Exploring a teacher’s facilitation of a collaborative story writing unit using Google Docs in a culturally and linguistically diverse high school English class

by

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

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Supervisory Committee

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Abstract

This dissertation shares findings from a descriptive case study that examined an experienced teacher’s facilitation of a collaborative story writing project using Google Docs in a culturally and linguistically diverse Grade 11 English class. An expanding body of research supports the use of web-based writing tools and peer collaboration for promoting writing skills development, yet there is little research examining how these practices are integrated within the broader teaching and learning process. In the present study, sociocultural theory provided a guiding framework for exploring the complexities inherent in the teaching and learning process as students worked in pairs (and one triad) to write a story about “the future” to be shared with an audience of upper level elementary students. Data sources included field notes taken during 16 class observations, pre- and post- project interviews with the teacher, on-going reflections written by the teacher, focus group interviews with the students, and the students’ collaborative projects stored in Google Docs. The findings cohered around five key themes that describe the teacher’s facilitation of the project: (1) incorporating procedural facilitators, including mentor texts and web-based writing applications; (2) adopting a socio-cognitive apprenticeship model to guide students toward higher levels of proficiency with narrative writing; (3) building a community of practice through peer collaboration, peer sharing, and peer editing; (4) enabling a
positive and productive learning environment; and (5) transitioning to a new curriculum. The findings from this study also shed light on the affordances and constraints associated with the pedagogical supports, the collaborative context, and the use of Google Docs as integral components of the project. The dissertation concludes with recommendations for educators who are interested in integrating collaborative story writing projects or web-based writing tools within their classroom contexts.
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Chapter One: Introduction, Significance of Study, and Research Questions

Drawing on sociocultural perspectives on writing, this study examines how an experienced high school English teacher facilitated a collaborative story writing project for his students using Google Docs. Despite the expanding body of research supporting the use of web-based collaboration tools for writing skills development (Alshumaimeri, 2011; Mak & Coniam, 2008; Strobl, 2014; Wichadee, 2010), there is a paucity of research examining how these tools are integrated into an existing curriculum. For my dissertation study, I used a descriptive case study approach to investigate the complexities of the teaching and learning environment of a Grade 11 English class during a narrative writing unit. The teacher integrated face-to-face learning activities with web-based collaborative writing to support his students from culturally and linguistically diverse backgrounds to develop their story writing skills. In addition to examining the teacher’s facilitation of the collaborative story writing unit, this study assesses the affordances and constraints of the pedagogical supports, the social context, and the integration of Google Docs into the writing curriculum.

The present study is timely as it coincides with a massive curriculum redesign effort in British Columbia (BC), a key aim of which is to equip students with an ever-changing set of skills that they will need to succeed in their academic and professional futures. The course in which this study took place is a new curricular offering under the umbrella of English Language Arts, titled New Media 11. This program of studies was “designed to reflect the changing role of technology in today’s society and the increasing importance of digital media in communicating and exchanging ideas” (BC Ministry of Education, 2018, p. 1). The participating teacher was
instructing the New Media 11 course for the first time, and he felt that a collaborative writing project using Google Docs would align well with the course objectives.

My interest in exploring the teacher’s role in the collaborative writing process of culturally and linguistically diverse learners stems from my prior experiences as a language learner and teacher. Through my experiences, I came to appreciate the complexity inherent in the writing process. Writers must juggle multiple tasks simultaneously, including gathering, planning and organizing ideas, choosing appropriate words, and attending to language conventions, including correct grammar and syntax, spelling, punctuation, and capitalization. Writers must also adopt a style of writing that matches the writing purpose (e.g., to describe, to persuade), while ensuring that the developing text is clear, coherent, and engaging for the audience. Research on the writing process demonstrates that a piece of writing cannot be created in a lockstep manner; it is a recursive process whereby the writer moves continuously between the stages of planning, writing, and revising (Flower & Hayes, 1981; Liu, 2013).

Learning to write in one’s second language is even more challenging as second language (L2) learners tend to have a more limited vocabulary, and oftentimes, they do not have an intuition for what sounds right in the target language. As a result, research shows that students writing in their second language spend considerably more time deliberating over linguistic choices, compared to students writing in their first language (Roca de Larios, Manchón, & Murphey, 2006; Roca de Larios, Manchón, Murphey, & Marín, 2008; Storch & Wigglesworth, 2007). When I was taking upper-level Spanish classes at the University of British Columbia, I was expected to write lengthy compositions in Spanish and it was a continuous struggle not knowing if the way I was expressing an idea was appropriate or if it would be understandable to
As I honed my Spanish writing skills, I relied heavily on fluent speakers to support me through the editing and revision process.

Later on, as a teacher of English and Spanish, and now a teacher-educator, I have been concerned with identifying ways of scaffolding the writing process for both first and second language learners. My research pointed me towards the value of providing opportunities for students to write collaboratively with their peers. In both first and second language learning contexts, when students work with peers to plan, draft, revise, and edit their compositions, they are able create higher quality texts than those produced by students working individually (Graham & Perin, 2007; Storch, 2005). Using web-based tools, such as wikis and Google Docs, for collaborative writing projects has also been shown to enhance the quality of students’ writing (Alshumaimeri, 2011; Mak & Coniam, 2008; Strobl, 2014; Suwantarathip & Wichadee, 2014; Wichadee, 2010). Recognizing the potential benefits of web-based collaborative writing, I embarked on this research study to gain a deeper understanding of the teacher’s role in facilitating the collaborative writing process using Google Docs in a diverse learning context. The findings from my study will be shared with pre-service and practicing teachers who are involved in instructing students from diverse backgrounds at a period of time that is characterized by an increasing use of digital media for communicating and collaborating.

**Theoretical Framework**

Sociocultural theory has played a significant role in writing instruction in both first language and second language learning contexts (Amerian, Ahmadian, & Mehri, 2014; Englert, Mariage, & Dunsmore, 2006; Lantolf & Thorne, 2006; Prior, 2006; Storch, 2013). Many of the key ideas associated with a sociocultural theory of learning can be traced back to the work of Russian scholar, Lev Vygotsky. Vygotsky (1930/1978) observed that all higher-level cognitive
abilities, including speech and writing, are developed through socially-mediated activity. Drawing on Vygotsky’s work, Prior (2006) explained that socially-mediated activity involves three processes, including “externalization (speech, writing, the manipulation and construction of objects and devices) and co-action (with other people, artifacts, and elements of the social-materials environment) as well as internalization (perception, learning)” (p. 55). Through co-action with more knowledgeable others, learners receive scaffolding, which enables them to solve problems and carry out tasks that they would not be able to do independently (Wood, Bruner, & Ross, 1976).

Drawing on these concepts, Englert, Mariage, and Dunsmore (2006) delineate three principles guiding a sociocultural perspective on writing instruction. The first principle is that teachers provide their students with socio-cognitive apprenticeships in writing. Within this framework, teachers scaffold their students’ understandings of socially-accepted conventions and practices of writing through a variety of strategies, including explicit instruction, think-alouds, and modeling. A socio-cognitive apprenticeship model also emphasizes the importance of co-participation and guided practice. Englert et al. (2006) explain that “what begins as teacher-centered discourse in authentic writing activity is succeeded by interactive and collaborative discourse in which mental activity is distributed and shared between the teacher and student participants” (p. 209). While the teacher is responsible for guiding and supporting students with facets of the writing task that are beyond their current abilities, students are expected to take increasing control over actions and processes that they can perform without teacher assistance (Englert et al., 2006).

The second principle outlined by Englert et al. (2006) is that a variety of mental, linguistic, and physical resources can be used to facilitate the writing process. The authors refer
to these resources as *procedural facilitators and tools*. Examples include graphic organizers, dictionaries and thesauruses, knowledge of genres and text structures, as well as word processing tools and other digital technologies for writing. As Englert et al. (2006) note, these resources enhance performance “by helping writers to organize mental reasoning” and “by making elements of the activity more visible, accessible, and attainable” (p. 211).

The third principle of a sociocultural perspective on writing instruction emphasizes the value of developing a *community of practice* (Englert et al., 2006). Expert writers engage in communities of practice, also known as discourse communities, and through their engagement with these communities, they appropriate the conventions, styles, and values of the community. In the classroom context, teachers can create a community of practice by providing ongoing opportunities for dialogue and collaboration, not only between the teacher and students, but also among students. A number of studies have demonstrated that collaborative writing projects encourage students to engage in shared dialogue, whereby they deliberate over their language use and provide feedback to one another that prompts revisions to linguistic form and content (Storch, 2005; Storch, 2011; Wigglesworth & Storch, 2009). Moreover, Englert et al. (2006) note that “students who interact frequently with other writers and readers have greater opportunities to understand and internalize the perspective of their audience, thereby laying the foundation for the development of dialogical skills that support text production, transformation, and revision” (p. 216).

Sociocultural perspectives on writing are compatible with two of the most popular pedagogical approaches used in writing classrooms today, process pedagogies and genre pedagogies. In process-oriented classrooms, the teacher acts as a facilitator as students cycle through stages of planning, writing, editing, and revising (Tribble, 1996; Badger & White, 2000;
Graham & Sandmel, 2011). Process pedagogies originated from cognitive models of writing, which highlighted the non-linear and recursive nature of the writing process (Flower & Hayes, 1981; Bereiter & Scardamalia, 1987), but they also align with sociocultural perspectives on writing as the teacher’s role is to create a supportive learning environment and to guide students toward higher levels of competency by exposing them to processes and strategies used by skilled writers (Graham & Sandmel, 2011).

Genre-based pedagogies also fit within sociocultural perspectives as their aim is to provide students with “explicit and systematic explanations of the ways language functions in social contexts” (Hyland, 2003, p. 18). Genre theorists study how language is used in different communicative situations and then apply this knowledge to literacy education. In genre-oriented classrooms, the teacher’s role is to scaffold students’ success with target genres by deconstructing model texts, analyzing the key features and linguistic attributes, and then collaborating with students to jointly construct texts following the features of the genre, before students write their own texts (Hyland, 2003; Rose, 2016). Process-pedagogies and genre pedagogies are not mutually exclusive, leading some theorists to argue in favour of using the two approaches in combination (Badger & White, 2000; Hyland, 2003).

Significance of the Study: Gaps in the Literature

Due to the growing use of wikis and Google Docs to support collaborative writing projects, a number of studies have explored the benefits and drawbacks of these web-based tools. Web-based collaborative writing has been shown to enhance students’ writing skills (Alshumaimeri, 2011; Wichadee, 2010), while also promoting learner autonomy and self-directed learning (Kessler & Bikowski; 2010; Lee, 2010), enabling students to emphasize each other’s strengths (Lee & Wang, 2013), and encouraging students to revise their work throughout
the writing process (Elola & Oskoz, 2010). Nevertheless, the extant research shows that the patterns of participation in web-based writing are highly variable (Kwan & Yunus, 2015; Lee & Wang, 2013; Li & Zhu, 2013). Factors that may impede effective collaboration include time constraints and roles not taken seriously by group members (Lee & Wang, 2013), while effective collaboration is more likely when students develop convergent goals, exercise collaborative agency by scaffolding for one another, and develop positive emotions about working together (Li & Zhu, 2017).

A limitation of this expanding body of research is that the majority of the studies have taken place in university contexts and they have frequently involved learners at similar levels of language proficiency. The current study is unique in that it examined the collaborative writing process in a high school class that included both native and non-native speakers of English. The extant research is also limited in that most studies have relied on similar data sources, including the archived versions of the wikis or Google Doc pages, and follow-up surveys and interviews with students and teachers. Because many teachers integrate web-based writing activities as a component of a course that is delivered face-to-face, the current study sought to understand not only what was occurring on-line, but also during the face-to-face class meetings. As a result, a key data source was field notes taken during class observations throughout the narrative writing unit. These field notes were triangulated with the other data sources, which included interviews with the students and the teacher, reflections written by the teacher on an ongoing basis throughout the project, as well as the version and comment history on the Google Docs. Taken together, these data sources facilitated a rich description of the research context and the web-based collaborative writing process within a diverse learning environment.
Another literature base that is relevant to this study is writing pedagogy. A number of meta-analyses and literature reviews have helped to illuminate the instructional techniques that have a positive effect on the quality of students’ writing. These techniques include providing explicit strategy instruction following a gradual release of responsibility model; engaging students in pre-writing activities from gathering ideas to more structured planning and organization of ideas; adopting a process writing approach that involves cycles of planning, drafting, and revising; introducing mentor texts as exemplars of different types and styles of writing; and ensuring students receive corrective feedback from their teachers and peers (Graham, Harris, & Chambers, 2016; Graham & Perin, 2007). To the researcher’s knowledge, however, no studies have examined how these pedagogies have manifested in the context of a collaborative writing project using web-based writing tools. The current study aimed to fill this void by examining the teacher’s instructional strategies and approaches during a narrative writing unit that integrated a collaborative writing project using Google Docs.

Context of the Study

This study took place at an independent high school in British Columbia, a province located on the west coast of Canada. It is a small school, with approximately 100 students, more than half of whom were born outside of Canada. In the focal classroom, participants originated from seven different countries: Vietnam, Singapore, England, Ukraine, Ghana, the United States, and Canada. As British Columbia continues to welcome new immigrant and international students (BC Ministry of Education, 2017), it is important to gather more research within teaching and learning environments that include students from diverse linguistic and cultural backgrounds.
All of the students and teachers at the high school have their own Chromebooks, which are laptops that are predominantly used to access cloud-based software, including the G Suite for Education tools (e.g., Google Docs, Google Slides). The G Suite for Education tools are being adopted by schools to facilitate collaboration between and among students and teachers. For example, when a student opens a new document in Google Docs, he or she can easily share it with members of the classroom community to view or edit. The teachers can see the changes their students are making in real-time or at a later date by viewing the version history, which is a detailed record of the contributions and edits made by each contributor.

This study focused on a narrative writing unit in a Grade 11 English class. As part of this unit, the students wrote a story in pairs (and one triad) that focused on the theme of “the future.” The students had access to their stories through a shared Google Doc; they were provided with time to work on their stories while sitting with their collaborators in class, and they were also asked to work on their stories outside of class time. The teacher, Mr. Towers (pseudonym), had about 12 years of teaching experience. The year prior to this study, he had undergone training on the use of the G Suite for Education tools and he demonstrated a high level of comfort using technology in his teaching. When I asked Mr. Towers why he was interested in being involved in this study during the pre-project interview, he responded as follows:

"Because we have an opportunity as a small group in a small school that uses on-line tools… and because we are culturally diverse. We have a lot of different backgrounds and a bunch of different language levels. I think it would be interesting to see how a study like this pans out. It’s one thing to teach day-to-day, but then to have something that you can think about on a different level, it just improves teaching and learning for the students."

By observing and interacting with the teacher and the students throughout the project, I was able to integrate multiple perspectives and provide a new lens through which to examine what
occurred when the teacher introduced a collaborative writing project using an innovative technology within a diverse learning environment.

**Purpose of Study and Research Questions**

Using a descriptive case study approach, this dissertation study explored the collaborative story writing process as it unfolded within a culturally and linguistically diverse high school English class. In addition to examining the teacher’s facilitation of both in-class and web-based writing activities, this study assessed the affordances and constraints associated with the collaborative writing project. As such, this study was guided by the following two research questions:

1. How did the teacher facilitate the collaborative story writing unit for his students?
2. What were the affordances and constraints associated with the pedagogical supports, the social context, and the use of Google Docs in a culturally and linguistically diverse classroom?

These two questions were answered through a detailed analysis of field notes derived from classroom observations, interviews with the teacher and the students, and ongoing reflections written by the teacher. The Google Docs with the students’ stories provided another data source that facilitated the corroboration and description of some of the themes that were identified. The findings from this study provide insight into considerations that should be made when teachers integrate collaborative writing projects and 21st century technologies within diverse learning contexts.

This dissertation comprises four additional chapters. Chapter Two presents a thorough review of the theoretical and empirical literature that form the foundation for this study. Chapter Three describes the research methodology used in this study and introduces the narrative writing
unit and the collaborative writing project that the teacher designed for his students. Chapter Four provides an in-depth description of the stages of data analysis and the findings. Chapter Five summarizes the findings, highlighting how they relate to the existing literature and the implications they have for teaching and learning.
Chapter Two: Literature Review

This chapter presents an extensive review of the conceptual and empirical literature on writing pedagogy and the role of collaboration and web-based tools in the writing process. To begin, a sociocultural theory of learning is described alongside the construct of scaffolding, as these theories provide a framework for examining the focal teacher’s facilitation of the collaborative story writing unit within a culturally and linguistically diverse classroom. Next, an overview of recent developments in pedagogical approaches and models in writing will be provided. Because the current study included both native and non-native speakers of English, this literature review also explores similarities and differences between the first and second language writing process. A comprehensive synthesis of empirical research on instructional strategies in writing and the collaborative writing process in first and second language learning contexts follows. Towards the end of the chapter, a description of how the current study is situated within the existing body of research is provided.

Sociocultural Theory and the Construct of Scaffolding

Sociocultural theory emphasizes the collaborative nature and the social and cultural context of learning. Before sociocultural theory emerged as a popular theory of learning, renowned educational theorist, John Dewey, proposed that schools provide extensive opportunities for students to work in groups and to engage in authentic problem-solving situations that are mediated by the teacher (Baker, 1955). Nevertheless, Vygotsky is most commonly credited with initiating the ideas on which this theory of learning was developed. Vygotsky (1930/1978) theorized that learners acquire language and other high-level cognitive abilities through socially-mediated activity within particular socio-cultural contexts. More specifically, Vygotsky posited that learning occurs on two levels, first on the social or
interpsychological level, as the learner interacts with an adult or more capable other, and then on
the individual or intrapsychological level, as the learner internalizes the knowledge co-
constructed in shared activity.

