explicit was a continuous process that occurred throughout the activity. During the formative assessment activity, the teacher and the students assumed several roles, some of which possessed greater power than others (Crossouard & Pryor, 2008a).

Although the literature describes formative assessment as a co-constructed process, whereby the teacher and student collaborate together to produce a work sample, the outcome of the activity is always identified as learning and development (Ash & Levitt, 2003; Black & Wiliam, 2006; Crossouard & Pryor, 2008a; Lund, 2008; Rust, 2005). Teachers are identified as learners within the activity system and are seen
as engaging in learning and transforming their practice, but this is overshadowed by the learning achieved by the students. An example of this is found in Ash and Levitt's (2003) four-step model of formative assessment activity. This model seeks to define the steps involved in teachers’ learning from assessment activity and the resulting transformation of their practice. In the first step, the teacher explores the student’s assignment to ensure that the student has met all the requirements established in the criteria. Second, the teacher employs a scaffolding tool to identify the strengths and weaknesses within the assignment. Third, the teacher embarks on a process of self-reflection in which she examines her or his practices and adjusts her or his pedagogy to enable the student to complete the task. Fourth, the teacher engages in praxis, in which the teacher alters his practice as a result. This description identifies the teacher appropriation of the student's work-product as the source of the learner’s identity.

One of the features of the formative assessment activity system in the Grade 8 Philosophy class that held my interest was that its outcome, unlike those described in the literature and the one used in my classroom, was the learning and development of all classroom participants. In my classroom, the outcome of the activity was students’ learning and development. It did not include the growth of my practice. This raises questions about the use of the words, joint activity and collaboration, by researchers, to describe formative assessment. The following may justifiably be asked: Can one speak of collaboration when the intended beneficiary is only the student? While the findings on the formative assessment activity system are limited to the Grade 8 classroom, the implications of the inclusion of Mr. Benedict as a learner, who experienced formative assessment activity, offer an area for future research. Investigations could be conducted using questions such as 'How does this learner-centred outcome unfold in other classrooms?’ and 'How do context variables such as subject disciplines and teacher beliefs determine the nature of the formative assessment activity?’

The formative assessment activity system in the Grade 8 classroom differed from the literature, however, in that Mr. Benedict’s role as a learner and the transformation of his teaching was not incidental but rather was a pre-identified outcome of the activity system. The outcome of achieving the best pedagogical practices featured prominently in the formative assessment activity system and was partly generated from his assessment of the students’ work samples. It also originated from the students’
assessment of his work-product, his teaching. The activity system captured the interaction and relationship between active learners, where Mr. Benedict’s role as a learner was equally important as students’. Mr. Benedict identified this relationship as one of reciprocity, where his experiences mirrored those of the students. Burner (2014) employs the concept of reciprocity to describe teacher and student learning during formative assessment activity: “Genuine formative assessment is based on a reciprocal relationship between the teacher and the student, between feedback and changing of teaching and learning activities in line with that feedback” (p. 8). However, Burner’s reciprocity, like that of Ash and Levitt (2003), stems from the teacher appropriating the students’ work-products and reflecting on what can be learned about their practice. It is not generated from the teacher eliciting expert feedback from the students on his practice. Mr. Benedict’s inclusion of his learning outcome in the formative assessment activity system transformed this activity in two significant ways. These will be discussed in the following paragraphs.

**The teacher as a learner**

In the first interview, Mr. Benedict identified himself as a “teacher-learner” searching for the “best pedagogical practices” and said that formative assessment activity was the tool facilitating his search. The literature makes a connection between formative assessment activity and teacher learning. Crossouard and Pryor (2008a) argue that through formative assessment, teachers engage in “narrating their own learning history, explicitly critiquing aspects of their work or actively inviting students’ critique” in an effort to develop their pedagogy (p.13). Similarly, Hoffman-Kipp et al., (2003) noted that formative assessment provides a medium through which the “practitioner [becomes] the owner and subject in, the process of his or her own reflection” (p. 249). However, the connection between formative assessment and the teacher’s role as a learner is not as well established as that of formative assessment and student ownership. Furthermore, the literature does not discuss the process through which it occurs. To Mr. Benedict, his role as a learner was identical to that of the student, and feedback was the key tool from which all learners developed.

As previously noted, Mr. Benedict and the students adopted the role of learners within the activity system. Through this role, Mr. Benedict and his students seemed to
belong to a community of practice where they actively pursued their development together (Lave, 1996). Within this community of practice, learning activity was not reserved for novices; all members of the community engaged in learning, and as they did so, they continuously improved and developed, with the community being held together by common experiences and norms (Lave, 1996). Within the Grade 8 community, both the teacher and the students were engaged in learning, and they were held together by their experiences as students, as well as by the formative assessment tools used by the community to engage in learning. Two tools important for the community’s engagement in learning were feedback and self-assessment. These tools did not work independently of each other, but rather had complementary functions. For example, feedback served as a catalyst for self-assessment. Learning within the community occurred twice, once through dialogue with students on the interpsychological plane, and then again through inner dialogue and reflection on the intrapsychological plane (Vygotsky, 1978). Hoffman-Kipp et al., (2003) note the utility of such a process for the teacher. Through dialogue and an examination of her teaching practice, the teacher develops “metacognitive mechanisms that teachers can use to regulate their own practice, before, during and after teaching” (p. 251).

The literature describes the community of practice for the teacher as occurring among his peers. Mr. Benedict seemed to have this community with the teacher whom he taught an integrated curriculum. He also had this community with his students, whom he saw as experts in their own learning. Again, this belief in students as experts in their learning was connected to his perception of ownership. While the literature I read on communities of practice in educational settings did not explore this type of community of practice within a school setting, there were implications for such an activity. First, Mr. Benedict incorporated those involved in the activity, within the Grade 8 classroom, as members of the community. He also drew on his informal experiences as a learner to inform his pedagogy. This encouraged the students to collaborate with Mr. Benedict in learning (Crossouard & Pryor, 2008b). Second, Mr. Benedict drew on his formal experiences as a learner within the university. And third, he responded to the nature of the subject discipline, Philosophy. The goal of the Philosophy teacher is to develop student thinking through a “community of inquiry” approach, whereby students provide evidence in their thinking of their rationalization, reflection and appropriation and
adoption of ideas (Lipman, 2003). These three actions serve as tools to mediate the teacher’s development in teaching and results in the teacher’s learning being a goal-directed activity, which is germane to a particular class and subject (Black & Wiliam, 2006).

“Student ownership”

Mr. Benedict believed that the students’ role of owner was indispensable to his practice of formative assessment; “because formative assessment is not real unless they take ownership of it” (Interview). The association of student ownership with formative assessment has been established in the literature. It identifies student ownership as a fundamental product of formative assessment activity. Through ownership, students become “agents of their own learning” (Rainer & Matthews, 2002, p. 22), and develop such skills and behaviours as goal orientation, self-direction, self-efficacy, self-confidence, metacognition, self-monitoring and persistence (Brookhart, et al., 2008; Brookhart et al., 2009; Chan et al., 2014; Conley & French, 2013; O’Neil, 2010; Rainer & Matthews, 2002). The overall impact of student ownership is “high student engagement in learning and increased student achievement” (Brookheart et al., 2009, p. 52).

Formative assessment activity fostered student ownership. Ownership was accomplished by offering students the opportunity to exercise their agency as learners, to “relate their own experiences to new knowledge, making the learning their own” (Rainer & Matthews, 2002, p. 22). Adopting the role of owners is not simply a matter of using the specific formative assessment tool, but rather, students’ must employ their context as a tool to mediate their ownership. As Ecclestone (2010) articulates it, ownership stems from “what they [students] learn through the assessment practices they experience, how they shape and influence those practices, and what they and other participants in a context consider to be important processes and outcomes” (p. 54). In the Grade 8 classroom, the tool of open-format, which allowed students to select assignment topics and formats that were meaningful to them, was the main avenue by which students became owners. This motivated student learning by allowing students to develop work on the issues and topics that were relevant to their lives. It also permitted students to have agency and autonomy in the design of their work samples (Chan, Graham-Day, Ressa, Peters, & Konrad, 2014), or as Mr. Benedict put it, “it must be her
own” (Interview). The literature identifies this ownership as providing students with “bargaining power” (Bernstone, 2009, p.10) in the classroom. To have a say in the decisions about their work samples served as a “tool to rethink their performance, link knowledge and evaluation, reflect on their learning and plan their learning. In this way, they are able to criticize themselves and be critical of given knowledge and the activities done in class” (Kurt, 2014, p. 338).

The formative assessment activity system in Grade 8 added another dimension to the students’ role as owners. It established a connection between students’ ownership and their expertise. Students were perceived as experts regarding their learning and as a consequence could evaluate Mr. Benedict’s teaching. This provided students with greater bargaining power during formative assessment activity and reduced the vertical power structure of the traditional teacher-student assessment relationship. Crossouard and Pryor (2008a, 2008b, 2009) have examined student ownership within formative assessment and have critiqued researchers for “wish[ing] away” the power inherent in the “highly asymmetrical power relationship” of assessment activity, where the teacher’s role as assessor provides him with substantial power (p. 10). They indicate that classroom participants should, instead, be made aware of the power associated with their various roles. Mr. Benedict’s form of ownership does not “wish away” pre-established power relations; rather, it establishes a new characteristic of power: power gained through the students’ role as evaluators and his role as a learner. However, this development has the potential to complicate power relationships in the classroom. Students’ ownership, accessed through making the learning their own and from students’ roles as experts, transforms the concept of ownership, providing it with greater dynamism.

**Mr. Benedict’s belief system**

This activity system in which both Mr. Benedict and his students were active learners was born from his beliefs about learning, that everyone in the classroom was a learner and that learning was a lifelong process where one “never stops learning” (Interview). The literature suggests that teacher belief systems are powerful and can determine their actions (Clandinin & Connelly, 1996; Tierney, 2006). “Beliefs are instrumental in defining tasks and selecting the cognitive tools with which to interpret,
plan, and make decisions regarding such tasks; hence, they play a critical role in defining behaviour and organizing knowledge and information” (Pajares, 1992, p. 325). For Mr. Benedict, it was his beliefs that created his identity as a learner, and formative assessment became the vehicle through which he came to know his pedagogy. As he put it, “My life is formative assessment” (interview), and it established in his classroom a learner-centred place. The teacher’s belief system plays a key function in the realization of the activity system (Elwood, 2010). Teacher beliefs therefore offered “another way of using teacher power to create collective spaces for students’ actions” (Crossouard, 2009, p. 89)

6.4. Implications

This study's findings have personal significance for me, as it was my struggles with formative assessment that inspired my desire to understand why this pedagogical tool did not materialize into the “good thing” (Torrance & Pryor, 1998, p. 6) the literature had promised. This inquiry was therefore designed for self-discovery, as well as a contribution to educational theory and research.