A key component of a sociocultural theory of learning is the zone of proximal
development (ZPD), which Vygotsky (1930/1978) defined as “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 capable peers” (p. 86). The zone of proximal development encompasses functions that
are in the process of maturation, but which have not yet matured within the individual. As
Vygotsky noted, they are the “buds” or “flowers” of development, as opposed to the “fruits” of
development (p. 86).

Language development. Due to its emphasis on socially-mediated activity, sociocultural
theory supports a social interactionist view of language development. Social interactionists
believe that language is acquired through social interaction with linguistically knowledgeable
adults. When adults adjust their speech to accommodate a young child’s linguistic level, they
enable the child to enter his or her zone of proximal development. Meanwhile, the child’s
developing language plays a key role in mediating social interaction on the interpsychological
level and mediating thought on the intrapsychological level (Vygotsky, 1930/1978).

Vygotsky’s ideas were originally used to describe the process of acquiring one’s first
language (L1), but his theories are widely cited within the field of second language (L2)
learning. For example, Lantolf and Thorne (2007) provide concrete examples of second language
learners reciting patterns they have heard in interpersonal contexts, a process they argue
facilitates the acquisition of L2 features, such as vocabulary and syntax. Other theorists,
including Ohta (2000) and Swain (2000), have suggested that opportunities to interact and negotiate meaning in the target language moves second language learners into their zone of proximal development, wherein, with developmentally appropriate assistance, they can extend their linguistic abilities to meet their communicative objectives. Fernández Dobao (2012a) examined learner-learner interactions and learner-native speaker interactions during oral tasks. The results showed that the native speakers provided more linguistic assistance to their collaborators because they possessed the necessary lexical knowledge, whereas same-level learners lacked the linguistic resources required for supporting their peers to build new lexical knowledge. The level of assistance provided by the native speaker to the learner was also dependent on the two participants’ developing a collaborative orientation to the activity, as determined by their goals and level of involvement in the task.

While the aforementioned examples relate primarily to oral language development, writing tasks carried out in a supportive learning environment also provide a locus for language development. Because writing happens at a slower pace than oral conversation, language learners have more opportunities to test their hypotheses about the target language forms and more time to process the corrective feedback they receive (Williams, 2012). Opportunities to engage in collaborative dialogue during the writing process further enhances students’ abilities to observe gaps in their language development, to reflect on their linguistic choices, and to internalize the language (Storch, 2011). Writing classrooms guided by sociocultural perspectives on learning are characterized by dynamic interaction, through which teachers and students collaboratively co-construct knowledge (Englert, Mariage, & Dunsmore, 2006; Storch, 2013).

**Scaffolding.** Drawing on Vygotsky’s work on social mediation and the zone of proximal development, Wood, Bruner, and Ross (1976) used the metaphor of scaffolding to refer to
temporary assistance provided by an expert, which enables a child or novice to carry out a task that he or she would not be able to do independently. Scaffolding allows learners to move towards new concepts and skills, by chunking the task into manageable components, modeling the steps involved in completing the task, keeping the learner directed towards the goals of the task, and stepping in to help when a learner becomes frustrated (Wood, Bruner, & Ross, 1976). In its original conception, scaffolding was used to describe support provided in a one-on-one tutor-tutee relationship, and therefore, it did not account for the complexity inherent in a classroom with a diverse group of learners who may require different types of assistance. As such, an expanded conceptualization of scaffolding is required. Concepts such as the gradual release of responsibility, directive and supportive scaffolding, collective scaffolding, and procedural tools for mediating learning are relevant to this discussion.

**Gradual release of responsibility.** The gradual release of responsibility model is an instructional framework whereby the teacher mediates the cognitive load associated with a task by handing over responsibility in a gradual and deliberate manner (Pearson & Gallagher, 1983). In the initial stage, the teacher assumes responsibility for explaining and modeling a desired strategy or skill. In the subsequent stage, referred to as guided practice, students practice a strategy or skill with the teacher’s assistance. Eventually, the learners are expected to take full responsibility for applying a strategy or using a skill. This process may occur over one lesson or multiple lessons. While Pearson and Gallagher’s (1983) model was originally proposed to describe reading instruction, it has been widely applied to other language skills, including writing. A more recent iteration of the gradual release of responsibility model recognizes the value of collaboration with peers and the recursive nature of learning, thereby proposing that teachers cycle intentionally through purpose setting and explicit instruction, guided instruction,
collaborative learning experiences, and independent learning experiences (Fisher & Frey, 2013). Similarly, Dix (2016) proposes a participatory scaffolding framework to describe how teachers and students co-construct learning to write. Her research in a primary classroom showed that “the teacher wove multiple layers of scaffolding, encouraging student talk and metacognitive awareness, thus creating a ‘magic space’ where mind could meet allowing negotiation and handover” (p. 23). A gradual release of responsibility model also parallels Englert, Mariage, and Dunsmore’s (2006) socio-cognitive apprenticeship model, whereby the teacher uses a combination of “step in” moves, when it is necessary to provide explicit instruction and model new writing processes, and “step-back” moves, so that students assume greater responsibility for the problem-solving task.

**Directive and supportive scaffolding.** Within classroom contexts, a distinction has also been made between directive scaffolding and supportive scaffolding (Dennen, 2004; Lenski & Nierstheimer, 2002). Directive scaffolding entails a more teacher-centered approach, whereby the teacher devises carefully defined tasks that will enable students to develop particular skills and strategies. Supportive scaffolding is a more learner-centered approach, whereby the students co-construct knowledge with others and the teacher provides support based on their needs. In a writing lesson, directive scaffolding could manifest itself as the teacher showing students how to map out their ideas for a story and then directing students to follow the same process or model. In a supportive scaffolding approach, the teacher might observe students during the writing process and then make suggestions for strategies they could use; for example, if students were struggling with using descriptive word choice, the teacher could highlight words or phrases in their writing and suggest that they consult a thesaurus to find more descriptive vocabulary.
Collective scaffolding. Scaffolding was originally assumed to occur in one direction, from expert to novice (i.e., from parent to child, or teacher to student). However, in the field of second language acquisition, researchers examining the interactional protocols of pairs of students working together have shown that learners provide guided support to their peers, which enables them to extend their knowledge of the target language and perform at higher levels of competence (Donato, 1994; Ohta, 2000). Donato (1994) coined the term collective scaffolding to describe situations in which language learners engage in joint problem solving and co-construction of knowledge during collaborative dialogic activities. Meanwhile, collaborative writing activities have been shown to afford students the opportunity to provide reciprocal feedback and pool their collective resources (Storch, 2005; Wigglesworth & Storch, 2009).

Procedural tools for mediating learning. A close examination of the literature on scaffolding and socially-mediated activity emphasizes the notion that procedural tools can also be used to mediate learning (Davis & Miyake, 2004; Englert et al, 2006). Early on, Vygotsky (1930/1978) provided examples of children using mnemonic tools to facilitate memory and cognition within socially-mediated activity. Examples of procedural tools used in writing lessons include graphic organizers (Lott & Read, 2015), mentor texts (Graham & Perin, 2007; Kerr, 2017), and digital technologies, including word processing tools with built in grammar and spell-checkers (Graham & Perin, 2007) and web-based tools that support collaborative writing (Li & Storch, 2017; Storch, 2013). While the teacher initially provides these procedural tools to students, over time, the goal is for them to be able to seek the tools out themselves.

Drawing on a sociocultural theory of learning, the current study explores the teacher’s facilitation of a collaborative story writing unit using Google Docs, as well as the affordances and constraints associated with the socially-mediated learning environment, which included face-
to-face and web-based interactions between the students and the teacher. Before exploring the existing body of research on instructional strategies and collaborative writing in first language and second language contexts, it is beneficial to examine recent developments in pedagogical approaches in writing classrooms.

**Developments in Pedagogical Approaches and Writing Models**

A number of developments in instructional approaches in writing have taken place in recent decades. The first development entailed a shift from a focus on the products of writing to an emphasis on the processes of writing, as informed by cognitive models (Badger & White, 2000; Hawkins & Razali, 2012); a subsequent development was for scholars and teachers to expand on process approaches to attend to the social contexts of writing through genre pedagogies (Hyland, 2003; Hyland, 2007); and, a more recent trend has been a rise in the use of digital and web-based tools in writing classrooms, which has led scholars to explore writing from the perspective of a new literacies lens (Leu, Slomp, Zawilinski, & Corrigan, 2016; Street, 2009). In recent decades, there has also been a steadily growing interest in second language writing, and researchers have highlighted some of the similarities and differences between the first language writing process and the second language writing process. Each of these trends will be explored in more detail below.

**From product to process.** A product-oriented model emphasizes the final piece of writing over the process a student goes through to produce the text. Product approaches correspond with traditional models of teaching writing, which have been critiqued for being “reductionist and mechanistic” because they view writing as set of discrete steps (Zamel, 1987, p. 697) and they do not provide opportunities for students to employ higher-level writing skills (Hawkins & Razali, 2012). Product orientations to writing are also associated with teacher-
dominated classrooms; the teacher assigns the writing task, collects it, and assesses it using established criteria, commonly relating to grammar, mechanics, vocabulary, content, and organization (Barrot, 2018). Remnants of this model still exist today, especially in exam-oriented teaching and learning contexts. Nevertheless, in response to research highlighting the complex and reciprocal nature of the composition process (Flower & Hayes, 1981; Bereiter & Scardamalia, 1987), there has been a gradual shift from a focus on the products of writing toward an emphasis on the processes of writing (Hawkins & Razali, 2012; Graham & Sandmel, 2011; Tribble, 1996). Two cognitive models that describe the mental activities involved in writing have been influential in informing process-oriented pedagogies and research: Flower and Hayes’ (1981) cognitive process theory and Bereiter and Scardamalia’s (1987) knowledge-transforming model.

**Cognitive models.** According to Flower and Hayes’ (1981) cognitive process theory, writing involves three elements: the task environment, the writer’s long-term memory, and the writing process. The task environment encompasses anything that exists outside the writer’s body, including the rhetorical problem or writing task and also the developing text. The writer’s long-term memory stores knowledge that will be used during the act of writing, such as background information on the topic, awareness of the audience, and writing plans and goals. Finally, the act of writing involves the interaction of a number of cognitive processes and sub-processes, including planning (generating and organizing ideas, setting goals); translation (converting thoughts and ideas into written text); and evaluation and revising (assessing the appropriateness of pragmatic and linguistic decisions; making changes, additions and deletions).

Bereiter and Scardamalia (1987) conducted experimental research with novice and experienced writers to create their knowledge-transforming model of the composition process.
The four key processes within this model are: (1) creating a mental representation of the task; (2) engaging in goal setting and problem analysis; (3) working out any problems inherent in completing the task, such as developing further knowledge on the topic; and (4) engaging in knowledge telling or text creation (i.e., transforming knowledge into text). Their research showed that experienced writers spent more time identifying and solving problems, whereas inexperienced writers tended to start generating text straight away, drawing on readily available knowledge.

Bereiter and Scardamalia’s (1987) knowledge-transforming model of the composition process and Flower and Hayes’ (1981) cognitive process theory both conceptualize writing as a recursive, problem-solving process. As noted by Flower and Hayes, “a given process may be called upon at any time and embedded within another process or even within another instance of itself” (p. 375). For example, a writer who is in the midst of formulating a sentence might realize that he or she does not have sufficient information to continue, such that the process of planning (and the sub-process of generating ideas) may be embedded within the process of translating or putting ideas into written word. Similarly, Bereiter and Scadamalia (1987) note that composing is “a two-way interaction between continuously developing knowledge and continuously developing text” (p. 12).

Self-regulation. Both of these cognitive models of writing also emphasize the importance of writers actively monitoring and directing the writing process in order to achieve their literacy goals, which is known as self-regulation. Zimmerman and Risemberg (1997) expanded on this work to examine personal accounts of self-regulatory techniques used by experienced writers and synthesized findings from empirical studies on self-regulatory strategies. Drawing on their findings, they delineated three categories of self-regulatory strategies: environmental (regulation
of the physical and social contexts of writing, such as choosing or creating effective writing settings and identifying models that illustrate desirable writing traits); behavioural (regulation of writing performance, including tracking one’s progress towards goals and providing oneself with rewards contingent upon accomplishments); and personal processes (regulation of cognitive processes, such as verbalizing ideas to oneself while composing and creating mental images to facilitate written descriptions). Through their work, Zimmerman and Risemberg (1997) also concluded that “self-regulation is a complex system of interdependent processes that are closely linked to an underlying sense of self-efficacy” (p. 73). Upon examining the available evidence, Graham and Harris (2000) found a positive correlation between the use of self-regulation strategies and writing achievement, with skilled writers using more self-regulation strategies than less skilled writers. The research evidence also indicates that teaching self-regulation strategies to developing writers improves their writing performance (Graham & Harris, 2000).

**Second language writing process.** In the 1980s and 90s, a number of studies explored the writing processes of second language (L2) learners drawing on cognitive models developed in first language (L1) contexts. A synthesis of these studies shows that “individuals compose in their second language in fundamentally the same way as they do in their mother tongues” (Cumming, 2001, p. 5). For example, as in L1 writing, the L2 writing process is non-linear and recursive, involving “a constant interplay of thinking, writing, and revising” (Liu, 2013, p. 88). Nevertheless, research also shows that students writing in their L2 spend considerably more time deliberating over linguistic choices during the writing process, compared to when they are writing in their L1 (Roca de Larios, Manchón, & Murphey, 2006; Roca de Larios, Manchón, Murphey, & Marín, 2008; Storch & Wigglesworth, 2007). For example, using think-aloud protocols, Roca de Larios et al. (2006) found that their English-Spanish bilingual participants
devoted twice as much time to dealing with formulation issues in the second language (L2) compared to the first language (L1). Roca de Larios et al.’s (2008) study further concluded that the percentage of time spent converting thoughts into language decreased as the students’ level of proficiency in the L2 increased.

These findings suggest that generating text in a second language requires considerable effort, especially at lower levels of proficiency, as beginner students lack experience listening to the language and internalizing its grammatical and syntactical structures. Cumming (2001) also notes that when L2 learners are forced to devote considerable time and attention to language forms and word choice, it may constrain their ability to attend to planning aspects of the composition process and to formulate more complex ideas when writing.

**Process approaches in teaching.** The process approach continues to be one of the most popular methods of teaching writing in classrooms today and it has been the focus of many professional development programs on writing development (Graham & Sandmel, 2011; Hyland, 2003). The actual teaching practices vary from classroom to classroom, but a key perspective of the approach is that writing is a “non-linear, exploratory, generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning” (Zamel, 1983, p. 165). In process classrooms, students participate in cycles of planning, writing, editing, and revising, while the teacher facilitates (Tribble, 1996; Badger & White, 2000; Graham & Sandmel, 2011). As described by Hyland (2003), “the teacher’s role is to be non-directive and facilitating, assisting writers to express their own meanings through an encouraging and co-operative environment with minimal interference” (p. 18).

Although a number of studies have highlighted the effectiveness of the process approach in supporting writing development (Graham & Perin, 2007; Graham & Sandmel, 2011), this
model of writing pedagogy has been criticized for favoring students from the mainstream culture due to its inductive and discovery-oriented approach to teaching and learning that presumes a shared familiarity with key rules of writing as well as target genres of writing (Delpit, 1988; Hyland, 2003). Instead of receiving explicit instruction on the structure of the texts they are expected to produce, students are expected to discover the appropriate forms through the process of writing and revising. Hyland (2003) explains how this disadvantages students who do not come from the mainstream culture and language:

[they] find themselves in an invisible curriculum, denied access to the sources of understanding they need to succeed. Thrown back on their own resources, they are forced to draw on the discourse conventions of their own cultures and may fail to produce texts that are either contextually adequate or educationally valued. (p. 20)

Process approaches have also been criticized for decontextualizing writing skills from the social contexts and circumstances in which writing occurs (Applebee, 2000; Hyland, 2003) and for adopting a “monolithic view of writing” whereby the writing process looks similar regardless of who is writing or for what purposes (Badger & White, 2000, p. 154). In his critique of decontextualized approaches to teaching writing, Applebee (2000) advocates for a writing curriculum that provides students with opportunities to practice the skills of writing within social contexts that require them to make rhetorical decisions related to audience, genre, and situation. Researchers and teachers have attempted to address the shortcomings inherent in process approaches through the development and application of genre-based pedagogies (Hyland, 2003; Hyland, 2007).

**Genre pedagogy.** Genre approaches view writing as purposeful and socially-situated within specific contexts and communities (Hyland, 2003). Genre-based literacy pedagogy stems
from Halliday and Matthiessen’s (2004) work on systemic functional linguistics (SFL), as well as three decades of research carried out in Australian schools, commonly dubbed the ‘Sydney School’ research (Martin, 2009; Rose, 2016). Halliday and Mathiessen (2004) provide numerous examples of how grammar facilitates meaning-making within spoken and written texts, thus depicting language as “a resource for making meaning in a particular context of use rather than as a set of fixed rules and structures” (Yasuda, 2011, p. 111). While genre theorists recognize that there is variability in the structure and language of particular texts, they also believe that there are “relatively stable underlying patterns or ‘shapes’ that organize texts so that they are culturally and socially functional” (Feez, 2002, as cited in Johns, 2011, p. 59).

The initial goal of the ‘Sydney School’ research was to develop a genre-based writing curriculum by identifying different text types that were valued in schools and in the workplace, and then describing the purpose and organizational pattern of each genre, thereby providing teachers with a “metalanguage… to explicitly discuss with students the kinds of texts written for various purposes and how they are organized” (Rose, 2016, p. 229). A second objective of this comprehensive research project was to evaluate the effectiveness of genre pedagogy, particularly in supporting literacy development among aboriginal and immigrant students who were learning English as a second language (Martin, 2009; Rose, 2016). The results were positive, with strong literacy gains shown among diverse learners who had been identified as underachieving in literacy (Rose, 2016). This research has led to the design of theoretical models centered on genre pedagogies, as well as wide-spread application in a variety of learning contexts.

Genre pedagogy typically occurs over three stages within the “teaching to learn cycle” (Rothery, 1994/2007, as cited in Rose, 2016), which closely resembles Pearson and Gallagher’s (1983) Gradual Release of Responsibility model described earlier. The first stage of the cycle
involves a “deconstruction” of one or more model texts of the target genre. The students and teacher discuss the organizational pattern and linguistic features of the model texts using the metalanguage that has been pre-established. In the second stage, “joint construction,” the teacher and students work together to compose a text in the target genre. After students have developed a good understanding of the target genre and engaged in joint practice with their teacher, they move into the final stage, “independent construction,” wherein they write their own texts either individually or with a partner.

Hyland (2003) points out that teaching key genres provides “a means of helping learners gain access to ways of communicating that have accrued cultural capital in particular professional, academic and occupational communities” (p. 24). Nevertheless, as with the process approach, concerns have been raised in regards to the application of genre pedagogy. For example, Johns (2011) notes that some practitioners present genres as “fixed and prototypical for certain contexts in the dominant culture” leading students to view text types and structures as “rigid formats [to be memorized], rather than problem-solving spaces open to critique and change” (p. 61). Another concern is that students from diverse linguistic backgrounds may receive implicit messages that English discourses are superior to those preferred in their own languages (Ahn, 2012). To alleviate these problems, Johns (2011) recommends that teachers teach genres as entities that are flexible and evolving, rather than fixed and transferrable. He also suggests that teachers provide space for L2 learners to compare genres in their L2 with those they are reading in their L1. In this way, teachers build on students’ background knowledge about the purposes for writing particular genres, the situations in which the genres are written, the processes that are followed to write them, and their linguistic and structural features.
**Process genre approach.** In an attempt to unite the benefits of a process model, which emphasizes the skills of writing, with the those of a genre approach, which values the purposes and contexts of writing, Badger and White (2000) propose a process genre approach to writing pedagogy. In their model, mediation comes from three different sources: (1) the teacher, who provides instruction on different skills and strategies; (2) peers, who support one another in the context of pair or group work; and (3) models of the target genre. They argue that “writing development happens by drawing out the learners’ potential (as in process approaches) and by providing input to which the learner responds (as in… genre approaches)” (p. 158). Badger and White (2000) also argue that students at different stages in their writing development will need varying degrees of input. The teacher’s role is to assess the needs of the learners and to ensure they have access to the input they need in order to work within their zone of proximal development, the metaphorical space between what students can do independently and what they can do with support (Vygotsky, 1930/1978).

**New digital technologies.** The turn of the 21st century has brought another shift in writing pedagogy and research with the arrival of new digital and web-based writing applications, from blogs and wikis to fanfiction and digital storytelling. The ubiquity of the Internet and the emergence of these new technologies has changed how we access, construct, and communicate knowledge, and it has expanded our notions of literacies beyond the ability to decode and encode texts or the acquisition of discrete skills associated with particular digital tools. The Internet and digital tools have “redefined literacies as social practices that are fluid, sociocultural, multimodal, and dynamic” (Chen, 2013, p. 143). Lankshear and Knobel (2007a & 2007b) refer to the unique characteristics of these new literacies as the new “ethos” of 21st century writing.
**New “ethos” of 21st century writing.** Lankshear and Knobel (2007a & 2007b) argue that new literacies are more “participatory,” “collaborative,” and “distributed” than conventional literacies, which is also to say that new literacies are less “expert-dominated,” “individuated,” and “author-centric” than conventional literacies. To illustrate their point, they use the example of Wikipedia.org, a user-generated, web-based encyclopedia that “leverages collective intelligence for knowledge production in the public domain” (Lankshear & Knobel, 2007a, p. 227). In contrast to traditional encyclopedias, which comprise a published collection of entries written by experts in different fields, Wikipedia entries are written by anyone with access to the Internet who wishes to contribute new knowledge or revise contributions that others have made. Wikipedia uses a wiki platform that allows multiple users to edit the different webpages within the site, and in doing so, “it builds on distributed expertise and decenters authorship” (Lankshear & Knobel, 2007a, p. 227), resulting in “a very democratic process of knowledge creation” (Richardson, 2010, p. 61).

**New literacy skills and knowledge.** New collaborative forms of writing require new literacy skills, such as an ability to integrate one’s own ideas without diminishing the ideas of others and the ability to engage in joint problem solving. Research conducted over the past decade demonstrates that these new skills can be developed and practiced through school-based projects (Kessler & Bikowski, 2010; Lee, 2010; Lee & Wang, 2013). Digital writing platforms also require students to acquire new discourse community knowledge, which refers to “a writer’s ability to understand and respond to the values and expectations of the communities within which or for which one is writing” (Leu, Slomp, Zawilinski, & Corrigan, 2016, p. 43). Integrating web-based writing into the curriculum provides an opportunity for teachers to scaffold their students’ understandings of the values and expectations of distinct discourse
environments, which they are likely to participate in for both in-school and out-of-school purposes. For example, teachers can ask students to examine texts and interactions emerging from on-line communities, a process which encourages students to become more “conscious writers,” that is, “rhetorically aware of how audience, genre, and tone work in a variety of writing environments” (Alexander, 2009, p. 59). While the role of the teacher in these new writing environments has yet to be examined closely, Alvermann, Unrau, and Ruddell (2013) predict that teachers will become “orchestrators of learning contexts,” thoughtfully guiding “students’ learning within information environments that are richer and more complex than traditional print media” (p. 1163).

In conclusion, pedagogical approaches in writing classrooms are continuously evolving. Nowadays, teachers can be guided by multiple approaches, and with tablets or laptops and access to the Internet, they have an array of writing tools at their disposal. Nevertheless, research examining how web-based writing tools are integrated with process and genre-based pedagogies is just beginning to emerge (e.g. Slavkov, 2015). In the following section, an overview of instructional strategies that have been shown to be effective in supporting writing skills development in both first and second language learning environments will be provided.

**Research on Instructional Strategies in Writing Classrooms**

Writing is a skill that is learned over time through repeated practice and guided instruction. Therefore, teachers are encouraged to provide students with dedicated time for writing and writing instruction and to engage students in different types of writing across the curriculum (Graham, Harris, & Chambers, 2016). Recognizing that not all students graduate from high school with the writing skills they require to succeed at post-secondary or in the workplace, Graham and Perin (2007) conducted a meta-analysis of 144 studies to identify
instructional techniques that the research indicates will support adolescents (defined as 4th to 12th grade students) to improve their writing. To follow is an overview of strategies that have been shown to be effective in improving writing outcomes, drawing on Graham and Perin’s (2007) meta-analysis, as well as Graham, Harris, and Chambers’ (2016) identification of evidence-based practices, which consolidates a more comprehensive set of studies (including experiments and quasi-experiments, and qualitative studies). In addition, since my dissertation study involved both first and second language learners, I will draw on research from second language contexts and interweave it into the discussion of strategies that are recommended for first language learners.

**Explicit strategy instruction.** Graham and Perin’s (2007) meta-analysis showed that explicitly teaching students strategies for planning, revising, and editing their compositions leads to higher-quality writing. Strategy instruction involves teaching skills that can be applied to different writing tasks, such as brainstorming and peer revising, as well as strategies for writing particular genres, such as narrative or persuasive essays. Self-regulated strategy development (SRSD) was identified as a particularly effective approach for teaching self-regulation skills, such as goal setting and self-monitoring; in SRSD, instruction occurs over six stages, as follows:

*Develop background knowledge:* Students are taught any background knowledge needed to use the strategy successfully.

*Describe It:* The strategy as well as its purpose and benefits is described and discussed.

*Model It:* The teacher models how to use the strategy.

*Memorize It:* The student memorizes the steps of the strategy and any accompanying mnemonic.

*Support It:* The teacher supports or scaffolds student mastery of the strategy.
Independent Use: Students use the strategy with few or no supports.

(Graham & Perin, 2007, p. 15)

To explore whether or not strategy-based instruction is an effective instructional practice in improving L2 learners’ ability to write persuasive essays, Baghbadorani and Roohani (2014) used a pre-test, post-test, control group design. The study involved two English writing classes at two universities in Iran. One class used a SRSD approach (following the six stages outlined above) and the other class used a more traditional, product-oriented approach. Both approaches had a significant impact on the participants’ persuasive writing ability, but the SRSD approach led to more significant improvements in the participants’ persuasive writing ability when assessing format and content, organization and coherence, syntax and vocabulary. The researchers concluded that when students are equipped with self-regulation strategies, they make stronger progress in their L2 writing competence, which aligns with the research in L1 contexts.

**Pre-writing activities.** Graham and Perin’s meta-analysis showed that engaging students in tasks that help them generate and organize ideas for their writing also has a positive effect on the quality of student writing. Pre-writing activities include gathering ideas for a writing project and engaging in structured planning and organization of ideas before putting pen to paper (or finger to keyboard). Some of the pre-writing strategies that have been shown to be effective among second language learners include concept mapping, pre-reading relevant texts, and participating in class discussions related to the writing topic (Al-Shaer, 2014; Mahnam & Nejadansari, 2012). Both of these studies found that students in experimental groups who participated in teacher-led pre-writing activities demonstrated stronger improvement in their written composition scores over the duration of the study, as compared to students in control groups. The researchers concluded that explicit instruction and practice engaging in pre-writing
tasks can enhance students’ writing abilities and lead them to become more autonomous L2 writers.

**Mentor texts.** Graham and Perin’s meta-analysis also showed a positive effect for providing adolescents with exemplars of different types of writing that they are expected to create. As noted by Graham and Perin, “students are encouraged to analyze [mentor texts] and to emulate the critical elements, patterns, and forms embodied in the models in their own writing” (p. 20). This approach draws on key principles of genre pedagogy, recognizing that while many qualities of good writing are applicable across genres, each text type also has particular characteristics that place different expectations on the writer (Calkins & Ehrenworth, 2016). In addition to supporting second language learners with expository writing (Ahn, 2012), mentor texts have been shown to be effective in supporting diverse learners to write genres that use specialized academic language, such as interpreting and describing line graphs in Math (Smit, Bakker, van Eerde, & Kuijpers, 2016), writing procedural recounts in Science (Oliveira & Lan, 2014), and describing historical events in Social Studies (Schall-Leckrone, 2017).

**21st century writing tools.** The use of computers and word processing tools for writing assignments enables students to add, delete, and move text around with ease, while also taking advantage of built-in tools, such as spell checkers. Graham and Perin’s meta-analysis found that word processing tools have a positive effect on the quality of students’ writing. Graham, Harris and Chambers (2016) reached a similar conclusion, noting that “students become better writers when they compose via word processing and even stronger writers when they compose with word processing programs that include additional software that facilitates one or more aspects of writing, like word choice or planning” (p. 222). In L2 settings, electronic tools such as on-line
dictionaries and computer corpora (for collocations) can also be effective when learners receive training and assistance in the use of these tools (Chon, 2008; Yoon, 2011).

More recently, web-based tools, such as blogs, wikis, and Google Docs are being adopted by teachers to facilitate writing projects (Li & Storch, 2017; Storch, 2013). These tools not only have word processing capabilities, they also expand the audiences of students’ writing, and in the case of wikis and Google Docs, they provide an infrastructure to support collaborative writing. A detailed overview of the research on the use of web-based tools to support writing instruction will be explored later in this chapter.

**Process writing approach.** The process approach, which was introduced above, draws on both cognitive models and sociocultural perspectives of writing by interweaving a number of instructional activities, such as providing extended opportunities for students to write; facilitating cycles of planning, drafting, and reviewing; emphasizing writing for real audiences; involving students in self-reflection and self-assessment; creating supportive writing communities; encouraging student-to-student interactions; and providing personalized instruction. When teachers receive explicit training in the process writing approach, there are measurable effects on the quality of students’ writing (Graham & Perin, 2007).

Importantly, however, Graham and Sandmel’s (2011) meta-analysis concluded that the process writing approach was associated with a statistically significant improvement in the quality of students’ writing for students in general education classes, but not for struggling writers. The authors explain that “although the process approach is effective in improving the writing of typical students, it is not a particularly powerful approach relative to other writing treatments, and its impact with those that are most vulnerable educationally, ELLs [English language learners] and children with learning disabilities, are unproven outside of a few case
studies” (p. 405). Based on the available research, Graham and Sandmel (2011) recommend that teachers continue to use process pedagogies, while also integrating explicit and systematic instruction, such as teaching strategies for planning and revising, and incorporating other evidence-based practices.

A particular strategy that has been shown to be effective as part of a process writing approach in L2 classrooms is writing conferences (Lee & Schallert, 2008; Maliborska & You, 2016; Young & Miller, 2004). Writing conferences allow teachers to get to know their students better and to be more responsive to their individual needs (Maliborska & You, 2016; Lee & Schallert). Lee and Schallert’s study also demonstrated that a student-teacher relationship built on mutual respect and trust was an important variable in the success of the writing conference and the extent to which students felt motivated to act on their teachers’ suggestions. Writing conferences also provide an opportunity for teachers to work with students on setting goals (Cumming, 2012) and ensuring that the feedback they provide is clear to their L2 learners (Maliborska & You, 2016). Goal setting and corrective feedback will be discussed in turn below.

**Goal setting.** Another strategy that Graham and Perin (2007) identified as effective was assigning goals for students that are specific and achievable. The research evidence suggests that it is beneficial to identify product goals at the outset of the project, such as the purpose of the writing task and the desired characteristics of the final composition, and to articulate sub-goals throughout the writing process, such as encouraging students to add more details when revising their compositions. Self-regulated learning approaches also emphasize the benefits of students setting their own goals for writing.

Cumming (2012) conducted research in Toronto with adult international students and at-risk adolescents and his analyses of their writing goals and practices demonstrated that “students’
goals for writing reflect their relative development of literacy as well as orientations to knowledge and the world” (p. 133). He further noted that “it may only be from interacting with students individually over extended periods that instructors can perceive, distinguish, and establish appropriate goals for students’ writing development” (p. 133). His research demonstrated that goals are contingent upon the learner and the context; they arise when a student is matched with developmentally appropriate learning opportunities and support.

Drawing on principles of assessment as learning and self-regulated learning, Lee (2016) suggests a four-step model to assist students with setting and operationalizing personal learning goals during writing. The first step is to help students develop a clear understanding of the learning objectives of the task and the assessment criteria that will be used to evaluate their learning. The second step is to assist students to set personal learning goals that align with the learning objectives specified by the teacher. For example, if the stated objective is to write a narrative, a personal learning goal might be to use a range of vocabulary to describe the setting and characters. The third step is for students to act as learning resources for one another through peer assessment and feedback, and the final step is for students to monitor and self-evaluate their progress towards their goals. The teacher acts as a facilitator throughout this process to ensure that students are choosing appropriate goals and that they have access to the resources and support they need to achieve their goals.

Corrective feedback. Graham, Harris, and Chambers (2016) consolidated a collection of literature reviews on writing and concluded that students’ writing improved when teachers provided them with feedback on their work. Graham and his colleagues also found that giving and receiving peer feedback had a positive effect on the quality of students’ writing. Studies in second language contexts have similarly highlighted the potential benefits of corrective feedback
on students’ written work (Bitchener, 2008; Sheen, 2007). Meanwhile, Biber, Nekrasova, and Horn (2011) surveyed a large number of studies that examined the effectiveness of feedback in both L1 and L2 contexts and identified some significant trends. The first trend was that L2 learners made greater gains in writing development in response to feedback than their L1 counterparts. The authors attributed this finding in part to the different measurements of writing improvement, as the L1 studies tended to emphasize content and more holistic measures of writing quality and the L2 studies often measured improvement in terms of grammatical accuracy. They also noted that higher gains may be observed in L2 contexts simply because L2 learners have more progress to make in their writing development. Another trend was that native English speakers achieved the greatest gains in response to teacher feedback provided orally, while non-native English speakers achieved the greatest gains in response to feedback provided from sources other than the teacher, such as peers or computer-generated feedback.

This latter finding suggests that L2 learners may face greater difficulties processing and/or engaging with feedback that they receive from their teachers. Bitchener (2017) points out that L2 learners may not benefit from corrective feedback on their writing if their linguistic level prevents them from noticing that there is a mismatch between what they have written and what the feedback is saying or if the feedback lacks explicitness, such that the learner is unable to fully comprehend it. It is important, therefore, for teachers of second language learners to consider a learner’s linguistic readiness when providing corrective feedback. The research evidence also suggests that corrective feedback is most beneficial for L2 learners when teachers target their feedback on a particular linguistic feature, rather than providing unfocused feedback (Bitchener, 2008; Sheen, 2007).
Another consideration is the technique that is used to provide the corrective feedback. Biber, Nekrasova, and Horn’s (2011) meta-analysis of research in L1 and L2 contexts showed that written comments resulted in greater gains in overall holistic quality of writing and grammatical accuracy, compared to direct error identification. The authors inferred that explanations of error patterns are more helpful than direct identification of specific errors because direct identification may not lead learners to generalize from one instance of a correction to another instance of a similar construction. Similarly, Storch and Wigglesworth (2010) compared how 48 English as a second language (ESL) learners at an Australian university processed direct feedback (reformulations) versus indirect feedback (editing symbols). Their findings indicated that the editing symbols elicited more discussion with peers and a higher level of engagement than the reformulations. With respect to editing symbols, “learners had to identify the nature of the error and attempt to supply the correct form, using their own knowledge of grammar and word meanings,” whereas “engagement with reformulations tended to be limited to reading the reformulation, acknowledging or merely expressing agreement, with fewer instances of extensive engagement” (p. 327). Storch and Wigglesworth’s study also found that affective factors, such as a learner’s attitudes, beliefs, and goals, can influence the uptake and retention of corrective feedback.