6.4.1. Implications for Theory and Research

Activity theory offers a lens through which teachers can understand the role that students’ motives play in shaping the activity. As noted in Chapters 2 and 5, motives drive an individual’s goals for engaging in the activity and can transform the object (Leont’ev, 1981; Wells, 2011). Studies by Hedagaard (2002), Shepard (2005) and Nolen (2011) in classroom settings, have found that although students possessed less power than the teacher in determining the assessment, their motives, especially performance-based motives, transformed the object (Hedegaard, 2002). My study produced similar findings. Students’ motives, especially those related to performance goals, “instantiated” a different object from the one designed by the teacher (Kaptelinin & Nardi, 2006, p. 153). As Kaptelinin & Nardi noted, the object is a reflection of a co-constructed process. Further study into the role that students’ motives play in “instantiating” the object will be useful for developing a fuller understanding of the enactment of formative assessment practices. It may shed light on why formative
assessments may not turn out to be as good as teachers imagine it to be (Torrance & Pryor, 1998, p. 6).

Research in the practice of formative assessment is a well-established field of study. The teacher who wants to understand how the activity unfolds within the classroom will find an abundance of studies that describe the activity and its complexity, as well as the successes to be gained from its application. The literature points to the context-specific nature of formative assessment – that the unfolding of formative assessment is very much dependent on upon the context, country, school level and subject discipline in which it is practiced. The practice of formative assessment within a Canadian context and in the Social Studies subject discipline are emerging areas of study. Studies that describe the activity within Canadian jurisdictions are important because of the differences of educational policy across the provinces, and territories which result in a variation of practices across the country. The Canadian educational context is also different from that of the United States and the United Kingdom, where standardized testing has shaped the practice of formative assessment.

The small body of literature addressing formative assessment in Canadian Secondary Philosophy or Social Studies classes does not mean that formative assessment activity is not enacted within these or other contexts. There is no doubt that many teachers practice formative assessment in various contexts. As Mr. Benedict noted in our first interview, he had been practicing formative assessment for three decades. Documenting the formative assessment activity can be a source of encouragement, provide insightful information and be an example for teachers within similar contexts. It can highlight to them the legitimate actions within these contexts. An awareness of the norms of a particular context mediates engagement in the activity where participants are critical and self-reflective of their practice. Crossouard and Pryor (2008a, 2008b) discuss the benefits to the students of making the regulative discourse evident to them. They argue that metacognitive development emerges when the teacher and the student deconstruct and co-construct legitimate actions. Similarly, making evident the norms associated with a particular context can serve as a tool for metacognitive development.

There is some research on formative assessment activity in the classroom, using Engeström’s (2001) activity theory; however, the predominant focus of these studies has
been to document the implementation of formative assessment as a collaborative effort, where teachers work with researchers. Crossouard and Pryor (2008b), Thanh Pham and Renshaw (2015), Black and Wiliam (2006), Crossouard (2009) and Burner (2014) are the research within this vein. To my knowledge, no studies have been conducted using this theoretical framework in classrooms where formative assessment is enacted unaided by researchers. More research like this, is needed, because it speaks to the circumstances of the majority of teachers who practice formative assessment. Using this theoretical lens made possible the identification and the impact of subjects’ motives and the teacher-student relationship on the activity. It revealed how the activity of formative assessment unfolded in the classroom, and made it evident that the activity was grounded within a particular context. Given that formative assessment practices are context-specific, each additional inquiry enlarges our understanding of the existing picture of formative assessment. It is in this way that my study makes its contribution.

Studies by Asghar (2013), Black and Wiliam (2006), Burner (2014), Crossouard and Pryor (2008b), Crossouard (2009) and Thanh Pham and Renshaw (2015) highlight the relational nature of formative assessment. They found that at the heart of formative assessment is the teacher and the student negotiating their relationship within the activity. Studies by Crossouard and Pryor (2008b) and Crossouard (2009) particularly have noted that a key component of this relationship is the adoption of different complimentary roles by the teacher and the student. They stress the importance of teachers making evident the roles they adopt, as well as identifying legitimate and appropriate student behaviours. The current study’s findings were congruent with this and thus added to our view of formative assessment as a social activity, involving the relationship between and among class participants. This study therefore strengthens the theoretical underpinnings of activity theory, by adding information on its relational nature.

While the above mentioned studies were useful for thinking about the nature of the teacher-student relationship, I found their discussion of the teacher’s role as a learner insufficient to explain the formative assessment activity system that developed in Mr. Benedict’s class. As noted previously the assumption of this role, teacher-learner, changed the nature of the community, within the classroom, from teacher-centered to creating a new community where all classroom participants were learners. It also added new dimensions to the definition of student ownership. This identity roused in me, as a
teacher and as a researcher, questions about the division of labour within the activity. As previously stated, I see questions regarding the nature of the collaboration on how co-construction is defined and practiced, and on the role of teacher-student negotiations in teacher learning, as potential areas of future research.

One of the study’s findings was the role that activity system networks played in influencing formative assessment activity. Activity theorists believe that subjects exist in multiple of activity system. So Mr. Benedict is a subject in several activity systems, some of which, for example his PhD learning system, was previously mentioned. The students also are subjects in several activity systems, including but not limited to their assessment activity systems in elementary school and in other classes at PSS1, shaped the formative assessment activity in the Grade 8 classroom. Studies by Havnes (2004) and Thanh Pham and Renshaw (2015) have investigated the role that the context, in particular examinations, plays in shaping formative assessment activity. They found that students’ past and present experiences with the examination system determined how they responded to formative assessment. To my knowledge, there are no studies that have investigated the quaternary contradiction mentioned, or the tensions arising from the interaction between the formative assessment activity system and other activity systems in which participants are involved. Crossouard and Pryor (2008a), in their theorization of formative assessment, advocated for such an investigation. They noted how an examination is affected by the wider context, in particular the school community, which determines what is legitimate. Such an examination would add to current understanding of how the “figured world” of the student and teacher determine their actions (p. 14). In addition, an investigation into quaternary contradictions, that is, how the activity system network interacts, would be useful for understanding how formative assessment activity connects to other activity systems, and how it shapes and is shaped by these other systems. I suggest that researchers could build on the work of Havnes (2004), Thanh Pham and Renshaw (2015) and this study, to describe how the formative assessment activity system shapes the activity systems to which the subjects belong. In our interviews, this was one of the concerns Mr. Benedict shared with me, that of the possibility of the transferring of knowledge and skills that the students learned in his class, to other classes. In other words, he wondered, what were the spill over effects of the formative assessment activity system?
As a teacher, my journey with formative assessment commenced with a Master of Education course, which introduced me to some of the most prolific researchers on the activity. Researchers as Black and Wiliam (1998a, 1998b), Brookheart (2001), Earl and Katz (2000), and Stiggins (1992) have shaped my thinking about formative assessment. This literature greatly influenced my decision to implement formative assessment in the classroom, because they described the activity as a powerful intervention that would produce student success. The statistics they offered as evidence of the activity’s ability to produce success, a mean effect size of between 2 to .30 standard deviations increase in students’ academic achievement, convinced me that this activity was worth implementing. This literature seemed to present the success produced by formative assessment in achievement terms (Personal communication with L. Kanevsky, July, 2 2015). This picture of the impact of formative assessment appealed to me because it aligned with my conceptions of student success. I perceived student success to be gains in student achievement. As I spent time in the Grade 8 Philosophy classroom, I noticed the differences between his and my definition of success as a result of formative assessment activity. Mr. Benedict perceived success to be an “unfixing” of the student. This definition of success had implications for teaching and learning. In my classroom, this definition of success led me to conclude that I had failed with formative assessment when my students’ academic achievement had not increased. This roused several questions in me. How do teachers define student success attained from formative assessment activity, and what impact does this have on the nature of formative assessment? How does this definition of success at formative assessment affect the collaborative nature of the activity?

At the end of the data collection, I left the Grade 8 classroom with a desire to find out about and document the three-year journey of the participants. I wanted to know the story in its entirety. I left the classroom with questions, some of which were: When would the students become unfixed? What would they be like in Grade 10? Would students argue with Mr. Benedict? I saw the benefit of documenting this formative assessment activity using a longitudinal study to capture the transformations in learning and development. Researchers have advocated for a view of formative assessment as a long-term process. Longitudinal studies by Bell and Cowie (2000), Black and Wiliam (2006), Filer (2000), Gipps (1995), and Torrance and Pryor (1998) have significantly
contributed to our understanding of formative assessment. These studies have described the realities of formative assessment activity. They have highlighted its complex, context-specific and relational nature. In Canada, there are a few studies that document formative assessment as a long-term process. Beckett et al., (2010) three-year study on assessment practices of teachers in elementary and secondary schools in Ontario is one such study. Mr. Benedict's emphasis on formative assessment as a long-term activity occurring over a number of years, and his long-term use of formative assessment, highlight the need for further research on those teachers who consistently use formative assessment activity in their classrooms.

6.4.2. Implications for Practice

This inquiry began in my classroom. As a teacher, I wanted to understand why I could not employ formative assessment activity to create the identical impact described in the literature. While the study findings are limited to the Grade 8 Philosophy classroom, I believe Mr. Benedict is another “living example” (Black & Wiliam, 1998, p. 17), an “insightful story” of practice (Beckett, Volante, & Drake, 2010, p. 45), that, at its very least, has reflective value for teachers. I for one, as a teacher, was encouraged by my discussions with Mr. Benedict. His honesty offered me hope and renewed my faith in formative assessment. I now impatiently await my return to the classroom, to struggle with the activity. I see this as an important professional implication. As the literature indicates, there are many teachers who experience difficulty with formative assessment. Recently, a student teacher confessed to me that although she believed that formative assessment was beneficial to student learning, she avoided using it in the classroom because it was difficult to enact. This study offers teachers, like that student teacher and me, hope that the activity can be implemented. Voices like Mr. Benedict’s are especially needed, as he is representative of the majority of teachers who learn to and continue to use formative assessment without the support of a researcher.

Most of the literature to which I had previous access suggested that formative assessment was a “quick fix” (Elwood, 2006, p. 226). However, this was contrary to the approach that Mr. Benedict adopted. He conceptualized formative assessment as a long-term process, and the three-year length of the Angora Program facilitated the realization of his vision. His step-by-step process catered to the students' lack of
experience with formative assessment by slowly integrating it into their practice, so that by the time they finished the Angora Program, it would have become, for them, an educational norm. Mr. Benedict adopted this approach because he knew that for many students, formative assessment was a foreign experience. This was evident in the fact that only one of the eight students interviewed had had previous experience with the activity. As Mr. Benedict noted, adopting formative assessment was not about introducing tools; it was about changing the way that the students thought about assessment. To do so, Mr. Benedict slowly integrated formative assessment into his relationship with the students. He began by getting to know his students; then, as time progressed, he incrementally added elements, until students were fully engaged in formative assessment activity.