A particular strategy that has been shown to be successful in L2 contexts is collaborative revision (Hanjani & Li, 2014; Hanjani, 2016). Hanjani and Li’s (2014) study involved five pairs of English as a Foreign Language (EFL) learners enrolled in an essay-writing course at an Iranian university. The students participated in a collaborative revision session during which they worked with a partner to revise their individually-written argumentative essays drawing on feedback provided by their teacher. Analysis of the participants’ interactions during the
collaborative revision and their revised drafts revealed that the students provided scaffolding for one another, offering and receiving advice that they could use to improve their writing. The findings also revealed that each partner benefited from the joint revision regardless of their relative level of language proficiency. Following on this study, Hanjani (2016) interviewed eight students who had participated in the collaborative revision session and concluded that they all held favourable attitudes about the process and considered it to be a useful technique for improving their L2 writing skills.

**Collaborative writing.** Planning instruction so that students have an opportunity to work together to plan, draft, revise, and edit their compositions has been shown to improve the quality of students’ writing (Graham & Perin, 2007). In one collaborative writing approach that yielded statistically significant improvements in writing, a higher-achieving student was assigned as the “helper” (tutor) and a lower-achieving student was assigned as the “writer” (tutee); the two students worked as partners through successive stages of generating ideas, drafting, reading over the draft, editing, producing a polished copy, and evaluating the final product (Yarrow & Topping, 2001). Collaborative writing has also been shown to be an effective instructional approach in L2 contexts; for example, Storch (2005) found that written texts produced in pairs were more grammatically accurate, and more syntactically complex and succinct, than written texts created by students working alone. Because the current study focuses on a collaborative story writing project, an extensive review of the research on collaborative writing will be explored in the next section.

In conclusion, several strategies have been identified as effective in supporting writing development among adolescent learners. This review has also highlighted a few differences between the findings from first language and second language contexts, which emphasizes the
need for teachers to adjust their instructional strategies depending on the unique characteristics of their learners. The next section provides a more comprehensive overview of the research that has been conducted on collaborative writing in both first and second language learning.

**Collaborative Writing Research**

Lowry, Curtis, and Lowry (2004) define collaborative writing as “an iterative and social process that involves a team focused on a common objective that negotiates, coordinates, and communicates during the creation of a common document” (p. 75). Collaborative writing is commonly used in both workplace and educational settings. In the workplace, for example, a team of people might work together to write a report, utilizing the expertise of different professionals. According to Storch (2017), classroom-based collaborative writing offers several advantages, such as exposing students to different ideas, allowing them to engage critically with others’ ideas, and providing an opportunity for students to develop their negotiation and teamwork skills. Collaborative writing projects yield unique patterns of negotiation, coordination, and communication, which led Lowry, Curtis, and Lowry (2004) to devise a collaborative writing classification system that includes group single-author writing, sequential single writing, parallel writing, reactive writing, and mixed mode writing.

Group single-author writing describes a situation in which a group of people collaborate on the content of a document and then designate one person to write on behalf of the group. Sequential single writing occurs when one person contributes to the document and then passes it to the next person to add to it, and so on and so forth. With parallel writing, the authors divide the writing into discrete units and then they write in a parallel or synchronous manner. Parallel writing can take different forms, including “horizontal-division writing,” in which each writer is responsible for a particular section of the document, and “stratified-division writing,” in which...
each writer adopts a role, such as author, editor, or reviewer, based on their strengths. Reactive writing occurs when “writers create a document in real time, reacting and adjusting to each other’s changes and additions… without significant preplanning and explicit coordination” (p. 78). Mixed mode writing involves a combination of two or more of the patterns previously described.

While Lowry and his colleagues’ framework provides a useful structure for describing collaborative writing events, some of the approaches he describes could constitute cooperative writing, as opposed to collaborative writing (Elola & Oskoz, 2017; Storch, 2017). Storch (2017) notes that in cooperative writing, the writing is divided into subtasks (e.g., gathering ideas, writing a draft, editing) or into subsections, with each person taking responsibility for a subtask or a subsection of the final document, whereas in collaborative writing, all participants are involved at all stages of the writing process, from brainstorming to drafting to editing. Storch (2017) further noted that including collaborative writing assignments as course assignments can prepare students for cooperative writing tasks they may be involved in during their future schooling or professional lives.

**Collaborative writing for language learning.** Collaborative writing tasks provide opportunities for students to engage in collaborative dialogue, and as highlighted in the seminal work of Swain (1995, 2000), collaborative dialogue facilitates language acquisition by enabling learners to become aware of gaps in their developing language abilities and by allowing learners to test hypotheses they have made regarding the target language. Swain’s work also suggests that speaking and writing activities allow learners to process language at a deeper level than is possible through listening and reading.
A review of the available research on collaborative writing reveals four research strands: comparisons of collaborative writing and individual writing samples; explorations of the collaborative dialogue that students engage in as they compose a text together; considerations regarding task type and grouping methods; and studies of web-based collaborative writing. Each of these research strands will be discussed in turn below.

**Individual writing versus collaborative writing.** In order to validate the use of collaborative writing activities, researchers have explored whether or not texts produced collaboratively are superior to texts produced by learners working alone. Two studies (Storch, 2005; Wigglesworth & Storch, 2009) used detailed discourse analytic measures to compare the accuracy and complexity of texts produced in pairs with those written individually by ESL students at an Australian university. Storch (2005) found that the texts produced in pairs were shorter, but superior in regards to task fulfillment, grammatical accuracy, and complexity. Wigglesworth and Storch (2009) concluded that collaboration resulted in a higher level of accuracy, but it did not affect complexity. In both studies, follow-up analyses of the pair dialogues also revealed that the opportunity to provide reciprocal feedback and to pool their knowledge of the language contributed to the higher level of accuracy that characterized the collaboratively written texts.

Meanwhile, Strobl (2014) used a mixed-methods approach to compare individual and collaborative syntheses written by native Dutch speakers in an advanced German university class using Google Docs. In contrast to previous research, Strobl’s study revealed no statistically significant difference between the individual and collaborative syntheses in regards to complexity, accuracy, and fluency. Nevertheless, the collaborative texts scored significantly
higher on measures of content selection and organization, which was attributed to in-depth discussions that took place during the planning phase of the collaborative writing assignment. Liu and Lan (2016) took a slightly different approach by comparing vocabulary gain, motivational levels, and perceptions of using Google Docs between students working individually to complete a university assignment and students working collaboratively to complete the same assignment. The results showed that the collaborators had higher vocabulary gains between the pre-test and post-test than the individuals. The collaborators also had higher levels of motivational beliefs and self-efficacy, reported more positive perceptions towards learning with Google Docs, and participated more actively in the web-based assignment, compared to the individuals.

In Elola and Oskoz’s (2010) study, eight students majoring in Spanish at an American university were asked to report on their experiences writing collaboratively versus individually using a wiki. The learners reported that working collaboratively led them to write higher quality essays; more specifically, they felt that working with a partner enabled them to develop a more finely tuned thesis and to structure their essays in a more organized manner. However, despite the positive effects on their writing, the learners expressed a preference for working individually as they felt this approach would enable them to maintain more control over their writing, to manipulate the text to suit their own style, and to work according to their own schedules, without having to rely on others.

**Collaborative dialogue.** Another area of research has entailed explorations into the collaborative dialogue that learners engage in as they co-write texts (Kim & McDonough, 2011; Leeser, 2004; Storch, 2013). These studies have analyzed learner interaction in terms of the type and resolution of language-related episodes (LRE), where an LRE refers to an instance during
the collaboration in which the learners deliberate about language (Swain & Lapkin, 1995; Storch 2013).

Kim and McDonough’s (2011) study involved 44 Korean students enrolled in a middle school English course. Half of the participants watched videotaped models of collaborative interaction before carrying out the writing tasks, while the other half did not view the videotaped models. The participants who received pre-task modeling engaged in more LREs and resolved more of the LREs correctly than the participants who did not receive the pre-task modeling. The participants who received pre-task modeling also exhibited a more collaborative type of interaction, which was characterized by reciprocal feedback and consistent sharing of ideas. The researchers concluded that pre-task modeling holds potential as a pedagogical strategy for supporting young English as a Foreign Language (EFL) students to engage in discussions about linguistic form and adopt collaborative interactional patterns.

The role of proficiency on the interactional patterns that emerge between learners as they write collaboratively is inconclusive. For example, in a collaborative writing task conducted by pairs of Grade 8 French Immersion students in Canada, Kowal and Swain (1994) observed dominant-passive relationships between students of different proficiencies, while in the homogenous dyads, the contributions were more balanced. Nevertheless, two studies with adult learners of Korean and Spanish found that mixed proficiency level pairings (e.g., low-high, intermediate-advanced) can lead to meaningful exchanges and opportunities for correction (Kim & McDonough, 2008; Leeser, 2004). Leeser’s study also showed that pairs of advanced proficiency students engaged in more language-related episodes, which led to more error corrections, than pairs of low proficiency students. Meanwhile, Watanabe (2008) analyzed the interactions of adult ESL learners at a Canadian university as they engaged in pair activities, as
well as the students’ attitudes towards the collaborative work. She found that higher and lower-
proficiency pairings provided opportunities for learning when they worked collaboratively. In
other words, the pattern of interaction that the learners co-constructed was more significant to the
nature of pair assistance than the students’ relative levels of proficiency.

Task selection and grouping methods. When teachers opt to use collaborative writing
assignments in class, they must also consider what types of tasks will result in the best learning
for their students. In language teaching and learning, a distinction is commonly made between
language-focused and meaning-focused tasks. According to Storch (2017), “language-focused
tasks generally require students to amend a given text or to reconstruct a text from notes and key
words, rather than compose a new text” (p. 132). The objective of language-focused tasks is to
draw students’ attention to language forms that have been selected by the teacher and which the
students have been practicing in class. An example of a language-focused task is a dictogloss,
which requires learners to listen to a dictation and take notes, and then use the notes to
reconstruct a new version of the dictated text.

Conversely, “meaning-focused tasks require students to compose a text and attention to
language in such tasks is incidental; that is, it occurs when the co-authors encounter a difficulty
in the process of composing their text” (Storch, 2017, p. 132). In meaning-focused tasks, the
students choose the vocabulary and language structures they will use, so the teacher cannot
always predetermine and/or pre-teach the language forms that students will need. Meaning-
focused tasks include argumentative essays, narrative essays, and other types of writing that
students may encounter in the real world, such as blogging about a personal experience.

The available research suggests that language-focused tasks are correlated with greater
attention to linguistic form, such as verb tense, while meaning-focused tasks also encourage
students to focus on lexis, including word choice and word meaning (Alegría de la Colina & Garcia Mayo, 2006; Storch, 2001; Storch, 2017). Based on her extensive experience using collaborative writing tasks in courses focused on developing English for academic purposes, Storch (2017) recommends that teachers consider the proficiency levels of the students and the pedagogical objectives of the course when selecting tasks. For lower-proficiency learners, the teacher may wish to draw students’ awareness to pre-selected language forms, in which case language-focused tasks may be more suitable. In advanced-proficiency classes, she recommends spending more time on authentic meaning-focused collaborative writing tasks.

For collaborative writing projects, teachers must also make decisions related to grouping, including the number of students that will work together and how the groups will be formed. Research shows that students working in groups of two are able to pool their linguistic and content knowledge to support the writing process (Elola & Oskoz, 2010; Kost, 2011). And, groups of four have also been shown to be effective in promoting language learning. In fact, Fernández Dobao (2012b) compared collaborative writing projects completed in pairs and groups of four, and concluded that the groups of four engaged in more deliberations about language and had more correctly resolved deliberations than the students working in pairs. Nevertheless, Storch (2017) prefers using pairs in her practice, noting that in her experience, pairs are most effective in ensuring that each member contributes to the writing task, although she recognizes that with any size of group (from 2 to 40, in the case of a class developing a wiki together), there can be variability in the extent to which students participate equally in the collaborative writing project (see Abrams, 2016; Fernández Dobao, 2012b; Kessler, 2009; Storch, 2002).
Another consideration for teachers using collaborative writing projects is whether to allow students to choose their own partners/groups or to assign partners/groups. When students self-select their partners/groups, they can choose people they are more familiar with and this tends to be associated with more positive experiences with the collaboration (Storch, 2017). More specifically, students who self-selected their partners/groups have reported that they communicated better, had higher levels of comfort and trust, were more willing to share ideas, were more receptive to corrective feedback from their partners, and were more enthusiastic about engaging in group work (Chapman, Meuter, Toy, & Wright, 2006; Hilton & Phillips, 2010; Myers, 2012; Russell, 2010; Storch, 2017). Nevertheless, student-selected pairs/groups are also more likely to spend time off-task (Chapman et al., 2006; Mozaffari, 2017; Storch, 2017).

Mozaffari’s study, which compared the nature of student-selected and teacher-assigned pairs, found that the teacher-assigned pairs engaged in significantly more language-related exchanges, and as a result, they outperformed the student-selected pairs on various measures of writing quality, including fluency, accuracy, and organization. Another benefit of teachers assigning pairs/groups is that they can determine group composition based on the goals of the project, considering such factors as linguistic background and personality (Storch, 2017). Meanwhile, Russell (2010) recommends that teachers support students to develop team building skills in order to break down relational barriers with classmates with whom they are less familiar.

**Web-based collaborative writing.** As some of the aforementioned studies suggest, web-based writing tools, including wikis and Google Docs, are increasing in popularity in both education and research. Google Docs and wikis are similar in that they facilitate collaborative writing by enabling multiple people to edit the same text through an ongoing process of production and collaboration (Leuf & Cunningham, 2001). Another similarity is that they are
web-based, meaning that the developing text is stored on-line, which allows contributors to access the written text from any computer with access to the Internet. A key difference between these two tools is that wikis are asynchronous, meaning that only one user can edit the web-based text at a time, while Google Docs allow editors to make changes to a web-based document simultaneously.

In school contexts, teachers can organize students in pairs or small groups, and then view the revision history and discussion pages or comments to track students’ contributions and edits, which provides insight into how students are co-constructing and co-revising their work. The extant research on wikis and Google Docs in language learning sheds light on the perceived benefits and challenges, implications for learner autonomy and writing skills development, patterns of participation and interaction, and peer feedback and revision behaviours. Each of these facets is discussed in turn below.

**Perceived benefits and challenges.** Research indicates that many students hold favourable perceptions of web-based collaborative writing because it promotes peer-to-peer collaboration (Kost, 2011; Woo, Chu, Ho, & Li, 2011), it enhances opportunities to improve writing skills through correcting and critiquing peers’ work (Aydin & Yildiz, 2014; Elola & Oskoz, 2010; Lee, 2010), and it provides a wider audience for their writing (Lee, 2010). Nevertheless, two studies examining student perceptions revealed a preference for face-to-face collaboration over the unfamiliar and asynchronous nature of wiki collaboration (Kwan & Yunus, 2015; Yusoff, Alwi, & Ibrahim, 2012). More specifically, some of the Malaysian high school students in Kwan and Yunus’ (2015) study felt that on-line communication is more likely to lead to misunderstandings, compared to face-to-face communication.
The wiki technology also has benefits and drawbacks from the perspectives of both students and teachers. Woo, Chu, Ho, and Li’s (2011) study with Grade 5 students in Hong Kong concluded that the PBWiki tool was easy enough for young learners to use and that the wiki’s tracking system enabled the teacher to assess the students’ participation and writing development and to provide ongoing feedback throughout the collaborative writing process. In a larger study, Woo, Chu, and Li (2013) also concluded that the wiki history pages provided teachers with insight into how the students co-constructed and co-revised their work, and allowed them to assess the writing process more easily than would be possible in face-to-face collaboration. On the other hand, Fu, Chu, and Kang’s (2013) study with Grade 5 students revealed that the formatting system of the wiki tool prevented students from achieving the desired organization and appearance of their wiki pages. Two other studies (Kost, 2011; Kwan & Yunus, 2015) also reported that the communication features of the wiki were lacking, and that students opted to use other communication tools (e.g., Facebook, MSN chat) alongside the wiki tool.

**Learner autonomy and writing skills.** Two studies have highlighted the usefulness of wikis in promoting learner autonomy and self-directed learning (Kessler & Bikowski, 2010; Lee, 2010). More specifically, Lee (2010) observed that wiki writing encouraged students to make choices and to initiate sharing ideas with their peers. Kessler and Bikowski (2010) concluded that students demonstrated autonomy as collaborative learners by using language to contribute personal meanings to the group task and by choosing appropriate strategies for communicating with group members.

Web-based collaboration also appears to positively support the development of students’ writing skills. Mak and Coniam’s (2008) study involving high school English learners in Hong Kong found that collaborative writing on the wiki platform led students to produce substantially
more text than anticipated and their writing showed increasing complexity and coherence as the project progressed. Meanwhile, Wichadee’s (2010) study compared students’ English summary writing skills before and after they engaged in a class wiki project. The participants included 35 students enrolled in a university English course in Bangkok. The results from pre-tests and post-tests showed significant improvements in their English summary writing skills, which the researcher attributed to the wiki’s role in encouraging students to learn from others and to write more carefully. Another study by Alshumaimeri (2011) included both an experimental group (which participated in a wiki project) and a control group (which studied writing using traditional methods) as part of an intensive English class at a university in Saudi Arabia. Pre- and post-tests indicated that both groups improved in writing accuracy and quality, but the experimental group significantly outperformed the control group in both accuracy and quality of writing in the post-test.

Meanwhile, Suwantarathip and Wichadee (2014) compared the writing scores of students who collaborated on a writing assignment using Google Docs with those of students writing collaboratively in the face-to-face modality. Participants included over 5000 students enrolled in an English course at a university in Thailand. Using a rubric that measured writing content, language use, and organization, the researchers found that students in the Google Docs groups had higher mean scores compared to students collaborating face-to-face. In contrast, Woodrich and Fan’s (2017) study involving close to 100 linguistically diverse students in a Grade 8 English class found that students working in random groups of four scored higher on a writing task completed face-to-face compared to writing tasks completed using Google Docs. The researchers suggested that variances in the study design, the population, and the task could explain the different results. The researchers also noted that although the face-to-face writing
resulted in higher overall scores, the use of Google Docs led to higher levels of participation among students with varying language proficiencies, especially when they were allowed to remain anonymous. The following section explores the patterns of participation and interaction that have been observed through studies of web-based collaborative writing.

**Patterns of participation and interaction.** The extent to which web-based collaborative writing tools encourage equitable participation and reciprocal interaction is inconclusive. Some studies have found patterns of uneven participation (e.g., Kwan & Yunus, 2015; Lee & Wang, 2013; Li & Zhu, 2013), while others have concluded that wikis encourage more individual participation as each member’s involvement is logged (Elgort, Smith, & Toland, 2008; Yusoff, Alwi, & Ibrahim, 2012).

Storch (2002) described a model for studying dyadic patterns of participation and interaction that consists of two continuums: low to high equality and low to high mutuality. Equality refers both to the extent to which students contribute equally and the degree to which they have equal control over the direction of the task (van Lier, 1996, as cited in Storch, 2002). Mutuality refers to the extent to which students engage with their peers’ work through reciprocal feedback and sharing of ideas (Damon & Phelps, 1989, as cited in Storch, 2002). In her research with adult ESL learners engaged in face-to-face collaborative writing tasks, Storch (2002) identified four distinct patterns of dyadic interaction: collaborative (high equality, high mutuality); expert/novice (low equality, high mutuality); dominant/passive (low equality, low mutuality) and dominant/dominant (high equality, low mutuality). Li and Zhu (2013) and Abrams (2016) subsequently applied Storch’s model to study triads of university students writing collaboratively using wikis and Google Docs respectively. Across these two studies, all four patterns of participation and interaction were also observed. A sub-pattern that emerged in
Abrams’ study was that in five of the nine collaborative writing triads, one participant was more passive than his or her peers, and that student tended to have a lower level of proficiency in the target language. In addition to taking student proficiency levels into account, Li and Zhu (2013) inferred from their findings that more active participation could be facilitated by providing structured training on how to use the web-based tool, evaluating each member’s work individually, and taking group member familiarity into account.

In a follow-up study, Li and Zhu (2017) found that three sociocultural factors helped explain the distinct patterns of interaction that emerged within different groups; collaboration characterized by high equality and high mutuality was dependent upon group members’ willingness and ability to develop convergent goals, to exercise collaborative agency by providing scaffolding and instruction to each other, and to develop harmonious emotions about working together, thus providing an emergent source of motivation. Meanwhile, in Lee and Wang’s (2013) study involving 103 Taiwanese university students creating a wiki-based picture book in English, factors that hindered effective collaboration included asynchronous communication, time pressure, personal incapability, and roles not taken seriously by group members. Lee and Wang (2013) also concluded that the students worked creatively to emphasize each other’s strengths, with more capable English writers taking charge of the writing tasks, while the less capable writers offered ideas and managed the web pages. Future studies should continue to explore the extent to which collaborative writing in a web-based environment facilitates genuine collaboration, whereby students are mutually engaged and support one another throughout the writing process, versus cooperation, whereby students divide the work between the group members.
Peer feedback and revision behaviours. The wiki’s history pages provide detailed information on revision behaviours, making this a popular research strand in L2 learning contexts. A common finding is that L2 writers tend to make more content and meaning revisions than surface or form-related revisions (Kessler, 2009; Woo, Chu, Ho, & Li, 2011; Woo, Chu, & Li, 2013). Kessler’s study, which involved 40 students enrolled in an English Language Teaching program in Mexico, found a “continuum of tolerance regarding form” (p. 90). Students tended not to make corrections to grammar when it did not impede meaning, even though the writing prompt explicitly asked them to strive for accuracy in both content and language. Follow-up interviews revealed that students tended to pay less attention to form because they viewed the wiki as an informal learning environment. Woo et al. (2011) also noted that the spell-check that was accessible through the wiki platform eased students’ cognitive load and enabled them to focus more on content.

The participants in Elola and Oskoz’s (2010) study, university students majoring in Spanish, were found to engage in minimal peer correction during wiki writing because they “did not readily notice problems in their partners’ writing, tended to overlook grammar in favor of content or structure, or thought it inappropriate to discuss grammar because perceived criticism might threaten the establishment of a good working relationship” (p. 62). Conversely, in a study by Lee (2010), university students in a beginner Spanish class were able to help their peers to organize content, as well as to make error corrections for language accuracy during wiki projects; however, in spite of the positive outcomes of the peer revision process, many of the participants expressed reluctance to correct their peers’ mistakes because they lacked confidence with their own language abilities and some expressed the view that they should not change others’ ideas without their consent.
Meanwhile, Liao (2016) studied patterns of peer feedback and negotiation between pairs comprised of one native English speaker and one non-native English speaker as they carried out a collaborative writing task using Google Docs while sitting together. Liao’s analysis focused on the oral and written interactions of six different dyads, as well as follow-up questionnaires and interviews. The results revealed that more discussions about lexis (e.g., word choice, word meanings) occurred during oral interactions, while peer feedback on grammar and mechanics were more prevalent on the Google Docs platform. Moreover, the non-native speakers reported that they benefited more from peer feedback on vocabulary and expressions, while the native speakers reported that they benefited more from peer feedback relating to organization and ideas.

Another interesting finding is that the traditional boundary between writing and revising is blurred when using wikis and Google Docs (Elola & Oskoz, 2010; Strobl, 2014). For example, Elola and Oskoz (2010) noted that when students were working individually, they tended to revise their texts towards the end of the writing process, when they had almost completed their texts, but when working collaboratively using a wiki, the students were more apt to revise their texts throughout the writing process, which resulted in students composing multiple drafts. The researchers hypothesized that “this difference in the correction pattern could be due to the fact that in the collaborative mode the learner has a reader, and this encourages him/her to pay attention to grammatical accuracy as when composing multiple drafts” (p. 62).

In conclusion, collaborative writing has been shown to be an effective pedagogical approach in both first language and second language learning contexts (Yarrow & Topping, 2001; Graham & Perin, 2007; Li & Storch, 2017). Moreover, web-based writing tools, specifically wikis and Google Docs, are gaining recognition as promising tools for facilitating collaborative writing and language learning (Godwin-Jones, 2003; Suwantarathip & Wichadee,
The research evidence also suggests that there are multiple variables for teachers to consider when they decide to integrate web-based collaboration tools into their courses, including choosing grouping methods, providing relevant training, and offering opportunities for students to combine face-to-face and on-line writing methods (Kwan & Yunus, 2015; Li & Zhu, 2013). All of these variables warrant further research in diverse learning contexts.

**Situating the Current Study**

The existing research on web-based collaborative writing has some limitations, which this study aims to address. First of all, much of the research on web-based collaborative writing has taken place in university contexts, while relatively fewer studies have involved school-aged participants – the focus of the current study. Moreover, studies on collaborative writing have tended to focus on either first language learning or second language learning, while this study examined collaborative writing in a classroom that included both native and non-native speakers of English. Exploring the phenomena of web-based collaborative writing in a new context has the potential to yield new insights.

Moreover, the current research study takes a unique perspective on the web-based collaborative writing process by examining the teacher’s role in facilitating the project for his students. Therefore, in addition to viewing the Google Doc history pages and carrying out interviews with the students and the teacher, I conducted classroom observations throughout the narrative writing unit, collecting field notes and gathering ongoing reflections from the teacher. Taken together, these data sources allowed me to describe the complexities inherent in the teaching and learning environment as the teacher supported his students from diverse backgrounds to develop their narrative writing skills through a collaborative writing project. In
the next chapter, I provide more details on the collaborative writing project and the research methodology used in this study.
Chapter Three: Methodology

This chapter constitutes an account of the research methodology used in this descriptive case study. To begin, I provide an overview of qualitative inquiry and explain how my philosophical beliefs align with this approach. An outline of my role as researcher follows. I then explain how the qualitative approach facilitated this study and why descriptive case study was my chosen methodology before detailing some of the characteristics of the selected case (i.e., the focal classroom). In the latter part of this chapter, I describe the three phases of the research project and outline the data collection methods that I used to explore my research questions.

Qualitative Inquiry

Qualitative research is often referred to as naturalistic inquiry because qualitative researchers study research problems within their natural settings. Naturalistic inquiry is an interpretive approach to the world and the researcher seeks to make sense of the phenomena of study by exploring the meanings the participants attach to their experiences (Denzin & Lincoln, 2011). Qualitative researchers gather data up-close by talking directly to people and observing them within their environments, such as by studying the interactions between parents and children in their homes or between students and teachers in classrooms.

Qualitative research aims to understand and describe, rather than seek explanation or causation. Creswell (2013) notes that qualitative researchers are “bound not by tight cause-and-effect relationships among factors, but rather by identifying the complex interactions of factors in any situation” (p. 47). In order to understand and elucidate the complexity of the phenomenon under study, the qualitative researcher seeks a plurality of voices, gathers multiple sources of data, and spends considerable time observing and analyzing the different facets of the phenomenon.
Qualitative research involves both inductive and deductive logic. The approach to data analysis in qualitative research is usually inductive; the researcher works from the “bottom-up,” identifying themes and building patterns, categories, and hypotheses from the data gathered (Creswell, 2013). This inductive approach enables the researcher to uncover emergent themes that may be particular to the local research setting. And, as noted by Miles, Huberman, and Saldaña (2014), by following an inductive approach, the researcher shows that “[he or she] is open to what the site has to say rather than determined to force-fit the data into [pre-existing categories]” (p. 81). Nevertheless, qualitative researchers also use deductive logic by continually checking the themes that emerge against the data. Creswell (2013) explains that “the inductive-deductive logic process means that the qualitative researcher uses complex reasoning skills throughout the process of research” (p. 45).

All researchers enter into the inquiry process with pre-formed beliefs and theories, which lead them towards particular types of research problems or methods of data collection. Creswell (2013) points out that these beliefs, or philosophical assumptions, originate from our educational training, through the academic journals we read, the advice we receive from our supervisors, and the scholarly communities we engage with at conferences. In the following section, I will describe some of the philosophical assumptions that underpin the decisions I made as I designed and conducted my study.

**Philosophical assumptions.** Over the past couple of decades, scholars have articulated a set of beliefs that set the qualitative or naturalistic paradigm apart from a quantitative or positivist paradigm. Drawing on the four editions of The Sage Handbook of Qualitative Research (Denzin & Lincoln, 1994, 2000, 2005, 2011) and the set of “axioms” presented by Lincoln and Guba (1985), Creswell (2013) presents an overview of four philosophical assumptions inherent
to qualitative research. To follow, I will describe how my own beliefs correspond with the philosophical assumptions presented in Creswell’s work.

**Ontology.** The first assumption concerns the researcher’s beliefs about the nature of reality (ontology). One of the reasons I chose to adopt a naturalistic inquiry stance is that I believe that multiple realities exist. My beliefs coincide with Merriam’s (1988) position that “the world is not an objective thing out there but a function of personal interaction and perception” (p. 17). In order to capture the diverse perspectives of research participants, I believe it is important to collect multiple sources of evidence from different stakeholders. In the present study, in order to gain a deep understanding of the collaborative story writing process, it was important for me to learn about the experiences and perspectives of the teacher and the students. It was also important for me to triangulate the data from the different sources to ensure that the conclusions are credible and trustworthy (Yin, 2014). In my original research proposal to my committee, I had not intended to collect field notes, but as I began collaborating with the teacher, I realized that observing his classes would provide valuable data that could be used to gain greater insight into the research context and allow me to describe how the collaborative writing project was integrated within the existing curriculum.

**Epistemology.** The second assumption concerns what counts as knowledge and how this influences the researcher’s relationship with the participants (epistemology). Because qualitative researchers believe that truth originates from “the subjective experiences of people,” they attempt to position themselves as “insiders,” getting close to and even collaborating with the participants throughout the study (Creswell, 2013, pp. 20-21). I observed 16 classes throughout the unit in order to gain an insider perspective of what was happening during the writing process. I also collaborated with the teacher at different stages. My role involved providing the teacher
with insights from previous research using web-based tools to support the collaborative writing process; discussing ideas with the teacher, such as the genre for the collaborative writing activity; and participating minimally during class activities. Although I wanted to gain an insider perspective of the research context, I was also conscious of not becoming too involved as my goal was to observe what was happening in its natural context without exerting control over the direction of the project. Having said that, I also recognize that simply by being present in the classroom observing, I was influencing how the participants behaved.

**Methodology.** The third assumption relates to the researcher’s beliefs about the methods that should be followed when carrying out the research (methodology). Creswell (2013) highlights three characteristics of the methods that qualitative researchers, such as myself, will normally adhere to: (1) using inductive logic; (2) following an emergent design; and (3) studying the phenomenon in its natural context. An *inductive logic* means that themes and hypotheses emerge from an analysis of the data. Interestingly, when I was recruiting students for the study and I had just explained the research objectives to the class, a student put up her hand and asked me what I was hoping to find. I responded that as a qualitative researcher, I had not formulated a hypothesis; my aim was to learn as much as I could about the collaborative writing process within this particular classroom context. Throughout the research study, I remained open to new insights. An *emergent design* allows the researcher to adapt the research methods in light of new insights that emerge as the study progresses. According to Dörnyei (2007), “this flexibility even applies to the research questions, which may evolve, change, or be refined during the study” (p. 37). Before beginning the present study, the primary objective of the study was to explore the writing process of linguistically diverse learners, but as the research got underway, I realized that
I was learning a lot more about how the teacher facilitated the collaborative writing project, and this became the central focus of my study.

In addition to the methodological considerations presented in Creswell’s work, I chose to adopt a recursive process in which I went back and forth between data collection and analysis. For example, as I was typing up the field notes after each class observation, I read through my notes to identify the roles and responsibilities of the teacher during the lesson, as well as possible affordances and constraints of the learning environment. In this way, themes were beginning to emerge early on, and I was able to use some of these themes during my initial coding.

**Axiology.** The fourth assumption relates to the role of values in the research process (axiology). As a qualitative researcher, I acknowledge that my research is “value-laden,” and I must strive to be transparent about my biases in my reporting, while sharing my interpretations of the phenomenon alongside those of my participants (Creswell, 2013, pp. 20-21). In the next section, I will provide information on my background to shed light on some of my experiences and beliefs that have shaped this research study.

**Role of the researcher.** Qualitative data obtained through interviews, observations, and other means are mediated through the researcher. As such, it is important for readers to know about me, including my past experiences, values, and biases. Herein, I present an overview of my background and then discuss my positionality in the research process.

**My background experiences.** I was raised by two teachers. My parents were university graduates and they both worked at our local high school. My mother predominantly taught English and Math, and my father taught English and Western Civilization. From a young age, my parents instilled in me a love of languages. At home, my father gave Latin lessons to my brother and I when we were young. I can still remember the orange books we used with pictures of all of
the family members and their corresponding names in Latin. At the time, I could not understand why we were studying a language that was not spoken, but later, when I was studying romance languages that evolved from Latin, specifically French and Spanish, I started to appreciate the value of learning the root words.

Writing is an activity that I enjoy, and for the most part, it has come easily to me. I was fortunate to have developed a strong foundation in writing during high school, and I honed my writing skills in university. Whenever I was assigned an essay to write, I regarded it like a puzzle. After researching and gathering ideas, I could spend hours playing around with the best way to express and organize those ideas. My father was integral to my success in writing; he would often read over my essays and provide constructive feedback and advice, as well as praise me on my writing abilities, which gave me confidence to continue in my studies.

When I started taking upper-level Spanish courses at university, the task of writing became more difficult. I could no longer rely on my ear to tell me what sounded right, and instead I had to fall back on the grammar and syntax rules I had learned in beginner-level courses. Word choice was particularly difficult as I could not always identify which word was the most appropriate in a given context. Again, I relied on others to assist me when it came time to edit my writing. In spite of these challenges, I enjoyed writing in Spanish and I was motivated by a feeling that I was making progress in writing in another language.

As a teacher, I continuously strove to assign writing tasks that were meaningful and appropriately scaffolded for students’ writing abilities and linguistic levels. Some of these tasks included writing articles for a school newsletter, writing letters to pen pals in Mexico, writing stories based on pictures, and writing riddles following a model. My approach to teaching writing is based on the belief that if the topic is not engaging or the task is either too easy or too
difficult, writing becomes a chore and students are not engaged. My aspiration to create supportive writing environments for language learners has not only influenced my teaching practices, but it has also led me to design this study, in which I explore the teacher’s role in web-based collaborative writing projects, since collaborative writing and digital tools have been identified as effective scaffolding supports for adolescent learners (Graham & Perin, 2007).