I was fortunate enough to observe what the end product of Mr. Benedict's process looked like, as he granted me permission to shadow him for a few of days in the Grade 10 Philosophy class, the last year of the Angora Program. I readily noticed the difference between the students in the Grade 8 and those in the Grade 10 classrooms. It was an enriching experience. These Grade 10 students argued with Mr. Benedict; they were unafraid to discuss their work samples with him. A looping classroom is an atypical experience in the secondary school environment, and many teachers do not have the quantity of contact time with one class that Mr. Benedict had, to allow them to slowly integrate formative assessment activity into their classrooms. To teachers wishing to employ formative assessment activity, my findings suggest that they give serious thought to designing the activity as a sustained endeavour, allowing time for the students to become comfortable with the activity. Collaborating with other teachers in the department to develop a plan for integrating formative assessment could be one way to achieve long term exposure to formative assessment and establish a supportive community of practice.

My findings suggest that teachers engaging in formative assessment activity should design learning experiences that facilitate constant reflection on their practices. The literature suggests several benefits of teacher reflection. Among them are that it ensures that the activity is aligned to the teacher’s belief systems and that it helps teachers develop confidence in their practices (Borg, 2001; Pajares, 1992; Willis, 2009; Xu, 2014). A good source for the generation of teacher reflective practice is students. Mr.
Benedict assumed students were experts at their own learning, and because of this view, he relied on them for feedback on his practice. Their comments served as a launch pad for reflection. This source of reflection was important in helping to attune Mr. Benedict to the specific needs of the Grade 8 students, as well as providing students with confidence. The excitement and spontaneous responses that this action generated, where even the shyest students were honest with Mr. Benedict about his teaching, seem to suggest that this could be applied in other classrooms and have a similar impact there.

Mr. Benedict perceived formative assessment as a collective activity. He constantly used the word “we” when describing the process. Throughout the data collection period, this was evident in a variety of ways, including the identification of himself as a learner, having students buy his product, and the incorporation of the outcome of teaching mastery in the assessment activity. This approach challenges Bloom’s (1967) notion of formative assessment as a teacher-directed activity; something that the teacher does to the student, an activity that is done with the students. Mr. Benedict believed that he and the students were “in this together” (Mr. Benedict, Interview) and so he designed an activity to accomplish this. This was one of the lessons that I learned from Mr. Benedict’s class about my practice. I enacted an activity which I assumed was co-constructed, but as the teacher, I had directed it and determined how the activity would unfold. This finding suggests that educators need to examine their actions during formative assessment activity, as well as their conceptualization of the activity. They need to inquire: Am I authentically engaged in collaboration? Or do my actions suggest that I am directing the activity? And is my relationship with the students vertical or horizontal?

Coffey et al., (2011) argue that the literature’s enthusiasm on strategies for using formative assessment has resulted in disregard for applying subject discipline knowledge to the activity. In the Grade 8 Philosophy class, subject knowledge was important to the execution of the activity. Mr. Benedict used formative assessment in a manner that mediated students’ Philosophical thinking. I was, however, surprised by the role Mr. Benedict’s content knowledge played in enacting the activity. Mr. Benedict did not identify content knowledge as an important feature of the formative assessment activity; rather, his students did. They saw him as an expert who had deep knowledge of the
subject area, someone who could provide them with information on the most obscure of topics. This expertise in Philosophy was important to them. To some degree, it was instrumental in getting them to engage in formative assessment activity. Students like Brianna, who said that the class felt like “swimming in the Pacific” and that she did not like it, engaged in activity because she had confidence in Mr. Benedict’s expertise. It is my suggestion to teachers who want to use formative assessment in the classroom, that understanding the nature of their subject, as well as their knowledge of the content, is important to the enactment of the activity.

Based on my findings, I would suggest that teachers wanting to understand formative assessment practices spend time in another teacher’s classroom, one who has been practicing formative assessment for a number of years. The insider/outsider role, a teacher researching another teacher’s practices, presented me with a view of the multidimensional nature of formative assessment. It highlighted strengths and weaknesses in my practices of which I had not previously been aware. Stenhouse (1982) notes, “It is teachers who will change the world of school by understanding it” (p. 5). While I do not claim to understand formative assessment completely, I feel that experiencing, documenting and analyzing Mr. Benedict’s practices facilitated an understanding of my practices and provided me with possibilities. It has certainly led to my rethinking what constitutes a successful practice. Based on my professional growth from this research, I would recommend that teachers seek opportunities to investigate the practices of other teachers, to observe and inquire about their pedagogy. The object of these inquiries would not be merely to evaluate their colleagues’ pedagogies, but rather, to listen to the stories of colleagues as a way to develop their own stories. This listening is an important element to an understanding of, and consequently the improvement of one’s practice.

Mr. Benedict’s willingness to participate in the study and to share his experiences with me suggest that there are teachers who are open to forging connections with teacher-researchers. Such connections have implications for the wider teaching community. In this study, my teaching community was extended beyond the classroom, school and educational system to become one with opportunities for encountering and sharing in wider and more diverse educational experiences, even to an international one. Within this community, I witnessed several commonalities between my pedagogical
practices and those of Mr. Benedict and, as I began to develop a sense of shared identity with Mr. Benedict, the community became, for me, a site for learning and celebration. For example, I became enthused when Evelyn began to "unfix" as Mr. Benedict described it – when she started the transition from the student who said nothing in class and who was only motivated by the prospect of high grades, to becoming an active participant in her learning. Mr. Benedict also became a part of a wider teaching community, with his influence extending beyond the Angora Program, PSS1, the school district and the province. Through this study, his experiences with formative assessment will be shared on a broader scale, and that serves as a "living example of implementation" which may provide other educators with the "conviction and confidence" to implement formative assessment activity (Black & Wiliam, 1998, p. 15).

For the practitioner wishing to conduct research in another teacher’s classroom, I would recommend that the connections forged be mutually beneficial to all parties. Both the researcher and the participants should benefit from the data collection process. I have a sense of satisfaction that the participants in this study reported that the inquiry was beneficial to their development. During the member checking process, the students shared with me that they had found the process enjoyable. Courtney thanked me for the experience and indicated that the interview made her think more about her work samples. Brianna found that explaining her work to me brought clarity as to the nature of the task. Mr. Benedict jokingly said to me that I possessed a never-ending list of questions that kept him talking for hours. Nevertheless, he felt positive about his engagement in the research because it added another dimension to his reflective practice. I found that my previous teaching experiences aided in my understanding of the culture of the classroom. It made it easier for me to discover ways to make the experience mutually beneficial, for example through offering to chaperone trips. I found the time spent with Mr. Benedict, prior to the study, useful for discovering ways by which I could become a legitimate member of the community.

6.4.3. Implications for Me as a Teacher and PhD Learner

The time I spent in the Grade 8 classroom led me to redefine what it means to succeed at formative assessment activity. Prior to this investigation, I viewed the successful practice of formative assessment as producing increases in student
achievement. This is still an indicator of a successful activity; however, for me, their overriding importance has shifted. In the classroom, I observed Mr. Benedict struggle with the practice and heard him speak positively about this experience. His struggle kept him attentive to the needs of all classroom participants, and it fueled continuous reflection, by him, on his practice. I no longer assume that struggling means failure. Struggling means a willingness to approach with confidence the complexities of practice, to learn and to see learning as a process or, as Mr. Benedict describes it, “a journey.” I see struggle as a tool which mediates success.

Another professional implication I draw from this study is that formative assessment is a context-specific activity. My attempts to incorporate formative assessment activity into the classroom were 'recipe' based. I believed that if I used the assessment specific tools exactly as the literature described, then the activity would lead to student learning and development. I learned in Mr. Benedict’s classroom that the activity of formative assessment could not be generic. It must match the needs of the community. He “tweaked” formative assessment to make it work in his classroom. This formative assessment activity reminded me of my process for making bread. Here in Canada, where the air is dryer, I use more water when making the dough than I do in Trinidad. I do this so that the bread will have a long shelf life. This principle when transferred to my practice means that formative assessment activity must match the needs of the learner, school, community, and teacher. And as a part of ‘tweaking’ formative assessment, it is important that I take things slowly and, like Mr. Benedict, get to know my students and their needs, adjust, assess, adjust, assess, adjust, assess….

This study is a reflection of my life experiences and identities, especially those related to my life as a learner and pedagogue. As a result, woven into this study design, including the choices about its conceptual lens, methodology, data collection methods and data analysis and interpretation, is a belief that I exist as part of a collective with a common culture and history, and that learning occurs within that collective by means of the rich and complex meaning-making systems which we share with one another. Maxwell (2005) argues that there is no “disassociation” between the researcher’s epistemological and ontological bases and the research design, and that the “subjectivity” of the researcher is instrumental in the “story that I am able to tell” (p. 38). Many of those choices were useful for generating trustworthy data. For example, my
decision to opt for a qualitative methodology, as a way of understanding rich and complex meaning-making systems, demanded that I spend a substantial time in the field to attain prolonged engagement with the subjects of the inquiry.

I would be remiss if I did not mention the implications of this study for my development as a scholar. As a PhD student, this investigation has been of significant value in the development of my academic voice. Mr. Benedict's inclusion of me as a member of the class, with a responsibility to contribute to the community, rather than only as a novice researcher, looking in at the community, seemed to generate in me a better understanding of the PhD process and of the use of formative assessment activity as a way to build expertise. Through my interactions with him and the students, I began to make connections between my experiences as a PhD learner and those of the Grade 8 students. We, the Grade 8 students and I, were both gaining expertise, and formative assessment was the activity in which we developed. The conversations with my supervisor, in which she tried to get me to argue with her, the feedback from my committee and from the peer debriefers in which they internalized my understandings and developed pathways for the next steps, were all formative assessment tools that were used to mediate my learning and transform me into a researcher. I saw my role as a PhD student differently. It was not to 'get it right' but to take ownership of my learning, my scholarship. Once I gained that perspective, my understanding of the actions of my committee members was transformed.

6.5. Limitations

In this study, I tried to create the connection between the formative assessment activity in the Grade 8 classroom and the reader by drawing attention to the activity through the provision of thick descriptions, as well as with portraits of the participants and details of the context. These served as "a vehicle for communicating to the reader a holistic and realistic picture" of the formative assessment activity that occurred in the classroom (Bloomberg & Volpe, 2012, p. 20). My use of the participants' voices was strategic. The fragments of raw data included relevant context information so that the reader possessed sufficient evidence of the theme. These thick descriptions, in the participants' voices, also produced naturalistic generalizations, through which the reader
was provided with enough first-hand evidence to ascertain whether the data matched the conclusions drawn (Bailey, 2007; Creswell, 2003; Maxwell, 2005; Miles & Huberman, 1996). However, there are several limitations to the study's findings.

One limitation was related to the design used. Based on previous research, I opted for a case study design in which I collected data for one term, as I believed this would be sufficient time to fulfill the task. However, after spending time with Mr. Benedict, I soon came to understand that his pedagogical beliefs were rooted in a longterm, 3-year program. As a consequence, the formative assessment activity was implemented using a step-by-step process, duration of the Angora Program, Mr. Benedict incrementally integrated the activity and its tools into the classroom. The class offered to me by Mr. Benedict was Grade 8, a class in which he and the students were just getting to know each other. As part of his process, he slowly introduced students, and me to his version of formative assessment. Therefore the data I collected did not reflect formative assessment activity in its entirety. As a result, my findings reflect only the beginnings of establishing formative assessment activity and the creating of the class community.