My positionality within the study. As a qualitative researcher, I was the primary instrument of data collection via the methods of interviewing and participant observation. Because I played such a direct and intimate role in the data collection process, my membership in the study context is an important consideration (Dwyer & Buckle, 2009). By membership, Dwyer and Buckle are referring to the researcher’s position as “an insider, sharing the characteristic, role, or experience under study with the participants, or an outsider to the commonality shared by participants” (p. 55). There are benefits and drawbacks to each position. A key benefit of being an insider is acceptance: “one’s [insider] membership automatically provides a level of trust and openness in your participants that would likely not have been present otherwise” (p. 58). On the other hand, as an insider, “the researcher’s perceptions might be clouded by his or her personal experience [with the phenomenon of study] and… as a member of the group he or she will have difficulty separating it from that of the participants” (p. 58). Identifying my position as insider or outsider in the current study is difficult. Due to my teaching experience and current position working in the field of education, the principal and teachers at the high school would likely have viewed me as a colleague. This shared status afforded me access to the school and a common ground from which to start talking about the collaborative writing project that was the focus of the research study. I also have a lot in common with the teacher participant; we both come from middle-class Caucasian backgrounds and we were born
and raised in Canada; we both pursued a teaching degree and have experience working with students from diverse linguistic backgrounds; and, we are both striving to improve teaching and learning by trialing new approaches and examining the impact they have on student learning.

With respect to the students in this study, I can relate to some of their educational experiences, such as the practice of working collaboratively with others. Nevertheless, I do not share a common cultural background with the majority of them; in fact, seven of the eight participants were born outside of Canada, and so part of their high school experience has been integrating into a new culture, and in some cases, a new language as well. Due to the commonalities and differences between myself and my research participants, I would say that I occupy the position of both insider and outsider, or “the space between,” which Dwyer and Buckle (2009) present as an alternative to the over simplistic “dichotomy of insider versus outside status” (p. 60).

Choosing qualitative research for the current study. This section articulates how the qualitative paradigm was most advantageous for inquiring into the teacher’s facilitation of a collaborative story writing project using Google Docs. Specifically, the qualitative approach enabled me to develop a holistic account of the multifaceted nature of the research phenomena, to jointly construct understandings by interacting and collaborating with my research participants, and to be responsive and flexible to the needs of my participants and to new insights that emerged.

Developing a holistic account of the research context and the research problem. Qualitative research facilitates a complex and detailed understanding of the research setting and the phenomena that is being explored. Because this study was guided by the notion that “technologies are intricately related to many other elements of the learning context”
(McLoughlin & Lee, 2007, p. 666), it was important for me to be present in the classroom observing and interacting with the teacher and students. In this way, I could develop a multifaceted picture of the learning environment and the means by which the collaborative writing project using Google Docs was integrated into the existing curriculum. In addition to the field notes taken during class observations, I had the opportunity to interview the participants and view their writing as it progressed. In this way, I could identify the complex interaction of variables involved and describe the bigger picture that emerged through an analysis of these different variables (Creswell, 2013).

**Constructing understandings alongside my participants.** Guided by the belief that our understandings of the world are socially-constructed, I watched the teacher and students’ interactions over time and I dialogued with them about their experiences. This approach helped facilitate my understanding of the meanings that the participants attached to their experiences. As noted by Creswell (2013), participant meanings suggest “multiple perspectives on a topic and diverse views” (p. 47). As themes emerged in my analysis, I was committed to ensuring that I was identifying and describing the multiple perspectives of the different participants in the study.

I also had the privilege of collaborating with the teacher before, during, and after the collaborative writing project. At the outset of the study, we met to discuss project ideas and some of the parameters that would guide the project; through this collaboration, we were able to draw on our prior experiences and understandings of effective teaching practices and approaches. As the project got underway, the teacher and I consulted regularly. I also supported him by finding an elementary class to serve as an audience for his students’ stories and I provided him with some relevant resources, including Will Richardson’s (2010) book entitled, “Blogs, wikis,
podcasts, and other powerful web tools” and a chapter by Neomy Storch (2017), entitled “Implementing and assessing collaborative writing activities in EAP classes.”

Finally, after the project had wrapped up and I had analyzed the data, the teacher was invited to read over the findings and provide feedback. I sent a draft copy of Chapters 4 and 5 of this dissertation to the teacher and asked him to comment on the extent to which the findings resonated with his experiences and to consider whether anything needed to be changed or added to ensure an accurate representation of his intended meanings. Tong, Sainsbury, and Craig (2007) note that participant validation “adds validity to the researcher’s interpretations by ensuring that the participants own meanings and perspectives are represented” (p. 356). Moreover, Birt, Scott, Cavers, Campbell, and Walters (2016) assert that if the findings are to be used as evidence to change practice, then it is imperative that the participants can see their experiences within the results. After reading a draft report of the findings, Mr. Towers wrote in an e-mail that “the paper reflects an accurate portrayal and true sense of the classroom experience” and that his “reflections at the time still resonate now as [he] read through the paper."

**Being responsive and flexible.** While quantitative research requires a standardized approach to data collection, qualitative research supports responsivity and flexibility. By adopting a naturalistic inquiry approach, I was not obligated to control any variables, such as who was present or what order the learning activities took place. Instead, I exercised flexibility and adapted to the needs of the teacher and his students. This flexibility also extended to the research process, which was emergent in nature. As noted by Creswell (2013), “the key idea behind qualitative research is to learn about the problem or issue from participants and engage in the best practices to obtain that information” (p. 47). This emergent design allowed me to adapt
my data collection instruments, such as the post-project interview questions, in light of new information that was emerging. Similarly, if I encountered a puzzling phenomenon during the course of the study, I could check in with my participants to develop a better understanding of what I was observing.

**Descriptive case study.** Case study is “an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context” (Yin, 2014, p. 16). Case studies are particularistic, meaning that they focus on a specific person, situation, event, or phenomenon (Merriam, 1988). One of the first steps in designing a case study is to define the case or unit of analysis to be studied. In educational studies, the case might be a program, a student, a teacher, a classroom, or an entire school. Defining the parameters of who or what could be included as a case, as well as the time frame for the study, is referred to as “binding the case” (Yin, 2014, p. 33). Due to its “specificity of focus,” case study is “an especially good design for practical problems – for questions, situations, or puzzling occurrences arising from everyday practice” (Merriam, 1988, p. 11).

Another key strength of case study research is that it supports “a rich, ‘thick’ description of the phenomenon under study” (Merriam, 1988, p. 11). In order to produce a “thick” description, the case study researcher collects multiple sources of data over an extended period of time. Data sources commonly include interviews, observations, documents, and artifacts (Yin, 2014). Creswell (2013) notes that the written report should provide a thorough description of the case, as well as the themes and issues that emerge through an analysis of the different data sources. This detailed description enables readers of the report to consider whether the findings resonate or are applicable to their contexts.
Supporting theory development is one way that case studies contribute to the cumulative body of knowledge within a field of study (Flyvbjerg, 2011; Merriam, 1988). When conducting a descriptive case study, the researcher begins by articulating a theory, and then, after collecting and analyzing the data, the researcher considers how the patterns that emerged fit within the proposed theoretical constructs. In this manner, the findings from the study can be used to corroborate, contradict, and further inform and shape existing theories (Tobin, 2010).

**Descriptive theories used in this study.** The overarching theory that guided this study is Vygotsky’s (1930/1978) sociocultural theory of learning, which proposes that learners acquire both spoken and written language through socially-mediated activity. Drawing on sociocultural theory and the role of scaffolding in teaching and learning, Englert, Mariage, and Dunsmore (2006) describe writing instruction according to three principles. The first sociocultural principle of writing is that teachers provide students with *socio-cognitive apprenticeships in writing* (Englert et al., 2006). Within this framework, the teacher’s role is to provide modeling, as well as shared and guided practice, on different aspects of the writing process, so that students come to understand the ways in which skilled writers approach the writing task and how they resolve issues that arise in the midst of writing. The second sociocultural principle of writing is that the teacher provides *procedural facilitators and tools*, such as graphic organizers and mentor texts, that help to offset the significant cognitive demands involved in writing (Englert et al., 2006). The third sociocultural principle of writing is that the teacher creates a *community of practice* by providing opportunities for students to engage in dialogue and to receive and provide peer feedback during the writing process (Englert et al., 2006).

This study is also guided by the affordance framework proposed by Kirschner, Strijbos, Kreijns, and Beers (2004) to support the design and implementation of electronic collaborative
learning environments. The term “affordance” was originally coined by Gibson (1977) to
describe what an environment affords an animal to facilitate its survival. Other theorists,
including Kirschner et al. (2004), have extended this concept to describe what a particular
learning environment affords students, which in turn facilitates their learning.

Kirschner et al. (2004) suggest that when teachers incorporate digital tools into the
curriculum, it is important to attend not only to the technological prerequisites for collaboration
(e.g., access to and training on particular digital technologies), but also to the educational and
social elements of the teaching and learning environment (i.e., the pedagogy and the social
interactions respectively). I drew on Kirschner et al.’s (2004) classification system when
formulating my second research question that inquired into the affordances and constraints
associated with the pedagogical supports, the social context, and the use of Google Docs in a
culturally and linguistically diverse classroom. Through this research question, I sought to
identify characteristics of the digital technology (Google Docs) that either facilitated or hindered
learning (i.e., technological affordances and constraints); characteristics of the teaching strategies
that either facilitated or hindered learning (i.e., pedagogical affordances and constraints); and
characteristics of the peer dynamics that either facilitated or hindered learning (i.e., social
affordances and constraints). After the data was analyzed, I examined the extent to which the
findings corroborated the aforementioned theoretical constructs, and included this consideration
as part of the discussion in the final chapter of this dissertation.

**Summary of research design.** To follow is a summary of my beliefs as they relate to my
chosen research design, including the methodological steps I followed, my role as researcher,
and my rationale for choosing the qualitative paradigm and the descriptive case study method.
• I regarded the study design as emergent, which allowed me to refine the data collection methods and research questions according to what I was learning.

• I acknowledge that qualitative research is inherently value-laden. My own experiences with and beliefs about the writing process and the nature of teaching and learning influenced both my research design and my interpretation of the data. As I analyzed the data, I remained focused on understanding the meanings that my participants attached to their experiences, and I shared their perspectives alongside my own interpretations.

• I believe that our understandings of the world are socially-constructed; a sociocultural perspective on learning frames both the way in which I gathered my data (developing an understanding of my participants’ experiences and perspectives by entering into dialogue with them), as well as the collaborative project that was chosen as the focus of this study (students working in a supportive learning environment to co-construct a story to be shared with an audience of elementary students).

• I spent considerable time observing the phenomena of study within its natural environment and I collected multiple sources of data. These two factors facilitated a richer description of the research context and allowed me to develop a multifaceted understanding of the phenomenon I was investigating.

• I strove to find a balance between seeking insider status by collaborating with the teacher, while also ensuring that the teacher made the key decisions based on his knowledge of his students and the curricular objectives. Moreover, due to the commonalities and differences between myself and my research participants, I occupied the position of both insider and outsider, or “the space between” (Dwyer & Buckle, 2009, p. 60).
I chose to use a descriptive case study methodology; as such, my aim was to explore how the findings corroborate the theories that I articulated above.

In the written report, I endeavored to provide a thorough description of the case, as well as the themes and issues that emerged through an analysis of the different data sources. It is my hope that this detailed description will enable readers of the report to consider whether the findings resonate or are applicable to their contexts (Creswell, 2013).

Overview of the Study

My research focused on one bounded case of a Grade 11 English class as the teacher and students engaged in a collaborative story writing unit. In this section, I explain the criteria and steps that were taken to choose this case, and I provide a description of the school and classroom context, as well as the teacher and student participants. Next, I describe the three phases of the study, which included the initial interview and project planning with the teacher, the narrative writing unit and collaborative writing project, and the follow-up interviews with the teacher and students. In the final section, I detail the data collected methods that I used to explore my research questions.

Case selection. The criteria for choosing the selected case was that the students were from diverse linguistic and cultural backgrounds and that the teacher was interested in integrating a collaborative writing project using web-based tools to develop his students’ writing skills. I identified an independent high school that enrolled both Canadian-born and international students. I began by explaining the study objectives to the principal and obtained her consent to recruit teachers within the school. The principal then provided me with an opportunity to attend a staff meeting to introduce my research study to the teachers. After explaining the study objectives and research design to the teachers, I circulated a paper for them to write their names
and contact information if they were interested in discussing the project further. I contacted each of the teachers whose names were on the list and then met individually with two teachers who expressed continued interest in integrating a collaborative writing project for their students during the current school year.

I had received ethics approval from the University of Victoria for my study prior to visiting the school. Nevertheless, upon learning that the students and the teachers at the school were already using Chromebooks and G Suite for Education tools, I submitted a request for modification of the approved protocol, which included changing from “wiki-mediated collaborative writing” to “web-based collaborative writing” (the students in the focal classroom used Google Docs for their collaborative writing project, rather than a wiki). I also clarified that the study would be taking place in a high school setting and I revised “students with mixed English language proficiency levels” to “students with diverse linguistic backgrounds” (recognizing that the students at the selected school came from many different countries). Once I received approval for these modifications, I sent the recruitment script (Appendix A) and consent letter (Appendix B) to the two teachers by e-mail. Both teachers consented to participate in the study. However, as the collaborative writing project unfolded, it became apparent that only one of the classes was providing the robust data that I required to answer my research questions, and this classroom became the focus of my dissertation study.

The participating teacher’s name was Mr. Towers (pseudonym). After meeting with Mr. Towers on two different occasions to discuss the research and the parameters of the collaborative writing project, he allowed me to come into his classroom to recruit students for the study. I created a PowerPoint based on the student recruitment script (Appendix C) that had been approved by the ethics board and presented it to the students. I provided an opportunity for
students to ask questions and I provided copies of the student consent form (Appendix D) and a letter for them to take home to their parents/guardians (Appendix E). They were encouraged to return the form in a timely manner (within 2 days), and if they did so, their names were entered into a draw for a $50 gift card. One student was absent when I came in to talk about the research study, so we provided a few extra days for him to return to class and take the form home overnight. In the end, all nine students in the class returned the consent form and they were all included in the draw which took place during class time. It is important to note that on the consent form, the students had the option of consenting or not consenting to participating in the research study so that the draw was not seen as an inducement to participate. Of the nine students, eight consented to participate.

**Case description.** The focal classroom was a New Media 11 class located within a small independent high school in British Columbia. The school is culturally and linguistically diverse and more than half of the students are born outside of Canada. Both domestic and international students pay tuition fees to attend the school. When students arrive with lower levels of English, they begin in the English language program before transitioning into English courses that follow the BC Curriculum and are required for graduation. The school is a 1:1 Chromebook school, which means that all of the teachers and students have Chromebooks (small laptops running the Google Chrome operating system). From their Chromebooks, the teachers and students log into their G Suite for Education accounts to access a set of web-based applications that facilitate communicate and collaboration.

New Media 11 is an English course that is focused on “affording numerous opportunities [for students] to demonstrate understanding and communicate increasingly sophisticated ideas through a wide variety of digital and print media” (B.C. Ministry of Education, 2018, p. 1). The
teacher had approximately 12 years of teaching experience, but this was his first time teaching the New Media 11 course. He volunteered to participate in the study because he wanted to gain a deeper understanding of how a collaborative writing project using web-based tools could be used to improving teaching and learning within his teaching context. The New Media 11 class was small and diverse. Of the eight participants, only one was born in Canada and the others originated from the United States, England, Russia, Ghana, Singapore, and Vietnam. Six of the students were native English speakers and two were non-native English speakers. More details about the teacher and student participants are provided in Chapter Four to contextualize the study further.

**Phases of data collection.** The data for this study was collected over a 5-month period, beginning at the end of January 2018 and concluding in the middle of June 2018. Table 3.1 outlines the three phases of the data collection process. Each phase is described in more detail in the pages that follow.

**Table 3.1**

**Phases of the Study**

| Phase one  
(January - February, 2018) | I conducted an initial interview with the teacher. I met with the teacher to discuss ideas for a web-based collaborative writing project, drawing on key learnings from prior research. |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Phase two  
(April - June, 2018) | The teacher taught a narrative writing unit, which included a collaborative writing project. I observed the lessons and wrote field notes. Students engaged in the collaborative writing process. The teacher wrote ongoing reflections, based on guiding questions I provided. |
Phase three (June, 2018)

I conducted follow-up focus group interviews with the students and a post-project interview with the teacher.

**Phase one: Initial interview and project planning.** An initial interview with the teacher was conducted to gain an understanding of his prior experiences in two key areas: supporting learners in a web-based learning environment and using collaborative writing activities. The interview was conducted in his classroom on a non-teaching day. Following the interview and at a subsequent meeting, we discussed project ideas. To guide our discussion, I provided an overview of some lessons from prior research, which are outlined below. The italicized sections explain how each lesson from prior research was executed within this study.

- It is important for teachers to use a web-based collaborative writing tool with a formatting system that will be intuitive for students to use and understand (Fu, Chu, & Kang, 2013). *Because the students and teacher were already familiar with Google Docs, the teacher opted to use this tool for the collaborative writing project.*

- A writing task that is authentic (e.g., meaningful outcome, real audience) can boost confidence and inspire creativity (Mak & Coniam, 2008). *After considering different writing genres, the teacher decided to engage his students in a story writing project. They would write their stories using Google Docs and then create a digital presentation of their story to share with a Grade 6/7 class at a nearby elementary school.*

- Even when students are “digital natives” (Prensky, 2001), instructional scaffolding on the use of the technology is important (Cole, 2009). Li and Zhu (2013) suggest that teachers provide an opportunity for students to engage in a task in which they practice using the key features of the web-based tool. *The students had been using the Chromebooks since*
the beginning of the course and they engaged in smaller collaborative writing tasks using Google Docs prior to beginning the story writing project. The teacher provided instruction on key features as needed.

- Some students appreciate having an opportunity to brainstorm ideas face-to-face before they engage in the web-based collaborative writing process (Kwan & Yunus, 2015). The teacher built face-to-face brainstorming into his lesson planning.

- Teachers should experiment with the roles they adopt during web-based collaborative writing projects (Kessler, 2009). The teacher adopted a variety of roles, which will be outlined in the findings chapter.