The case study design, a single-case, also limited study findings. The Angora Program was designed to support integrated curricula, which Mr. Benedict and the History teacher, developed and used. Their academic programs covered the same historical time period, so students employed the knowledge gained in the History class to assist in constructing the work Mr. Benedict assigned. Furthermore, Mr. Benedict’s open format assignment criteria created opportunities for students to draw on the expertise gained in other classes and employ it during formative assessment activity. The classroom walls were littered with evidence of the students’ integrated work products. As a result of the design selected, study findings were limited to the Grade 8 Philosophy class.

Only 18 of the 26 students in the Grade 8 class consented to participate. This required that I devise a plan to collect the data in such a way as to keep the meaning constructed during group discussions, while not impinging on the rights of those who did not consent to participate. To protect the rights of those who did not consent, I had to omit non-consenters contributors from classroom and group discussions. This impacted
my study by limiting the richness of the data and producing study results that represented only part of the classroom community.

Being on my own during data collection and analysis was another limitation of the study design. The need for more than one pair of eyes and ears was evident in a number of situations, especially when observing students during group work. My conundrum with this activity was to determine the best way to collect data. It was impossible to collect data on all that was going on. More extensive data in this space may have further shed light on how students were developing ownership of their work through independent study.

Given the study’s design, which is a qualitative case study, its implications are context-specific and not intended for generalization. The findings are descriptive, representing and limited to the Grade 8 Philosophy classroom, in the Angora Program, at the PSS1 secondary school, in British Columbia. Nevertheless, it has been my hope that there would be some transferability in the study’s findings and that the way the study unfolded would resonate with teachers and they would find results useful for developing their practice. The study’s immediate environment, a three-year looping Philosophy class, reflects a unique context. This limits the transferability of study results. However, based on my experience in the classroom, both as a teacher and a researcher, I suggest that the findings will have value to educators and researchers interested in formative assessment in other settings.

### 6.6. Looking Back

Four features were found to be essential to the formative assessment activity in the Grade 8 classroom. They were: formative assessment being born from the beliefs of classroom participants; aligning the motives of the teacher and students; the assumption of ownership by the students; and teacher’s identification as a learner. These features seemed to create an environment conducive for formative assessment. It was a situated and relational activity born from collaboration and co-construction, and it used tools to mediate students’ and the teacher’s learning and development.
At the beginning of this study, I was excited and anxious. Excited to discover the answer to a question that gnawed at me, and anxious, hoping that my experience was not totally my fault. As I interacted with the classroom participants and observed their actions, my anxiety dissipated and was replaced by intrigue because the answer the class provided was not what I expected. The activity of formative assessment in the Grade 8 was like nothing I had ever experienced. It certainly did not “come from a school in New Hampshire” (Mr. Benedict, interview). It met the needs of a specific community, the 24 students in the classroom and Mr. Benedict.

Mr. Benedict believed learning must fit the needs of the community, school and students. This was not his only belief that shaped the activity. Mr. Benedict also believed in learning as a learner-centered, process-based, activity that developed learners’ metacognitive skills. Beliefs seemed to be an essential component of the formative assessment activity that I was witnessing. The activity did not exist independently of these beliefs. It was a part of them. A piece of the puzzle were the words that Mr. Benedict used to describe the relationship between the formative assessment activity and his belief system. As a result, the formative assessment tools used, for example redoing work samples, were used in a way to align with his belief in learning as a process-based activity. I discovered that the actions of the students were also guided by their belief systems, and as with Mr. Benedict, there was coherence between the students’ beliefs in learning and their assessment beliefs. The students’ assessment beliefs were also a piece of the puzzle. It seemed to me that this component of the formative assessment activity in the Grade 8 classroom produced formative assessment as a “social practice” that was mediated by “contextual means” (Lund, 208, p. 34).

From the moment I stepped into the classroom, Mr. Benedict made his intentions clear to the class and to me. He wanted to create student success. He defined this as writing at a first year university level. He knew that his students possessed different motives from him. They were primarily interested in attaining high grades, and so he tried to align their motives to his. Mr. Benedict sought to accomplish this task. He adopted a salesman persona and offered students incentives that were meaningful to them, for example grades, established trust and adopted a step-by-step approach. Students’ buy-in was essential they had to desire engagement with the activity. It was at this moment that I realized formative assessment activity could only be successful if
students were willing participants. I was surprised by the extent to which students’ motives shaped Mr. Benedict’s object. The object was dynamic, reflecting the dialogue between Mr. Benedict’s motives and those of the students. It was essential that he know students’ motives and negotiating with them.

It surprised me that during the activity, students’ ownership of their learning and work was required. Assessment became a tool which mediated students’ ownership. Tools as open format, where students constructed work samples that interested them and were relevant to their lives, seemed to build that ownership of learning. I found it fascinating how a simple task, such as making the criteria evident, mediated the students’ ownership of their work samples, because it gave them knowledge and confidence to complete the task successfully. I gradually came to understand that. If formative assessment was to be a collaborative activity, then those students must be partners in the activity. This was accomplished by elevating the status of students in the class.

Perhaps the most astonishing component necessary for preparing the Grade 8s for formative assessment activity, was Mr. Benedict identity as a learner. Mr. Benedict revealed this in the very first conversation that he had with me. He said that he was “a teacher-learner.” I expected this, because the definition of formative assessment described the activity as involving both the teacher and learner developing as they appropriate and internalize each other’s understandings and knowledge. What I did not expect was Mr. Benedict’s operationalization of a teacher-learner. That is, he saw himself as a learner like his students. This shared experience made Mr. Benedict’s identity as a learner evident to his students. As a consequence, Mr. Benedict engaged in formative assessment where the students evaluated his work, and he revisited his teaching based on the feedback he received. It seemed to me that Mr. Benedict was expanding his community of learners to include his students and this further facilitated their collaboration in formative assessment activity.

In Mr. Benedict’s classroom I expected to find answers of how to appropriately apply formative assessment specific tools as feedback, self-assessment and peer assessment within a Social Studies secondary school. I thought I would have a specific answer of how these elements were important to formative assessment. Instead I
discovered four broad features, features that highlighted the relational and contextual nature of formative assessment, rather than the use of its tools. These features reflect the movement towards an activity whereby the teacher and students collaborate with each other on assessment tasks with the aim of developing the students’ mastery and the teacher’s practice (Ash & Levitt, 2003; Black & Wiliam, 2006). It prepares the students and Mr. Benedict to engage in an activity that is situated and relational, born from collaboration and co-construction.

6.7. Looking Ahead

I end this study intrigued and curious about the classroom as a site for research. It opened my eyes to the possibilities of future research using the theoretical lens of activity theory and the practice of formative assessment activity, in particular, new terrain that can be mapped (McMillian, 2011). The study highlighted the utility of activity theory to investigating formative assessment activity. In particular how other network activity systems influenced the actions of Mr. Benedict and the students. For me, it raised the question of how do students activity systems, in particular from other subject classes impact on formative assessment activity. I also see possibilities for researching formative assessment. The most burning question I would like to address is what is the nature of the community that is needed for a collaborative process of formative assessment? Such a study would add to our understanding not only of the dynamic nature of assessment, but also to the developing nature of relationships among teacher and students.

This study provided a description of the activity of formative assessment, in its infancy, in a Grade 8 classroom. Throughout the process, it helped me to understand the concept of formative assessment, both its theory and practice. Perhaps the most important nugget gained in this study was how my conceptualization of success had shaped my practice. As previously noted, I had defined success as the literature had prescribed: that the success of formative assessment was an increase in student achievement. I left Mr. Benedict’s classroom wondering what impact this definition had on my practice. I see a need for further study in this area. How do teachers and students
conceptualize success with formative assessment and how do these conceptualizations determine actions in the classroom?

I have come to realize that success is more than attaining a score. To me, it is the ability to engage in constant self-reflection and in evaluation of an activity. Now I look at my practice, I do not see failure. I see it as a step in my process of coming to know. This study signifies another step, and when I return to my classroom, I will take another step as a teacher, a step of trying again with formative assessment. I will continue my incremental journey with the activity, expecting to struggle in order to grow.

As an educator, it is my belief that this study can serve as a source of encouragement and insight for other teachers as well. My discussions with teachers about my dissertation have revealed that there are many teachers, like me, who have struggled with implementing formative assessment activity. They see the benefits of this innovation but have found it difficult to implement in their classroom. I believe that this research can offer these teachers hope and encouragement; that the descriptions of the activity given will resonate with them, and they will see possibilities in their practice and their struggles.
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Appendix A.

Permission from the School Board

May 28, 2013

Ms. Carla Kronberg,

Dear Ms. Kronberg,

Thank you for your research proposal entitled, "Understanding formative Assessment Practices in a Social Studies Classroom: A Case Study."

You are granted approval to complete your research within the School District. You have permission to contact teachers, students and parents in schools. We request that you make your initial contact with the principal of the school to inform them of your study and provide them with a copy of this letter. Please note that administrators are very busy with many obligations and that schools have the right of refusal to participate in any research studies. Also, the School District does not find subjects for researchers.

The District would be very interested in learning of your results and its implications for students. When your research is completed please send us an abstract of the results.

Thank you for focusing your work within the School District. I wish you the best of luck as you proceed with your inquiry.

Sincerely,

Associate Superintendent, Learning Services
School Board
Appendix B.

Principal Permission Letter

Permission Letter

16th September, 2013

Principal Investigator: Carla Kronberg
Supervisor: Lannie Kanevsky
Simon Fraser University
8888 University Drive,
Burnaby, B.C. V5A 1S6

Dear Ms. S,

My name is Carla Kronberg and I am a PhD candidate in the Faculty of Education at Simon Fraser University. I would like to extend an invitation to one of your Social Studies teachers and her or his class in the school to participate in a study entitled: Understanding Formative Assessment Practices in a Social Studies Classroom: A Case Study. It is designed to understand and document how formative assessment activity occurs during teaching and learning in a real classroom.

Formative assessment is a process whereby the teacher and students collaborate with each other to develop students’ understanding and reorganize the teacher’s practice in order to enhance student learning. In this process, assessment tasks are judged with the intention of identifying the learner’s strengths and weaknesses. These judgments are used to develop and improve students’ conceptual understanding and academic achievement by guiding teaching and instructing. Researchers and scholars have noted that this assessment produces successful learning environments, because it directs the teacher’s actions and interactions with students towards the development of skills necessary for the students to thrive and learn. It facilitates the development of students’ self-regulation, motivation, critical thinking and meta-cognitive skills. This study will investigate the everyday use of formative assessment in a classroom. It will investigate this process by focusing on how a teacher’s formative assessment practice unfolds in a Social Studies classroom.

This study will be divided into two stages.

(a) Pilot Study: The pilot study will be conducted over a period of approximately three weeks. It will conclude by the 18th October 2013. The purpose of this pilot is to test and refine research methods designed for a subsequent study to investigate a teacher’s formative assessment practice in a secondary school Social Studies classroom.