- Teachers should clarify how they will be assessing the process and product of the collaboration. An overview of the assignment is provided below and the assessment rubric that the teacher gave to the students is shown in Appendix H.

- Web-based collaboration is “inherently complex, and students may find their role to be potentially ambiguous” (Kessler & Bikowski, 2010, p. 56). Teachers can discuss these challenges with students and provide ongoing opportunities for students to develop their “collaborative autonomous language learning abilities” (p. 56). The teacher dialogued with students about their roles and he engaged students in small collaborative writing tasks before they started the story writing project. These tasks are outlined in the following section.

**Phase two: Collaborative writing project.** Phase two began with Mr. Towers introducing the collaborative short story writing project to his students. He explained that their task would be to “write a well-written, creative and engaging short story that uses the given topic in some significant way.” The topic provided was “the future,” based loosely on the novel 1984 by
George Orwell, which they had read as a class. To follow are some other guidelines provided to the students both verbally in class and posted as an assignment on Google Classroom:

- You will be working in groups (likely 2 or 3).
- The topic must deal with some aspect of the future. Your group can take this in any direction you choose. You could present a dystopian and utopian view of the future.
- There is no firm length on the story, but it should be appropriate in length (i.e., more than a few pages but less than a novel!).
- In a lead-up to the final completed story, you will be completing several smaller assignments individually and in your group to develop key aspects of story writing (character, setting, descriptive writing) and get comfortable working collaboratively.
- Peer editing will be a regular part of this assignment. You will be expected to regularly and formally edit your own work as well as other students’ work.
- All work MUST be created through Google apps (Docs, Slides, etc.) unless otherwise instructed.
- There will be a presentation aspect to this assignment where you will be expected to create a digital performance of your finished story. This presentation will (potentially) be played for elementary students.
- You will be assessed on writing style, content, organization and conventions of writing as well as your final digital presentation.

Audience. At the outset of the project, Mr. Towers expressed an interest in finding an elementary school class who could be an audience for his students’ collaboratively written stories. I offered to help find an elementary teacher who would be willing to have the Grade 11
students come by to share their stories. We identified a teacher at an elementary school within a couple of kilometers of the high school. It was a Grade 6/7 split class.

*Instructional sequence and activities.* After introducing the project, the teacher began a series of lessons to support students with developing their understandings of narrative writing. Weeks one and two focused on setting descriptions. Week three focused on character descriptions and conflict. In weeks four to seven, students worked on their stories, with the latter two weeks also focused on peer and teacher editing and revising; in the final week, students were also asked to create a digital presentation of their stories. An overview of the tasks the teacher and students engaged in throughout the narrative writing unit is provided in Table 3.2

**Table 3.2**

*Narrative Writing Unit Overview*

<table>
<thead>
<tr>
<th>Task</th>
<th>Mode of Representation</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Brainstorm components of a story</td>
<td>Orally, as a whole class. Teacher wrote notes on the board.</td>
<td>Mr. Towers asked students about the different components of a short story. As they shared ideas (e.g., tone, description, characters, setting, conflict), he wrote them up on the board. He also drew a diagram demonstrating rising and falling action, and made connections to stories they had read.</td>
</tr>
<tr>
<td>2) Study descriptions of settings</td>
<td>Orally, as a whole class.</td>
<td>Mr. Towers put setting descriptions from published works on the screen and read them aloud. He then called on students to identify words they liked and prompted them to consider the effect that the author’s word choice had and/or the mood it created. The teacher moderated the discussion and pointed out strategies used by the authors (e.g., alliteration).</td>
</tr>
<tr>
<td>3) Describe a place that is important to them</td>
<td>Individually, using Google Docs, followed by class sharing and discussion</td>
<td>The students were asked to write a 5-sentence description of a place that was important to them. They were encouraged to create a mood through their choice of words. After finishing, they shared their descriptions electronically with the teacher and he projected them up on the screen (with the intention of making them anonymous). He then read them aloud and invited students to discuss which words they liked and why.</td>
</tr>
<tr>
<td>4) Use descriptive language to describe images of places</td>
<td>First, orally, as a whole class, and then students worked individually to contribute words to create 3 class word clouds</td>
<td>The teacher placed four different images of places on the screen. For the first image, the teacher asked students to brainstorm adjectives or descriptive phrases as a class. For the following three images, students input words into a website that created a word cloud. Words that were entered by multiple students appeared larger. The teacher shared each word cloud on the screen and provided feedback by emphasizing which words were effective and which words could be more descriptive.</td>
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<td>---</td>
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<tr>
<td>5) Write a paragraph describing a chosen image of a scene.</td>
<td>Students worked in groups of 2/3, using Google Docs</td>
<td>Students were instructed to begin by choosing an image of a place through a Google image search. They were also encouraged to create a mood through the description of the place. After choosing an image, each pair/triad then began writing and the teacher circulated to provide support. In the next class, the teacher shared their setting descriptions on the screen (anonymously) and invited students to talk about words they liked, what words confused them, or how the words made them feel.</td>
</tr>
<tr>
<td>6) Brainstorm what is important to know about a character</td>
<td>Orally, as a whole class.</td>
<td>Mr. Towers called on students to identify what is important to know about the character of a story and he wrote their ideas on the board to create a mind map. He also talked about character types (e.g., protagonist, antagonist, character foil) and asked students to identify examples from literature.</td>
</tr>
<tr>
<td>7) Describe characters based on images portrayed on screen</td>
<td>In groups of 2/3 using pen and paper</td>
<td>The teacher handed a large paper to each pair/triad and a different coloured ink to each group member. He proceeded to put images of characters on the screen and asked students to write descriptions of the people. The teacher prompted students to imagine key aspects of the character (e.g., How old is he? What’s on her mind?). After each image, the teacher asked the students to share their ideas aloud and he provided feedback.</td>
</tr>
<tr>
<td>8) Write a paragraph describing a chosen image of a person</td>
<td>In groups of 2/3 using Google Docs</td>
<td>One person from each group was asked to open a new Google Doc and then share it with his/her peers. From there, they were instructed to choose a Google image of a person (not famous) and to describe the person. In the subsequent class, he asked students to submit their Google Docs. He then put the image of their chosen characters on the board and asked them to describe the character. He prompted them to add more details (e.g., What are his challenges?) and asked other students what else they wanted to know about the characters.</td>
</tr>
<tr>
<td>9) Write three conflicts that their character is facing</td>
<td>In groups of 2/3 using Google Docs</td>
<td>After leading a discussion about what makes a good conflict, the teacher instructed the students to use the same Google Doc as in the previous task and to add 3 conflicts their character was facing. When they were</td>
</tr>
</tbody>
</table>
10) Brainstorm ideas for their own stories

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10) Brainstorm ideas for their own stories</td>
<td>In groups of 2/3, using pen and paper</td>
</tr>
</tbody>
</table>

11) Planning their stories

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11) Planning their stories</td>
<td>In groups of 2/3 using Google Docs</td>
</tr>
</tbody>
</table>

12) Writing their stories

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12) Writing their stories</td>
<td>In groups of 2/3 using Google Docs</td>
</tr>
</tbody>
</table>

13) Peer editing

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13) Peer editing</td>
<td>Google Docs (exchanging stories with another group)</td>
</tr>
</tbody>
</table>

14) Creating a digital story

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14) Creating a digital story</td>
<td>In the same groups, using Pixton, Google Slides, and Screencastify</td>
</tr>
</tbody>
</table>

For the collaborative tasks outlined above, the students worked in different pairs/groups. For Task #5, Mr. Towers chose the pairs/triad. The students then self-selected their partners for
Task #7, and they continued to work with the same peers for Task #8 and Task #9. Before Task #10, Mr. Towers formed the pairs/triad that they would work with for the main story writing project. Once the students had finished brainstorming ideas for their stories, he shared a Google Doc with each group. The Google Docs contained the 4 guiding questions that they would use to plan their stories before they began writing.

**Phase three: Post-project interview with teacher and focus group interviews with students.** When the collaborative writing project drew to a close, I conducted a post-project interview with the teacher and focus group interviews with the students in order to gain further insight into their experiences with the collaborative story writing project. These interviews are elaborated upon in the following section on data collection methods.

**Data collection methods.** To facilitate triangulation of the data, a variety of data sources were collected, including field notes derived from 16 class observations, teacher and student interviews, teacher reflections, students’ collaborative story writing projects, and other miscellaneous artifacts. Each of these data sources are outlined in Table 3.3 and explained in detail on subsequent pages.

**Table 3.3**

**Data Sources and Collection Methods**

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Tools</th>
<th>Description/Purpose</th>
<th>Frequency/Duration/Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class observations of in-class writing lessons and activities</td>
<td>Field notes taken by hand following unstructured observation protocols. Notes typed up on computer afterwards.</td>
<td>To gain an in-depth understanding of the process the teacher and students went through in preparing for and writing the short stories, including the teacher’s role and class interactions.</td>
<td>16 classroom observations over the duration of the collaborative story writing unit (7 weeks).</td>
</tr>
<tr>
<td>Teacher interviews</td>
<td>Semi-structured interview protocols (MacBook Pro running Audacity audio software)</td>
<td>To establish a detailed understanding of the teacher’s experiences and perspectives in relation to the web-based collaborative writing process.</td>
<td>An initial interview (30 minutes in duration) was carried out before the collaborative story writing project was introduced, and a post-project interview (60 minutes in duration) took place at the end of the unit.</td>
</tr>
<tr>
<td>Teacher reflections</td>
<td>Google Docs (guiding questions provided by the researcher)</td>
<td>To collect an ongoing record of the teacher’s perspectives at different points throughout the unit.</td>
<td>5 reflections, on a weekly or semi-weekly basis.</td>
</tr>
<tr>
<td>Focus group interviews with students</td>
<td>Semi-structured interview protocol (MacBook Pro running Audacity audio software)</td>
<td>To gather the students’ perspectives and experiences on the collaborative writing process.</td>
<td>Focus group interviews took place at the end of the unit. Each focus group interview was 50 minutes in duration.</td>
</tr>
<tr>
<td>Students’ collaborative story writing projects</td>
<td>Google Docs (web-based writing), Brainstorming notes (hand-written)</td>
<td>To explore how the teacher was supporting his students during the writing process and to corroborate other findings.</td>
<td>Ongoing over a 4-week period.</td>
</tr>
<tr>
<td>Miscellaneous artefacts</td>
<td>The New Media 11 curricular document (on-line), the assignment overview and rubric, and photographs of notes the teacher had written on the board and classroom posters.</td>
<td>These items were collected to facilitate a richer description of the course and the classroom context, as well as to extend the findings.</td>
<td>Collected at different points throughout the study with the teacher’s consent.</td>
</tr>
</tbody>
</table>

**Class observations and field notes.** I observed 16 lessons between April and June, during which the teacher and students were engaged in the collaborative story writing unit. As I observed the lessons, I took notes on the class activities and the teacher-to-student and student-to-student interactions. When the teacher was leading a lesson, I sat quietly at one of the tables,
and when the students were working collaboratively with their peers, I sometimes circulated to look at their work and listen to their conversations. At other times, I looked at their Google Docs as they were writing and revising their stories. As soon as possible following each class observation, I typed up neater notes on the computer, focusing on the class activities and interactions, different roles and responsibilities of the teacher, and possible affordances and constraints.

**Teacher interviews.** The first interview with Mr. Towers took place before the project started. We met in his classroom on a non-teaching day. The interview was approximately 30 minutes in duration. The purpose of the initial interview was to gain insight into the teacher’s prior experience using collaborative writing activities and web-based tools to support his students’ learning. The post-project interview took place once the students had completed their collaborative writing projects. We met after school in Mr. Towers’ classroom. The post-project interview lasted approximately 1 hour. The post-project interview allowed me to gain a deeper understanding of Mr. Towers’ perspectives on and experiences with integrating a collaborative story writing unit into his New Media 11 class. Both the initial and post-project interviews were semi-structured and the guiding questions are provided in Appendix F and J. The interviews were audio-recorded and I transcribed them myself over several days. Although I considered hiring an undergraduate or master’s student to transcribe the interviews for me, I had heard and read that researchers who do their own transcription come to know the interviews better (Seidman, 2006). When sharing excerpts from the interviews in the write-up of the findings, I used a clean verbatim style, whereby I omitted some false starts, repeated words, and filler speech, such as “um” or “you know.”
**Teacher reflections.** The teacher wrote reflections on the collaborative writing process on a weekly or semi-weekly basis throughout the project. For each reflection, I provided some guiding questions (Appendix I). Mr. Towers reflected both on the role that he played in preparing and supporting his students with the collaborative writing project, as well as the interactions that were occurring between students. Mr. Towers was asked not to include any identifying information about students who were not participating in the research study. In the follow-up interview, I had the opportunity to ask him to expand on some of the ideas he had expressed in his reflections.

**Focus group interviews.** At the end of the project, students participated in focus group interviews. Students were granted permission to participate in the interview during class time and we met in a conference room adjacent to the main office. Both focus group interviews were approximately 50 minutes in duration. The focus group interview questions are displayed in Appendix L. Students were divided into two groups, and the groups were formed predominantly by selecting one member from each pair (since there was one triad, two participants from one group participated in the interview together). I wanted to ensure that students were able to share their experiences openly, even if they differed from what their group members experienced. There was a student who was collaborating on the writing project with a peer who had not consented to participate in the study. In this case, I spoke with the student before the interview to let him know that he should avoid discussing the collaboration that occurred between him and his partner. I invited him to participate in the portion of the interview that related to the role of the teacher in the collaborative writing process and the use of Google Docs, and he was not included in the portion of the interview that related to the collaborative writing process. One student was also absent from class the day that his group interview took place so we carried out a
one-on-one interview the following day in a meeting room at the library. The duration of this interview was approximately 20 minutes.

Before beginning the interviews, I asked the students to initial and date their original consent forms to ensure that I was obtaining and documenting ongoing consent for participation in the research study. I also asked the students to fill out a brief questionnaire prior to beginning the group interview (Appendix K). The purpose of this questionnaire was to give students a few minutes to get their thoughts down before sharing their experiences orally with the group. Krueger (1994) also notes that pre-focus group questionnaires help participants to commit to a response before hearing what others have to say. I reviewed the questionnaires to check for consistencies or inconsistencies with the information reported in the focus group interviews, but they were not included as part of the formal data analysis. The group interviews were recorded, and immediately afterwards, I listened to the recordings and took notes. At a later date, I transcribed the interviews and colour-coded the responses provided by each student. When sharing quotes from the student interviews, I used a clean verbatim style as described previously.

**Collaborative writing projects.** Before they started writing, the students brainstormed ideas for their stories while sitting face-to-face with their peers. Pictures of these brainstorming notes were collected as an artifact. The teacher then shared a Google Doc with each student group, so they could begin planning and writing their stories. Three of these Google Docs (the ones in which all collaborators were participants in the study) were obtained as a data source. The teacher had added me as an editor so that I could see the version history, which provides a detailed overview of each participant’s contributions and revisions to the shared document, as well as any suggestions or comments that were provided by other students or by the teacher.
**Miscellaneous artifacts.** In order to provide a more detailed description of the selected case and the themes that were emerging, I collected a few additional artifacts. These included the BC Ministry of Education’s (2018) New Media 11 curriculum (Appendix G), an overview of the collaborative writing assignment and rubric provided by the teacher (rubric is in Appendix H), as well as photographs of notes that the teacher wrote on the white board and posters hung up in the classroom. These artifacts helped to contextualize the study, as well as to contribute additional insight in relation to the research objectives.

**Conclusion**

This chapter provided an overview of the qualitative research methodology used in this study, and offered an introduction to the narrative writing unit and the collaborative writing project that the teacher designed for his students. A descriptive case study approach was chosen as it was particularly well suited to obtaining a multifaceted understanding of the collaborative writing process within a diverse learning context, while also enabling me to consider the extent to which the findings corroborate or expand on the proposed theoretical constructs. Several sources of data were obtained and triangulated to ensure that the conclusions are trustworthy. The next chapter details the data analysis steps that were followed and the findings that emerged from this analysis.
Chapter Four: Data Analysis and Results

In this chapter, I share the findings from my doctoral study. The central aim of my research was to examine an experienced teacher’s facilitation of a collaborative story writing project using Google Docs in a diverse high school English class. Before presenting the findings, I will re-state my research questions and provide a brief overview of the data sources. I will also provide a detailed description of the focal case to further contextualize the study and I will describe the open-coding process I followed to analyze the different data sources.

This descriptive case study sought to answer the following two questions:

1. How did the teacher facilitate the collaborative story writing unit for his students?

2. What were the affordances and constraints associated with the pedagogical supports, the social context, and the use of Google Docs in a culturally and linguistically diverse classroom?

These questions were answered through a detailed analysis of four primary data sources: field notes derived from 16 class observations, five reflections written by the teacher, the post-project interview with the teacher, and the focus group interviews with the students. I also examined four additional sources of data, which included the initial interview with the teacher, the Google Docs containing the students’ collaboratively-written stories, the assignment overview the teacher posted to Google Classroom, and the course curriculum, and I considered the extent to which each of these data sources confirmed, contradicted, or added new insights in relation to the analysis of the primary data sources.

Contextualizing the Study

The focal classroom for this descriptive case study was a New Media 11 class located in a small independent high school in British Columbia. New Media 11 is an English course that is part of
the BC Ministry of Education’s redesigned curriculum. The purpose of the curriculum redesign was to create flexibility so that teachers can personalize learning for their students, while also preparing them for a world that is continuously changing by emphasizing deep learning and authentic application of skills (BC Ministry of Education, 2015). The New Media 11 curriculum acknowledges that “digital literacy is an essential characteristic of the educated citizen” and aims to provide students with “a set of skills vital for success in an increasingly complex digital world” (BC Ministry of Education, 2018, p. 1).