(b) Main Study. The main study will be conducted over a period no longer than a term. It will begin within two-weeks of the conclusion of the pilot study and will continue until the 14th March 2014. The research methods used in the main study will reflect revisions made based on the insights gained from the pilot study.
Teacher Selection Process
An interview will be arranged with each teacher/s to discover her or his beliefs about, and understandings and practice of formative assessment. The purpose of this interview is to determine the alignment between the teacher's understanding and the study's definition of formative assessment. This study examines the practices of a teacher who has integrated formative assessment into her or his daily instruction, and also who also actively encourages collaboration with her or his students during formative assessment activity. The interview will last for approximately 35-minutes.

The Study's Procedures
The investigation will involve three main data collection procedures.

1. Daily observations of the teacher and class engaging in formative assessment activity during classroom instruction will be conducted. The purpose of this is to collect data on how formative assessment is enacted in a real classroom. During these observations, notes will be taken and digital recordings made to document the actions and interactions observed and heard. The purpose of these digital recordings is to ensure accuracy. They will be kept and transcribed solely by me.

2. Interviews will be conducted with the teacher and some of the students.
   - Student Interviews: The purpose of the student interviews is to provide information on how the students are understanding the teacher's formative assessment practice. Two types will be conducted. Interviews will be either 5 or 35 minutes in length.
     - 5-minute interviews: These interviews will be conducted immediately after the observation of classroom instruction. If a student is selected to participate in the 5-minute interviews, she or he will be interviewed no more than seven times during the studies (pilot and main study).
     - 35-minute interviews: There will be three 35-minutes interviews. Eight students will be asked to participate in these interviews. Two students will be interviewed during the first interview. This interview will be held during the second week of the pilot study. Six students will be interviewed twice during the main study. One interview will occur at the beginning of the main study, and the other at its end.

If a student is selected to participate in the interviews, she or he will be interviewed no more than nine times, a maximum of seven 5-minute interviews, and a maximum of two 35-minute interviews. Over the term, a student selected to be interviewed will be required to give no more than two hours of her or his time. Participants in these interviews will be interviewed individually.
These will be conducted during the students’ free time, so that there will be no interruption of teaching and learning. They will occur within the school compound, in a location where students’ confidentiality and privacy could be preserved.

* Teacher Interviews: The purpose of teacher interviews will be to collect data on her or his motives for, beliefs about and understanding of formative assessment. Two types will be conducted. They are (1) short interviews of 5 minutes duration, prior to and after each observation session, and (2) longer interviews of 35-45 minutes, conducted at regular intervals during the study.

Interviews will be scheduled to occur at a date and time convenient to the teacher and students. All interviews will be digitally recorded to ensure that participants’ words can be accurately documented. They will be kept and transcribed solely by me.

3. Documents relevant to formative assessments will also be collected. Included are samples of students’ assignments with written feedback, peer or self-assessment, the teacher’s assessment plans and assessment rubrics. Original assignments will not be kept. They will be photocopied and returned to the teacher. The purpose for collecting students’ assignments is to seek to understand the role that written comments and feedback plays in formative assessment.

The research methods and the analysis of data in this study are intended to collect information on the teacher’s practice in a comprehensive manner, and designed to capture and understand the myriad and integrated ways that the teacher practices formative assessment. It is an attempt to produce an in-depth and accurate picture of how formative assessment is enacted within the Social Studies discipline. It is my hope that the findings will add to the existing knowledge on how formative assessment works within a classroom. It is hoped that it will provide a concrete example to teachers who want to use formative assessment in their classrooms. The results of this study will be used in a doctoral thesis and may be published in a journal article.

**Voluntary Participation and Confidentiality**
It is my hope that you will consent to this study being conducted at your school. It has been approved by the Simon Fraser University Department of Research Ethics and by the school district. It poses no psychological or physical risk to the participants. Participation in this study is voluntary and participants can withdraw at anytime. It will not affect students’ grades or academic progress, neither will it have an adverse effect on the teacher’s employment. The teacher’s and students’ privacy and confidentiality will be protected at all times during the investigation. They will be given pseudonyms and all personal identifiers, such as participant name and school, will be removed from documents. All documents will be given a code number. The only exception to this will be the consent forms that participants have signed. The teacher’s and students’ confidentiality and anonymity will be protected to the full extent of the law.
If, after reading this request you need to be provided with further information, I can be contacted through email at [redacted] and/or by telephone at [redacted]. If you are interested in allowing your school to participate in this study, please read and complete the consent form on page 5.

I thank you very much for your time and I look forward to receiving a positive response from you.

Sincerely,

[Signature]

Carla Kronberg
PhD Candidate,
Simon Fraser University
PERMISSION FORM

- The purpose of this study is to investigate a teacher’s formative assessment practices.
- This research will be used in the researcher’s doctoral thesis and also for publication purposes.
- The data collection in this study centers on the teacher’s and students’ participation in and understanding of formative assessment in a Social Studies classroom. The data collection involves (a) daily observation of participants’ instructional actions and interactions in the classroom; (b) interviews to understand participants’ perspectives and understandings about formative assessment activity; and (c) documents such as assignments, unit plans, and rubrics. Data in this study will involve the teacher’s and students’ actions, interactions and written feedback about formative assessment in the classroom.
- The teacher and students will be digitally recorded during interviews and observation sessions. The purpose of recordings is to permit me to accurately document their words. These transcriptions of the teacher’s and students’ words will be analyzed later and will not be shared with anyone without the teacher’s and students’ consent.
- Participation in this study is voluntary and participants can withdraw from the study at anytime. This study will not affect students’ grades or academic progress nor will it adversely affect the teacher’s employment.
- All data will be kept confidential. Hard copies will be stored in a locked security box, to which only the researcher and her supervisor will have access. Electronic data will be uploaded to a memory key and will be protected by an electronic password. All data on recording devices will be uploaded to the memory stick within 24 hours of its recording. Once uploaded, the data will be immediately erased from the digital recording device. The data will be stored for five years or until 2019. After this time period, the data will be deleted and all paper documents will be shredded.
- The teacher’s and students’ privacy and confidentiality will be protected throughout the study. The teacher and students will be given pseudonyms, and all personal identifiers, such as name and school, will be removed and all documents will be given a code number. The signed consent forms will be the only documents on which there will be personal identifiers.
- This study poses no psychological or physical risk to the participants.
- Permission to conduct this study has been granted by the school district.
- The expected date for the study completion is September 2014. If you are interested in reading the completed study you can contact me via email: [redacted].
- If you have any concerns about this study, you may contact Dr. [redacted], Associate Director, Office of Research Ethics at [redacted].

Your signature below indicates that you have read the letter and have given your permission for the study to be conducted in your school.

School (Please print name) ____________________________

Name (Please print name) ____________________________

Signature ____________________________ Date ________________

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Appendix C.

Teacher Consent Letter

16th September, 2013

Principal Investigator: Carla Kronberg
Supervisor: Lannie Kanevsky
Simon Fraser University
8888 University Drive,
Burnaby, B.C. V5A 1S6

Dear Mr. Benedict

My name is Carla Kronberg and I am a PhD candidate in the Faculty of Education at Simon Fraser University, who is interested in understanding formative assessment activity in Social Studies classrooms. I would like to invite you and your class to participate in a study entitled: Understanding Formative Assessment Practices in a Social Studies Classroom: A Case Study. The purpose of the study is to understand how formative assessment activity occurs in a classroom. It seeks to collect data on a teacher’s formative assessment practices in a manner that will preserve the realities of the classroom context.

Formative assessment is a process whereby the teacher and students collaborate with each other to develop students’ understanding and reorganize the teacher’s practice in order to enhance student learning. In this process, assessment tasks are judged with the intention of identifying the learner’s strengths and weaknesses. These judgments are used to develop and improve students’ conceptual understanding and academic achievement by guiding teaching and instructing. Researchers and scholars have noted that this assessment produces successful learning environments, as it guides the teacher’s actions and interactions with students towards the development of skills necessary for the students to thrive and learn. It also facilitates the development of students’ self-regulation, motivation, critical thinking and meta-cognitive skills. This study will investigate the everyday use of formative assessment in a classroom by a teacher by focusing on how the teacher’s formative assessment practice unfolds in the Social Studies subject discipline.

This study will be divided into two stages.
(a) Pilot Study: The pilot study will be conducted over a period of approximately three weeks. It will conclude by the 18th October 2013. The purpose of this pilot is to test and refine research methods designed for a subsequent study to investigate a teacher’s formative assessment practice in a secondary school Social Studies classroom.
(b) Main Study: The main study will be conducted over a period no longer than a term. It will begin within two-weeks of the conclusion of the pilot study and will continue until 14th March 2014. The research methods used in the main study will reflect revisions made based on the insights gained from the pilot study.
Teacher Selection Process
If you accept the invitation to be a potential participant, an interview will be conducted with you. The purpose of this interview will be to discover your beliefs about, and practices of formative assessment. My experience has been that teachers practice formative assessment in different ways. I would therefore like to study a teacher who has integrated formative assessment into her or his daily instruction, and actively encourages collaboration with her or his students during teaching and learning. Interviewing you about your practice will inform me as to your suitability for this study. The duration of this interview is approximately 35 minutes and any questions and/or concerns that you may have about the pilot, can be addressed then.

The Study
The study will involve three main data collection procedures.

1. There will be daily observations of you and your Social Studies class engaging in formative assessment activity during instruction. The purpose of these observations is to collect data on how formative assessment is enacted in a real classroom and will include taking notes to document the actions and interactions that I have observed and heard. All observations will be digitally recorded to facilitate an accurate documentation of you and your students’ words. These recordings will be kept and transcribed solely by me.

2. Interviews will be conducted with you - the teacher, and some of the students.

   **Teacher Interviews:** You will be interviewed prior to and after each observation session. These interviews, which will last for five minutes, will be based on a list of pre-determined questions and will collect data on your goals for engaging in formative assessment activity, as well as your evaluations of the activity observed. Longer interviews of approximately 35-45 minutes will also be conducted with you. During the pilot study, there will be two of these interviews. One will be conducted at the beginning and the other at the end of the pilot study. During the main study, the scheduling of these interviews will be determined by the insights gained from the pilot study. The purpose of these interviews will be to collect data on your beliefs about and understandings of formative assessment.

1. **Student Interviews:** Two types will be conducted. Interviews will be either 5 or 35 minutes in length.

   - **5-minute interviews:** These interviews will be conducted immediately after the observation of classroom instruction. If a student is selected to participate in the 5-minute interviews, she or he will be interviewed no more than seven times during the studies (pilot and main study).

   - **35-minute interviews:** There will be three 35-minutes interviews. Eight students will be asked to participate in these interviews. Two students will be interviewed during the first interview. This interview will be held during the second week of the pilot study. Six students will be interviewed twice during the main study. One interview will occur at the beginning of the main study, and the other at its end.
If a student is selected to participate in the interviews, she or he will be interviewed no more than nine times, a maximum of seven 5-minute interviews, and a maximum of two 35-minute interviews. Over the term, a student selected to be interviewed will be required to give no more than two hours of her or his time. Participants in these interviews will be interviewed individually.

The purpose of these interviews will be to provide information on how the students in the classroom are making sense of the teacher’s formative assessment practice.

Scheduling of interviews will occur at a time and place when it is convenient to both you and the students. They will be conducted during you and your students’ free time so that there will be no interruption of teaching and learning. They will occur within the school compound, in a location where your and your students’ confidentiality and privacy can be preserved. All interviews will be digitally recorded so that you and your students’ words can be accurately documented. These recordings will be transcribed by me only.

3. Documents relevant to formative assessments will also be collected. Included will be your assessment plans and rubrics, and samples of 5 students’ assignments with your, and student peer/self feedback and assessment. Original assignments will not be kept, rather, they will be photocopied and returned to you. The purpose of collecting students’ assignments is to understand the role that written comments and feedback play in formative assessment.

The research methods and the analysis of data in this study, seeks to collect information on the teacher’s practice in a comprehensive manner. It is designed to capture and understand the myriad and integrated ways that you practice formative assessment. In doing so, this study will produce an in-depth and accurate picture of your formative assessment practices. It is my expectation that the findings will add to the existing knowledge on how formative assessment works within a classroom and serve as a concrete example for those teachers who want to practice formative assessment in their classrooms. Your participation is therefore important in understanding this practice and it is my hope that you will participate in this study. The results of this study will be used in a doctoral thesis and may be published in a journal article.

Voluntary Participation and Confidentiality
You can be assured that this study poses no psychological or physical risk to you as a participant. This study has been approved by the school district and the Simon Fraser University Department of Research Ethics. Your participation is voluntary. You can withdraw from the study at anytime and this decision will not have an adverse effect on your evaluation or affect your employment.

Your privacy and confidentiality will be protected at all times during the investigation. During the study, you will be given a pseudonym and all personal identifiers, such as name and school, will be removed. All documents will be given a code number. The only one that will have personal information will be the form that you signed to give consent to participate in the study. Your confidentiality and anonymity will be protected to the full extent of the law.
If after reading this request, you are interested in getting further information, I can be contacted through email at [redacted]. If you are selected to participate in the study and consent to do so, please read and complete the consent form on pages 5 and 6.

I thank you very much for your kind consideration of this request and I hope to receive a positive response from you.

Sincerely,

/ 

Carla Kronberg  
PhD Candidate,  
Simon Fraser University
RESEARCH CONSENT FORM

- The purpose of this study is to investigate your formative assessment practices.
- This research will be used for a doctoral thesis and for publication purposes.
- The data collection in this study centers on your participation in and understanding of formative assessment in a Social Studies classroom. The data collection involves (a) daily observation of your instructional actions and interactions in the classroom; (b) interviews to understand students’ perspectives and understanding about formative assessment activity; (c) documents, such as assignments, unit plans, and rubrics. Thus data in this study will involve your actions, interactions and written feedback about formative assessment in the classroom.
- You will be digitally recorded during interviews and observation sessions. The purpose of recordings is to permit me to accurately document your words. These transcriptions of your words will be analyzed later and they will not be shared with anyone without your consent.
- Your participation in this study is voluntary. You can withdraw from it at anytime and this decision will not have an adverse effect on your evaluation or affect your employment.
- All personal identifiers will be removed from all documents, and electronic copies of data will be stored securely. The researcher and her supervisor will be the only persons who will have access to a locked security box at the researcher’s home where hard copies will be stored. All data on recording devices will be uploaded to a memory stick within 24 hours of recording the data, after which, the data will be immediately erased from the recording device. Electronic data will be protected using a password and will be kept in the security box. After the study has been completed, the data will be stored for 5 years in the strong box at the researcher’s home, or until 2019. After this time period, the electronic data will be deleted and all paper documents will be shredded.
- Your privacy and confidentiality will be protected throughout the study. You will be given a pseudonym and all personal identifiers, such as your name and school, will be removed from all documents. All documents will be given a code number. Informed consent forms will be the only documents that will have your personal identifiers on it.
- This study poses no psychological or physical risk to you and the students. Data collection will occur, when it is convenient to you both in terms of time and place.
- Permission to conduct this study was granted from both the school district and the principal.
- The expected date for the study completion is September 2014. If you are interested in reading the study once completed, you can contact the researcher via email:
- If you have any concerns about your rights as a research participant and/or your experiences while participating in this study, you may contact Dr. [Name] Associate Director, Office of Research Ethics at [Contact Information].
Your participation in this study is entirely voluntary. This means that you have the right to refuse to participate in the study. If you consent to participate in the study, you can withdraw that consent at any time and you are not required to provide a reason for doing so. Your decision not to participate, or to withdraw your consent will not negatively affect your employment or evaluations. Your signature below indicates that you have read the letter and have consented to participate in the study.

Name (Please print name) ________________________________

Signature ___________________________ Date___________
Appendix D.

Parent Consent Letter

16th September, 2013

Principal Investigator: Carla Kronberg
Supervisor: Lannie Kanevsky
Simon Fraser University
8888 University Drive,
Burnaby, B.C. V5A 1S6

Dear Parent/Guardian,

My name is Carla Kronberg and I am a PhD student in the Faculty of Education at Simon Fraser University. I am interested in learning about the practice of formative assessment in secondary schools Social Studies classrooms. Formative assessment is a process in which the teacher and students collaborate to identify each student’s strengths and weaknesses. The information is then used during instruction to further develop students’ understanding. Many teachers use formative assessment to promote student learning because it facilitates the development of students’ self-regulation, motivation, critical thinking and meta-cognitive skills. This study will investigate the everyday use of formative assessment in classrooms by a teacher. My inquiry focuses on how a teacher’s formative assessment practice unfolds in a Social Studies classroom.

I conducted a study which investigated your child’s/ward’s teacher’s formative assessment practice in the Social Studies classroom. Although this study focused on the teacher’s formative assessment practice, your child/ward was invited to participate because students play an important and active role in formative assessment. This study has been approved by the Simon Fraser University Department of Research Ethics, the school district board, the school principal and by your child’s/ward’s Social Studies teacher.

This study begun on the 25th September and concluded on 14th March 2014.

Data Collection
During the study, data was collected through interviews, Observations and assignments. I am asking permission to include your child’s/ward’s classroom contributions during the period of the study in the data collection and analysis:

(1) Observations: The class was observed while engaging in formative assessment activity during classroom instruction. The purpose of daily classroom observation was to collect data on how formative assessment is enacted in a real classroom. During those sessions, I took notes to document the actions and interactions observed and heard. The sessions were digitally recorded and will

Page 1 of 4
transcribed solely by me. I am requesting permission to include your child’s/ward’s classroom contribution in the data analysis.

The results of this study will be used in a doctoral thesis and may be published in a journal article. It is my expectation that the findings will add to the existing knowledge on how formative assessment works within a classroom. It is hoped that it will provide a concrete example to teachers who want to use formative assessment in their classrooms. Inclusion of your child’s/ward’s contribution to participation is therefore important in understanding this practice and it is my hope, that you will give consent for your child’s/ward’s participation.

Voluntary Participation and Confidentiality
This study poses no risk to your child/ward and it meets the ethical requirements established by Simon Fraser University and requirements of the law. Participation is completely voluntary. Your child/ward can withdraw from the study at anytime and if this decision is made, there will be no negative effects to her or his grades or to the evaluation of the course, because of that decision.

The information provided by your child/ward will be kept confidential. All digital recordings, transcripts and documents collected will be kept safely and securely and will not be shared with anyone without your consent. Your child’s/ward’s privacy will also be protected. During the study, she or he will be assigned a pseudonym in order to protect his or her identity, and she or he will not be identified in reports. To further protect your child/ward’s identity, personal identifiers will be removed from all documents except the signed consent form. Confidentiality and anonymity will be protected to the full extent of the law.

If after reading this request you are still in need further clarification, I can be contacted through email at [email protected] If you are interested in your child/ward participation in this study, please read and complete the consent form on pages 5 and 6. Kindly return these pages via your child/ward as soon as possible.

I thank you very much for your kind cooperation and I look forward to receiving a positive response from you.

Sincerely,

[Signature]

Carla Krueger
PhD Candidate,
Simon Fraser University
RESEARCH CONSENT FORM

- The purpose of this study is to investigate the teacher’s formative assessment practices.
- This research will be used in the researcher’s doctoral thesis and it may also be used for publication purposes.
- The data collection in this study may include your child’s/ward’s participation in and her or his understanding of formative assessment activity. The data collection involves (a) observation of your child’s/ward’s actions and interactions in the classroom.
- All observations sessions were digitally recorded. The purpose of these recordings was to ensure the accuracy of your child’s/ward’s words. Transcriptions of participants’ words will be analyzed later. Digital recordings and transcripts will not be shared with anyone without your consent.
- Your child’s/ward’s participation in this study is voluntary and he or she can withdraw at anytime. This study will not affect students’ grades or academic progress in anyway.
- All data will be kept confidentially. All personal identifiers will be removed from all documents, and electronic copies of data will be stored securely. The researcher and her supervisor will be the only persons who will have access to a locked strong box at the researcher’s home where hard copies will be stored. All data on recording devices will be uploaded to a memory stick within 24 hours of recording the data, after which the data will be immediately erased from the recording device. Electronic data will be protected using a password and will be kept in the security box. After the study has been completed, the data will be stored for 5 years in the security box at the researcher’s home, or until 2019. After this time period, the electronic data will be deleted and all paper documents will be shredded.
- Your child’s/ward’s privacy and confidentiality will be protected at all times. During the study, your child/ward will be given a pseudonym and all personal identifiers, such as participant’s name and school, will be removed. All documents will be given a code number. The only document that will have your child’s/ward’s personal information will be the form that she or he signed to give consent to participate in the study. Your child/ward will not be identified in any reports or publications.
- Permission has been granted from the school district, school principal and Social Studies teacher.
- This study poses no psychological or physical risk to your child/ward. Data collection will occur when it is convenient to your child/ward both in terms of time and place.
- The expected date for the study completion is September 2014. If you are interested in reading the study once completed, you can contact the researcher via email: [email protected]
- If you have any concerns about your rights as a research participant and/or your experiences while participating in this study, you may contact Dr. [redacted], Associate Director, Office of Research Ethics at [redacted].
Your child’s/ward’s participation in this study is entirely voluntary. This means that she or he has the right to refuse to participate in the study. If you consent to her or his participation in this study, you can withdraw that consent at any time and you are not required to provide a reason for doing so. This decision not to participate, or to withdraw your consent will not negatively affect your child’s/ward’s grades or academic progress.

Your signature below indicates that you have read the study and have consented to participate in the study

() Yes  () No  Consent is given for observation of your child/ward participation during classroom sessions to be included in the study

() Yes  () No  You aware of all the details of this study and understand your rights.

Child Name: (Please print name) ________________________________

Parent/Guardian Name (Please print name) ________________________________

Signature ________________________________

Date ________________________________
Appendix E.

Student Consent Letter

16th April, 2014

Principal Investigator: Carla Kronberg
Supervisor: Lannie Kanevsky
Simon Fraser University
8888 University Drive,
Burnaby, B.C. V5A 1S6

Dear Student,

My name is Carla Kronberg and I am a PhD student at Simon Fraser University. I am interested in conducting an investigation into formative assessment practices in a Social Studies classroom. In formative assessment, the teacher and students work together to improve the students’ learning and the teacher’s teaching. The study focuses on your Social Studies teacher’s formative assessment practices. Although this is so, you are invited to participate in this study, because as a student, you play an important and active role in formative assessment activity. Will you participate in this study?

This study was concluded on 14th March, 2014. During the study, I observed your class and your teacher engage in formative assessment activity. This involved me observing, taking notes on what is seen and heard, and digitally-recording the classroom activities during instruction. These observations showed me how formative assessment is used in the classroom. Is it possible to include your interactions during classroom activity in my data?

The results of this study will be used in my doctoral thesis and may be published in a journal article. It is my hope that the findings will add to the existing knowledge on how formative assessment works within a classroom. It is expected that it will provide a concrete example to teachers who want to use formative assessment in their classrooms. Your participation is therefore important in helping to understanding this practice and it is my hope that you will consent to participate in the study.

Your participation in this study is voluntary and you can choose to withdraw your consent, if given, at anytime, and without providing a reason for doing so. There will be no negative consequences if you decide to withdraw from the study and this will not affect your grades or academic progress in any way. Your privacy will be respected at all times. You will be provided with a pseudonym and all personal identifiers, such as your name, will be removed before the documents are used. If you are interested in participating, please sign on the third page and return it to your teacher. You will also
need parental consent to participate in this study. Please take a form home to be read and signed by your parent/guardian.

The expected date for the completion of this study is September, 2014. If you are interested in reading a copy of the study, you can email the researcher at [redacted].

I thank you very much for reading and considering my request, I am excited about the prospect of working with you and look forward to your consent.

Sincerely,

Carla Kronberg
PhD Candidate,
Simon Fraser University

RESEARCH CONSENT FORM

- Your participation in this study is voluntary and you may withdraw consent to participate at any time, without giving reasons for doing so.
- This study will not affect your grades or academic progress in any way.
- Your privacy will be protected and anonymity will be provided.
- If you have concerns about the study or the researcher’s actions, you can contact [redacted], Associate Director, Office of Research Ethics, at

( ) Yes ( ) No Consent is given for me to use the data collected of your interactions during observations in my study.

( ) Yes ( ) No Consent is given for the researcher to collect samples of your assignments.

Name (Please print name) _________________________________

Signature ___________________ Date ____________________
Appendix F.

Member Checking Consent Letter for Teacher

16th April, 2014

Principal Investigator: Carla Krouberg
Supervisor: Lannie Kanevsky [redacted]
Simon Fraser University
8888 University Drive,
Burnaby, B.C. V5A 1S6

Dear Mr. [redacted]:

Thank you for participating in the first phase of data collection for the study entitled: Understanding Formative Assessment Practices in a Social Studies Classroom: A Case Study. The data collected during the period of September 25th to March 2014 included: multiple interviews with your child/ward and selected grade 8 students, daily observations of classroom instruction, and the collection of assessment documents. Now that the data collection for the first phase is complete, I would like to conduct member checking to discuss the accuracy of my initial findings with you to correct any errors.

Member Checking Session
Member checking will involve an examination of the interview transcripts by you, as well as a report of my interpretation of your words and actions to determine the accuracy of my analysis. The sessions will be made as comfortable as possible for you and it will occur at a time convenient to you. It will not interfere with teaching and learning. The sessions will be digitally recorded, and I will solely transcribe these recordings.

The aim of these sessions is to collect information on your practice in a comprehensive manner. They are designed to ensure that I have accurately and authentically captured your understandings about the myriad and integrated ways that you practiced formative assessment in the Grade 8 Philosophy class this year. In doing so, it will facilitate the robustness of the study. Your participation in member checking is therefore important in understanding your formative assessment practices and it is my hope that you will participate in this study.

Voluntary Participation and Confidentiality
As in the first phase, this study poses no psychological or physical risk to you as a participant. This study has been approved by the school district and the Simon Fraser University Department of Research Ethics. Your participation is voluntary. You can withdraw from the sessions at anytime and this decision will not have an adverse effect on your evaluation or affect your employment.
Your privacy and confidentiality will continue to be protected at all times during the investigation. All personal identifiers, such as name and school, will be removed from session transcripts. All session documents will be given a code number. The only one location that will have personal information will be the form that you signed to give consent to participate in the member checking. Your confidentiality will be protected to the full extent of the law.

If after reading this request, you are interested in getting further information, I can be contacted through email at [email protected] and/or by telephone at [phone number]. If you are selected to participate in the study and consent to do so, please read and complete the consent form on page 3.

I thank you very much for your kind consideration of this request and I hope to receive a positive response from you.

Sincerely,

Carla Kronberg
PhD Candidate,
Simon Fraser University
RESEARCH CONSENT FORM

- The purpose of the member checking is to discuss my initial study findings with you to determine the validity of my analysis of your words and actions.
- The results of this study will be used in my doctoral thesis and will be presented in my doctoral defence. It may be presented and/or published.
- The member checking session involves the examination of the interview transcripts by you, as well as a report of my interpretation of your words and actions to determine the accuracy of my analysis.
- The member checking sessions will be digitally recorded. The purpose of recordings is to permit me to accurately document your words. Transcriptions of your words will be analyzed later and they will not be shared with anyone without your consent.
- Your participation in this study is voluntary. You can withdraw from it at anytime and this decision will not have an adverse effect on your evaluation or affect your employment.
- All personal identifiers will be removed from all documents, and electronic copies of data will be stored securely. The researcher and her supervisor will be the only persons who will have access to a locked security box at the researcher’s home where hard copies will be stored. All data on recording devices will be uploaded to a memory stick within 24 hours of recording the data, after which, the data will be immediately erased from the recording device. Electronic data will be protected using a password and will be kept in the security box. After the study has been completed, the data will be stored for 5 years in the strong box at the researcher’s home, or until 2019. After this time period, the electronic data will be deleted and all paper documents will be shredded.
- Your privacy and confidentiality will be protected throughout the study. You will be given a pseudonym and all personal identifiers, such as your name and school, will be removed from all documents. All documents will be given a code number. Informed consent forms will be the only documents that will have your personal identifiers on it.
- This sessions poses no psychological or physical risk to you and the students. Data collection will occur, when it is convenient to you both in terms of time and place.
- Permission to conduct this study was granted from both the school district and the principal.
- The expected date for the study completion is March 2015. If you are interested in reading the study once completed, you can contact the researcher via email: [email]

If you have concerns of complaints about the manner in which you were treated in this study, please contact the Director Research Ethics, Dr. Jeff Toward by email at [email]

Your participation in this phase of the study is entirely voluntary. This means that you have the right to refuse to participate in the study. If you consent to participate in the session, you can withdraw that consent at any time and you are not required to provide a
reason for doing so. Your decision not to participate, or to withdraw your consent will not negatively affect your employment or evaluations. Your signature below indicates that you have read the letter and have consented to participate in the study.

( ) Yes ( ) No Consent is given for the researcher to conduct a checking session with you.

( ) Yes ( ) No Consent is given for the researcher to digitally record the checking session.

Name (Please print name) ________________________________

Signature_________________________ Date_________________
Appendix G.

Member Checking Consent Letter for Parent

11 June, 2014

Principal Investigator: Carla Kronberg
Supervisor: Lannie Kanevsky
Simon Fraser University
8888 University Drive,
Burnaby, B.C. V5A 1S6

Dear Parent/Guardian,

My name is Carla Kronberg and I am a PhD candidate in the Faculty of Education at Simon Fraser University. As you will remember, I contacted you last Fall requesting your consent for your child/ward to participate in my research entitled: Understanding Formative Assessment Practices in a Social Studies Classroom: A Case Study. Formative assessment is a process in which the teacher and students collaborate to identify each student's strengths and weaknesses. The information is then used during instruction to further develop students' understanding. Many teachers use formative assessment to promote student learning because it facilitates the development of students' self-regulation, motivation, critical thinking and metacognitive skills.

Thank you for consenting to your child's/ward's participation in the first phase of the study. In that phase I was able to collect vital information that has been instrumental in my understanding of your child/ward's formative assessment practices. Your child/ward participated in the interview process. That part of the study is now complete so I am now requesting your permission to meet with your child one more time so she/he can examine and correct my interpretation of what she or he said in our interview sessions. This checking session will be done individually, will last no longer than 60 minutes and will occur at a time convenient to her or him. It will be conducted during your child’s/ward’s free time, and it will not interfere with teaching and learning. The session will occur in a location where your child’s/ward’s confidentiality and privacy can be preserved. Member checking will be conducted on the school campus, or virtually through the use of Skype. If you are willing to consent to your child/ward’s participation in the checking session, you can either sign on the third page and mail it using the self-addressed envelope, or you can complete the electronic copy of the form and type I AGREE in place of your signature.

The session will be digitally recorded, and I will transcribe it. Before the session, your child/ward will be reminded that her or his participation in the session is voluntary, and as such, she or he could withdraw from the study at any time, refuse to answer questions or have the session not digitally recorded.

As you will remember, the results of this study will be used in my doctoral thesis and will be presented in my doctoral defence. It may be presented and/or published. It is my expectation that the findings will add to the existing knowledge on how formative assessment works within a classroom. It is hoped that it will provide a concrete example.
to teachers who want to use formative assessment in their classrooms. Your child’s/ward’s contribution and participation is therefore important in understanding this practice and it is my hope, that you will consent to your child’s/ward’s participation.

**Voluntary Participation and Confidentiality**

This study still poses no risk to your child/ward and it meets the ethical requirements established by Simon Fraser University and requirements of the law. Participation is completely voluntary. Your child/ward can withdraw from the study at anytime and if this decision is made, there will be no negative effects to her or his grades or to the evaluation of the course, because of that decision.

The information provided by your child/ward will be kept confidential. All digital recordings, transcripts and documents collected will be kept safely and securely and will not be shared with anyone without your consent. Your child’s/ward’s privacy will also be protected. During the study, she or he will be assigned a pseudonym in order to protect his or her identity, and she or he will not be identified in reports. To further protect your child/ward’s identity, personal identifiers will be removed from all documents except the signed consent form. Confidentiality and privacy will be protected to the full extent of the law.

If after reading this request you would like further clarification, I can be contacted through email at [redacted]. If you are willing to allow your child/ward to participate in this study, please read and complete the consent form on pages 3 and 4. If you consent to your child/ward participating in this study kindly return the hard copy to your child/ward’s teacher or email the signed consent form [redacted]. Please provide the information for your preferred method of contact, either over the phone or electronically through the use of Skype.

I thank you very much for your kind cooperation and I look forward to receiving a positive response from you.

Sincerely,

[Signature]

Carla Kronberg  
PhD Candidate,  
Simon Fraser University
RESEARCH CONSENT FORM

- The purpose of this checking session is for your child to examine my interpretation of what she or he said in our interview sessions.
- This research will be used in the researcher’s doctoral thesis, its defence and it may also be used for publication purposes.
- The data collection in this study included your child’s/ward’s participation in and her or his understanding of formative assessment activity. The data collection in this phase of the study will involve an examination my interpretation of what your child/ward discussed with me during our interview sessions.
- The checking session will be digitally recorded. The purpose of these recordings was to ensure the accuracy of your child’s/ward’s words. Transcriptions of participants’ words will be analyzed later. Digital recordings and transcripts will not be shared with anyone without your consent.
- Your child’s/ward’s participation in this study is voluntary and he or she can withdraw at anytime. This study will not affect students’ grades or academic progress in anyway.
- All data will be kept confidentially. All personal identifiers will be removed from all documents, and electronic copies of data will be stored securely. The researcher and her supervisor will be the only persons who will have access to a locked strong box at the researcher’s home where hard copies will be stored. All data on recording devices will be uploaded to a memory stick within 24 hours of recording the data, after which the data will be immediately erased from the recording device. Electronic data will be protected using a password and will be kept in the security box. After the study has been completed, the data will be stored for 5 years in the security box at the researcher’s home, or until 2019. After this time period, the electronic data will be deleted and all paper documents will be shredded.
- Your child’s/ward’s privacy and confidentiality will be protected at all times. During the study, your child/ward will be given a pseudonym and all personal identifiers, such as participant’s name and school, will be removed. All documents will be given a code number. The only document that will have your child’s/ward’s personal information will be the form that she or he signed to give consent to participate in the study. Your child/ward will not be identified in any reports or publications.
- Permission has been granted from the school district, school principal and Social Studies teacher.
- This study poses no psychological or physical risk to your child/ward. Data collection will occur when it is convenient to your child/ward both in terms of time and place.
- The expected date for the study completion is March 2015. If you are interested in reading the study once completed, you can contact the researcher via email: [redacted].
- If you have concerns of complaints about the manner in which you were treated in this study, please contact the Director Research Ethics, Dr. Jeff Toward by email at [redacted].
Your child’s/ward’s participation in this study is entirely voluntary. This means that she or he has the right to refuse to participate in the study. If you consent to her or his participation in this study, you can withdraw that consent at any time and you are not required to provide a reason for doing so. This decision not to participate, or to withdraw your consent will not negatively affect your child’s/ward’s grades or academic progress.

Your signature below indicates that you have read the study and have consented to participate in the study.

☐ Yes ☐ No  Consent is given to conduct a checking session with your child/ward to ensure the accuracy of the data collected during the interview session.

☐ Yes ☐ No  Consent is given for your child/ward to be digitally recorded during the checking session. You are aware that this digital recording will be transcribed and will be used by the researcher. Your additional consent is required if the researcher decides to play these recordings to anyone else.

☐ Yes ☐ No  You aware of all the details of this study and understand your rights.

Child Name: (Please print name)

Parent/Guardian Name (Please print name)

Signature

Contact information:

Date
Appendix H.

Member Checking Consent Letter for Students

11th June, 2014

Principal Investigator: Carla Kronberg  
Supervisor: Lannie Kanevsky [Redacted]  
Simon Fraser University  
8888 University Drive,  
Burnaby, B.C. V5A 1S6

Dear Student,

Thank you for participating in the first phase of data collection for the study entitled: Understanding Formative Assessment Practices in a Social Studies Classroom: A Case Study. The data was collected during the period of September 25th to March 2014, and as you will remember, you consented to being interviewed during the data collection process. As part of the data collection process, I would now like to conduct a checking session to discuss my interpretations of what you said in the interview session.

The information you provided during the first stage of my study was very useful in understanding [Redacted] formative assessment practices. I would like to meet with you to double check the transcripts and to make sure that I have interpreted your words correctly. This will be done in one session that will last no longer than 1 hour. It will be digitally recorded and I will transcribe the recordings. It will be conducted in your free time so it will not interfere with your class schedule or your learning.

Are you willing to participate in this checking session?

The results of this study will be used in my doctoral thesis and will be presented in my doctoral defence. It may be presented and/or published. It is my hope that the findings will add to the existing knowledge on how formative assessment works within a classroom. It will provide a concrete example to teachers who want to use formative assessment in their classrooms.

Your participation in this study is still voluntary and you can choose to withdraw your consent, if given, at anytime, and without providing a reason for doing so. There will be no negative consequences if you decide to withdraw from the study and this will not affect your grades or academic progress in any way. Your privacy will be respected at all times. You will be provided with a pseudonym and all personal identifiers, such as your name, will be removed before the documents are used. Member checking will be conducted on the school campus, over the phone or electronically through the use of Skype. If you are willing to consent to the checking session, you can either sign on the third page and mail it using the self-addressed envelope, or you can complete the electronic copy of the form and type I AGREE in place of your signature.

You will also need parental consent to participate in the checking session. Please take a form home to be read and signed by your parent/guardian.
The expected date for the completion of this study is March 2015. If you are interested in reading a copy of the study, you can email the researcher at [redacted]

If you are interested in participating in member checking, kindly return the hard copy to your teacher or email the signed consent form to [redacted] Please provide the information for your preferred method of contact, either over the phone or electronically through the use of Skype.

I thank you very much for reading and considering my request, I am excited about continuing to with you and look forward to your consent.

Sincerely,

[Signature]

Carla Kronberg
PhD Candidate,
Simon Fraser University
Appendix 1.

Structured Observation Form

Observation Protocol

Date __________________ Activity Setting no__________________________
Period of Observation: from ______ to ______ No of classroom sessions:____
Activity setting location: __________________ No of students:______________
Personnel involved: _____________________________________________
Assessment Object: _____________________________________________

<table>
<thead>
<tr>
<th>Activity setting Environment</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Classroom Subjects</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of classroom events</th>
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<tbody>
<tr>
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</table>
Appendix J.

Pre-observation and Post-observation Interviews

Pre-Observation 5-Minute Interview (Teacher)
1. Is there formative assessment in this session?
2. If yes, what is it?
3. If yes, why?

Post-Observation 5-Minute Interview (Teacher)
1. Do you feel the formative assessment activity was successful/effective?
2. If yes, why? If no, why not?
3. What did you learn from it?

Post-Observation 5-Minute Interview (Student)
1. What do you think were the teacher’s goals during assessment?
2. Why do you think that these were her or his goals?
3. How did the teacher’s goals shape your participation?
Appendix K.

List of Interview Questions for the Teacher

Teacher interview Script:
I would like to ask you some questions about the assessment activity in your classroom. These questions are designed to inform me about your goals during formative assessment practices. Before we begin, I would like to remind you that your participation in this interview is voluntary and, as such, you may refuse to answer question/s. Is it okay that I interview you? Can I digitally record our conversation?

Teacher Interview Questions
What are your plans for teaching during the term?
How would you define formative assessment?
What role does formative assessment play in your classroom?
How long have you been using formative assessment?
Why do you use formative assessment in your classroom?
Why have you continued to use formative assessment in your classroom?
How do you use formative assessment?
In what way/s have formative assessment affected your teaching practice?
How long have you been teaching?
How long have you been teaching Social Studies?
What lessons have you learned over the years from using formative assessment?
Have your formative assessment practices altered over the years? If yes, how? If no, why
Is Social Studies an easy/difficult subject to employ formative assessment?
In what way has formative assessment affected your teaching practice?
How does assessment fit into them?
How does formative assessment in particular fit into them?
Why are you using formative assessment?
Tell me how will you use feedback, questioning, observation and peer-assessment and self-assessment during the term?
What role do you see yourself playing during formative assessment?
What role do you see the students playing during formative assessment?
How often do you intend to use formative assessment during the term?
Tell me about the curriculum. How does it shape your use of formative assessment practices?
How have students responded to the use of formative assessment in your classroom?
What type of classroom environment do you think is best suited for formative assessment?
Describe the culture of your school in regards to the use of formative assessment?
How are the teachers in your school responding to the use of formative assessment?
How has your use of formative assessment affected the Social Studies department?
What roles do students play when you use formative assessment?
What roles do you play when you are using formative assessment?
How is the formative assessment activity progressing?
Describe the interactions that you have with your students during formative assessment.
What kind of environment is needed for formative assessment to work in your classrooms?
What rules do you put into place when using formative assessment?
What formative assessment activities are you hoping to bring to the classroom during this term?
At the end of the semester, what do you hope to achieve?
How do these plans fit into the curriculum objectives?
What features of formative assessment will be important to your practice this term? Why?
Can you tell me more?
Why do you think so?
In what way/s?
Within class /during the interview you said or did.............................. . Can you provide me with more information? Why?
How have your plans for formative assessment been progressing during the term? Are you satisfied?
Have you seen changes in student learning because of formative assessment? If yes what? If no, can you suggest reasons why?

What problems have arisen as a result of your use of formative assessment in the classroom so far?

How have you dealt with these problems?

What changes if any do you think you need to make?

Have you noticed any changes in your classroom because of the use of formative assessment? What are they?

How would you describe your classroom environment during the study?

How would you evaluate your formative assessment practices during the study?

Comment on the use of feedback, questioning, observation and peer and self-assessment criteria during the study.

What were some of the advantages and disadvantages you experienced using formative assessment during the study?

What were some of the challenges that you experienced during the study?

How did the curriculum’s aims and objectives shape your formative assessment during the study?

How did students respond to formative assessment?

If you had to teach the unit again, what things would you do differently? The same?

Are you satisfied with your formative assessment plans during the study?

**Member Checking**

I would like to discuss with you what I have understood from our interviews. I have written down what I think you have said during our interviews. I would like you to let me know if I am interpreting your responses accurately. If not, can you please let me know what you wanted to say. If, on the other hand, I am correct but you have since altered your perceptions, please let me know.

One of the themes that emerged from the data was……… . What do you think about it?
Appendix L.

List of Interview Questions for the Student

Student Interview Script:

I would like to ask you some questions about the assessment activity that occurred. These questions are designed to inform me about your formative assessment activity. Before we begin, I would like to remind you that your participation in this interview is voluntary. You may refuse to respond to any or all of the questions. Is it all right to interview you? Would there be a problem if I digitally record our conversation?

Student Interview Questions:

Tell me about your class?

Do you enjoy Social Studies?

What do you know about formative assessment?

Is this your first experience with formative assessment? If no, how is this experience different from your other experiences with formative assessment?

Why do you think formative assessment is being used in this class?

What roles do you play during formative assessment activity?

Tell me about the rules you had to follow when engaging in formative assessment?

What kind of resources were available to you when engaging in formative assessment? Were they easy to access?

During class you said or did................................ . Can you tell me why?

What do you think about the use of formative assessment during the class?

Were there aspects of the formative assessment activity that were easier than others? If yes, what? If no why?

Member Checking

I would like to discuss with you what I have understood from our interviews. I have written down what I think you have said during our interviews. I would like you to let me know if I am interpreting your responses accurately. If not, can you please let me know what you wanted to say. If, on the other hand, I am correct but you have since altered your perceptions, please let me know.

One of the themes that emerged from the data was........ . What do you think about it
Appendix M.

Map of Codes