The participating teacher, Mr. Towers (pseudonym), was a Caucasian male with approximately 12 years of teaching experience. He completed his teacher preparation in Canada and taught in Scotland for 4 years before returning to Canada to resume his teaching career. His main teaching areas were high school English and Social Studies. Mr. Towers had a good rapport with the participating students in his New Media 11 class. He chatted with them about a variety of topics, including social media, current events, and popular culture. He also used humour to engage with his students. Mr. Towers also demonstrated considerable comfort with technology and frequently used digital tools, including the G Suite for Education applications, in his lessons.

Mr. Towers noted in the post-project interview that due to the small size of his New Media 11 class, “it lends itself to being a very casual class” and that he is more “open to discussions and side-tracks and experiments.” For example, he explained that he is “more willing to work with a smaller group on projects such as the collaborative writing because it’s more manageable than a large class of say, 30, or even 20.” He also noted in the post-project interview that the students in the class had diverse personalities, backgrounds, and skill abilities. For example, some of the participants were very talkative, while others were quieter. Mr. Towers also remarked during the post-project interview that “there were challenges going into [the
project] with language and perhaps just completing the work, [and he] knew that there would be certain students who wouldn’t maybe be always in attendance or would have difficulty with homework completion.” To follow is a brief introduction to the cultural and linguistic backgrounds of the eight student participants:

- A 16-year-old female who was born in Canada. English was her native language, and she also learned Dutch while living and attending school in Belgium.

- A 17-year-old male who was born in Texas. He grew up speaking both English and Spanish. He attended school in the Yukon before moving to British Columbia for high school.

- A 17-year-old female who was born in England. Her parents were from Germany so she learned both English and German from birth. She moved to Canada when she was 13 years old.

- An 18-year-old male who was born in England. English was his native language. He lived in Australia, Holland, and the United States before moving to Canada five years prior to the study.

- A 19-year-old male who was born in Russia and moved to the Ukraine when he was six years old. Russian was his native language. He studied English in England for six months and then moved to Canada 3 years prior to the study.

- An 18-year-old male who was born in Ghana. English was his native language. He also spoke some local languages of Ghana. He had been living in Canada for 4 months when the study started.
• An 18-year-old male who was born in Vietnam. He started learning English in Grade 1 at an international school in his home country. He had been living in Canada for 3 months at the start of the study.

• An 18-year-old male who was born in Singapore. English was his native language and he had been living in Canada for 3 months when the study began.

It is important to note that although the class was culturally and linguistically diverse, only two of the eight participants were non-native speakers of English. Also, because the study took place in a Grade 11 English course that was following the BC curriculum (not a course specifically geared toward second language learners), the student participants all had relatively high levels of English language proficiency. To help protect the anonymity of the student participants, pseudonyms will be used when sharing quotes from the focus group interviews. When it is relevant to the discussion of the findings, students are referred to as a native or non-native speaker of English.

Open-Coding Process

I used NVivo (Version 12) by QRS International to assist with the coding process. NVivo is a data analysis software tool that allows qualitative researchers to store, organize, and identify connections and patterns across large quantities of data. As noted above, I had two research questions guiding my study, and I completed two rounds of coding for each research question.

First cycle coding for research question #1. Miles, Huberman, and Saldaña (2014) explain that the purpose of the initial round of coding is to summarize segments of data. As such, I read the primary data sources line-by-line and assigned codes to segments that related to the teacher’s facilitation of the collaborative writing project. I started with the field notes as they provided the most comprehensive overview of the collaborative story writing unit from start to
finish. As I was coding the field notes, I noticed that there was some redundancy as I had taken notes about the lesson sequence and interactions during the class observation and then I had added some reflections below these notes after the class observation. These reflections constituted an initial form of data analysis. Nevertheless, to avoid coding the same occurrence of an event multiple times, I removed the redundant data by using the strikethrough font in Word and then I reread and recoded the field notes using many of the codes I had formulated the first time I read through the field notes.

After coding the field notes, I coded the teacher’s written reflections and the post-project teacher interview, followed by the student interviews. I assigned pre-existing and new codes that emerged to segments of data that demonstrated how the teacher was facilitating the project. After systematically coding the teacher’s reflections and the interviews transcripts, I turned to the Google Docs with the students’ stories to examine the teacher’s comments and suggestions on the students’ work. Because many of the comments and suggestions were stored in the “comment history” and did not appear in situ, it was difficult to analyze them systematically. Therefore, the approach I adopted was to scan through the comment history of each Google Doc, taking notes about the comments and suggestions provided by the teacher and cross-checking those with the version history. From there, I created a summary of the teacher’s feedback, which I uploaded to NVivo and coded using the inventory of pre-existing codes. Meanwhile, I also uploaded the collaborative story writing assignment overview that the teacher had posted on Google Classroom and the New Media 11 curriculum (BC Ministry of Education, 2018) to NVivo so that I could identify connections between the information in these documents and the codes I had established up to this point. As a final step, I coded the initial interview I carried out with the teacher to explore how his previous experiences and perspectives on web-based
collaborative writing either corroborated or contradicted what actually occurred during the collaborative writing unit he facilitated for his Grade 11 English class.

During the first round of coding for question #1, I used two of the coding methods identified by Saldaña (2016): descriptive coding and process coding. Descriptive coding entails assigning labels in the form of a word, often a noun, or a short phrase to a passage of qualitative data in order to create an inventory of emerging topics (e.g., word choice; setting descriptions). Process coding uses gerunds (“-ing” words) to assign labels to actions that are observable or conceptual (e.g., clarifying expectations; scaffolding). I used the same codes repeatedly as my goal was to identify patterns. This technique aligns with Saldaña’s (2016) recommendation to intentionally “search for commonalities throughout the data and employ an evolving repertoire of established codes” (p. 108). I also used simultaneous coding, which involves “applying two or more different codes to a single qualitative datum, or the overlapped occurrence of two or more codes applied to sequential units of qualitative data” (Saldaña, 2016, p. 126). Simultaneous coding was used when a segment of the data indicated multiples ways in which the teacher was facilitating the project. For example, the following excerpt from the field notes was coded as both “elements of story” and “class brainstorm”:

Mr. Towers then moved onto asking students to brainstorm different parts of a short story. He asked, “What aspects are important?” (Field Notes, Apr. 23rd)

The first round of coding was an iterative process as I would sometimes reread and recode certain data segments to ensure that I had not missed anything. I also occasionally used the “search” function in NVivo to look for items that I may have overlooked. Throughout the coding process, I stopped regularly to examine the inventory of codes and consider whether any revisions were needed. Examples of revisions included changing the name of a code, merging
similar items into one code, or removing a code altogether if it no longer appeared to be relevant. At the culmination of the first round of coding, I had an inventory of 75 codes, which are outlined in Appendix M, alongside a frequency count of the coded references.

**Second cycle coding for research question #1.** During second cycle coding, I grouped the codes established in the first round of coding into a small number of categories or themes. Miles, Huberman, and Saldaña (2014) refer to second cycle coding as “pattern coding,” noting that “pattern codes are explanatory or inferential codes, ones that identify an emergent theme, configuration, or explanation. They pull together a lot of information from First Cycle coding into more meaningful and parsimonious units of analysis” (p. 86).

During the first round of coding, I had engaged in analytic memo writing, whereby I used the “memo” feature of NVivo to note emergent categories, subcategories, and themes, as well as other insights that were coming to the forefront. As Weston et al. (2001) note, “coding is not what happens before analysis, but comes to constitute an important part of the analysis. There is a reciprocal relationship between the development of a coding system and the evolution of understanding a phenomenon” (p. 397). These memos helped me to understand the patterns between the different codes and to identify categories, many of which I was able to use in the second round of coding. Table 4.1 shows the categories and the codes that fit within each category.

**Table 4.1**

**Second Cycle Coding for Question #1**

| Story elements: setting descriptions, character development, conflict, dialogue, topic (the future), dystopia, mood, tone, literary devices, dialogue, metalanguage |
| Writing traits and conventions: descriptive writing, word choice, grammar and syntax, spelling, punctuation and capitalization, avoiding clichés, sharing his pet-peeves, organization of writing |
**Scaffolding:** explicit instruction and modeling, class brainstorm, class discussion, pre-writing tasks, reviewing and connecting to prior learning, idea generation and planning, emphasizing the process, stepping back

**Teacher feedback and support:** prompting and circulating, clarifying student meaning, responding to student questions, providing suggestions and ideas, individualized support, teacher feedback (verbally), teacher feedback (via Google Docs), editing symbols, positive reinforcement, assisting with technology

**Community of practice:** sharing with peers (anonymously), sharing with peers (not anonymously), student work as exemplars, class time to write, collaborative writing tasks, collaboration with peers, peer editing and peer feedback

**Student involvement:** student participation, student engagement, student creativity, student voice and choice, student accountability

**Technology:** Chromebooks, G Suite tools, other web-based tools, digital presentation

**Reference tools:** mentor texts, notes on board, pen & paper notes, thesaurus

**Constructive and positive learning environment:** forming groups, facilitating groups, putting technology away, articulating timeline and sequencing, clarifying expectations, reinforcing attendance, time management, refocusing students, assigning for homework, small talk, fun environment, teacher-student rapport

**Curriculum and Assessment:** project goals and sub goals, connecting to curriculum, assessment, audience

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**First cycle coding for research question #2.** My objective for the first round of coding for research question #2 was to identify segments of the data that related to affordances and constraints associated with the pedagogical supports, the collaborative learning environment, and the use of Google Docs for the story writing project. In this case, I coded the primary data sources in reverse order, beginning with the student interviews, followed by the reflections written by the teacher and the post-project interview with the teacher, and then finally, the field notes of the class observations. The rationale for following this order was that I wanted to begin by focusing on what the students and the teacher perceived to be the affordances and constraints, and then consider how the field notes either corroborated their perspectives or added additional insights. Again, the coding was an iterative process as I would frequently go back to different segments of data to try to develop a better understanding of the meaning attached to the participants’ experiences and to identify the patterns that were emerging.
Because I wanted to honour the participants’ voices, I used in-vivo coding to code the student and teacher interviews and the teacher’s reflections. In-vivo coding means that the researcher uses words or short phrases uttered (or written) by the participants when coding the data sources (Saldaña, 2016). Examples included “made a compromise” and “running out of time.” After coding the student and teacher interviews and the teacher’s reflection, I read through the field notes, looking for further evidence of the affordances and constraints that the students and teachers had identified. I then coded these excerpts using the categories that I had identified through second cycle coding as explained below.

**Second cycle coding for research question #2.** Second cycle coding for question #2 was interwoven with first cycle coding. I began by sorting each code into one of six categories: pedagogy (affordances), pedagogy (constraints), collaboration (affordances), collaboration (constraints), technology (affordances), and technology (constraints). Because I was using in-vivo codes for the student and teacher interviews and the teacher reflections, I was not able to use the same codes repeatedly. As a result, I was accumulating a large number of codes. To keep organized, I created sub-codes within each of these six categories as I continued coding. Saldaña (2016) recommends this strategy and uses the metaphor of a cook who cleans the kitchen while continuing to prepare the meal (p. 108). It was a continuous process of categorizing and recategorizing in order to identify the trends that were emerging. I also changed the names of the second cycle codes throughout the process in order to create the best description of the trends that were emerging. Appendix N provides a description of the second cycle codes with an example of each one, as well as a frequency count, which represents the number of coded teacher and/or student references to the relevant theme. Table 4.2 shows the final list of the sub-categories that fit within the six main categories.
From Coding to Themes

After applying first cycle coding methods to my data and then transitioning these codes through second cycle coding methods (for both research questions), while also keeping analytic memos, I felt prepared to identify the key themes. When considering the first research question exploring how Mr. Towers facilitated the collaborative story writing project in his Grade 11 class, the findings cohered around five broad themes: (1) incorporating procedural facilitators, (2) adopting a socio-cognitive apprenticeship model to guide his students toward higher levels of proficiency with narrative writing; (3) building a community of practice; (4) enabling a positive and productive learning environment; and (5) transitioning to a new curriculum. The affordances
and constraints that emerged as relevant are interwoven throughout the write-up of each of these themes.

**Incorporating procedural facilitators.** A significant finding from this study was that the teacher used a variety of procedural facilitators to scaffold the writing process for his students. Procedural facilitators are resources that teachers provide to mediate their students’ ability to adopt cognitive strategies that are used by experienced writers (Baker, Gersten, & Scanlon, 2002; Englert, Mariage, & Dunsmore, 2006). The three primary facilitators used in the current study were mentor texts, brainstorming and planning tools, and web-based writing applications.

**Mentor texts.** “Mentor texts are pieces of literature that we can return to again and again as we help our young writers learn to do what they might not yet be able to do on their own” (Dorfman & Cappelli, 2007, pp. 2-3). When Mr. Towers first introduced the story writing project to his students, he noted that it would be based loosely on George Orwell’s *1984*, a dystopian novel they had just finished reading as a class. This novel, which was published in June of 1949, depicts a future in which civilians are subjected to constant surveillance and propaganda by the government and then tortured for rebelling or expressing opposition. To connect this novel with the story writing unit, Mr. Towers gave students "the future" as an overarching topic for their stories. He explained this decision in the post-project interview as follows: “we finished the unit on *1984*, talking about dystopia, visions of the future, so I thought rolling that into a story would work… because they were already warmed up to that idea of imagining what their idea of the future is or what other people’s idea of the future is.” When explaining the project to the class, he noted that they could take up the future any way they wanted, which could include a dystopia, utopia, time travel, etc.
One key affordance of using *1984* as a mentor text for the story writing unit was that it was familiar to all the students and it was referred to repeatedly when discussing different story elements. For example, the following excerpt comes from my field notes during a lesson on character development: “they also discussed the meaning of the following: protagonist, antagonist, supporting characters, character foil. When Mr. Towers asked for examples, they used examples from *1984.*” Similarly, during a lesson on conflict in which the teacher was explaining the different types of conflict, he stated, “if you are thinking about *1984*, Winston has an internal conflict, but he also has an external conflict, against Big Brother.” It was also evident that the students were emulating aspects of *1984* in their own writing. For example, the prologue of one group’s story ended, “No one dares to put a step into the Krystol or they would have to face psychological torture and will be sent to the scariest place known – the Black Hole,” and after they shared their prologue with the class, the teacher commented, “Good. It’s like rm. 101.” Rm. 101 was the name Orwell gave to the torture chamber in *1984.* In this way, the novel *1984* provided a common language for the teacher and students to discuss key elements of narrative writing and served as a source of inspiration for the students’ own story writing.

Another finding with respect to providing *1984* as a mentor text was that the “students’ view of the future had a tendency to be bleak and dystopian in nature” as Mr. Towers noted in his written reflections. When I asked the students about this in the follow-up interviews, their responses suggested that some of them believed a dystopian story would be more interesting, while others were influenced by having read *1984*, and some had assumed (mistakenly or not) that this is what their teacher expected. The following quotes from the focus group interviews with the students demonstrate these findings (all names are pseudonyms):
That was because we just did *1984* before this topic and the teacher was connecting the two topics. He was saying that we could make a dystopian future and that was the freshest thing on our minds…. (Cameron)

Yeah, just *1984*, so we went straight to dystopian short story. (Jesse)

Well, we kind of wrote a dystopia because we had to, because we read *1984*. (Alex)

It just sounds better, like utopia, that’s boring, dystopia, that’s good. (Shay)

I didn’t even know we were supposed to choose a dystopia or a utopia. We just kind of ended up with a dystopia, like after bringing our ideas together, we just ended up there. (Kobi)

Because I think it’s more something to attract the audience, more than a utopia. (Daniel)

Dorfman and Cappelli (2007) note that “mentor texts are books that are well loved by the teacher and known inside and out, backward and forward” (p. 3). *1984* was certainly a book that was well-loved by Mr. Towers. In his classroom, he had a poster that read, “BIG BROTHER IS WATCHING YOU,” which was a slogan used in the novel to remind the citizens that they were under constant surveillance. Also hanging in his classroom was the magazine cover depicted in Figure 4.1, which has an image of George Orwell and references to themes from the novel *1984*.

**Figure 4.1. BC BookWorld Magazine Cover**

While the teacher’s fascination with George Orwell’s novel may have steered some students in a particular direction with their own stories, mentor texts are intended as models for students to imitate while they grow as writers, and this objective was met, not only by introducing them to *1984*, but also through the use of other mentor texts within the story writing unit.

At the beginning of the unit, Mr. Towers shared setting descriptions from three published works. He projected the setting descriptions up on the screen and led a class discussion that revolved around the mood that was created and the author’s choice of words. Afterwards, Mr. Towers asked his students to write a description of a place that was important to them, and then he projected them on the screen and led a similar discussion, asking students to comment on which words they liked and why. It became apparent that the teacher had used the excerpts from the published works as mentor texts to encourage his students to be more descriptive in their own writing and to consider how their word choice can influence the mood that is created for the reader.

Moreover, after exploring the different elements of stories, and before students began writing their own stories, Mr. Towers devoted part of a lesson to a short story, titled *Harrison Bergeron* by Kurt Vonnegut. He introduced the story by noting that it depicts a dystopian view and says what *1984* says in 3-4 pages. He also noted that it is about the same length as the story they would present to their audience of Grade 6/7 students. Before beginning, he asked them to think about the content and whether or not it would be appropriate for a Grade 6/7 audience; he stated, “there is some questionable content, see if you can pick it out.” He then played an audio-recording of the story, which he paused frequently to review key ideas and to check for understanding, as well as to go over story elements (e.g., “What’s the setting?”). At the end, Mr.
Towers reviewed the plot and made connections/parallels to *1984*. For example, the main character, H.B., got arrested by the government, and the teacher said, “let’s call it ‘Big Brother’ or ‘Thought Police’ as it would be in *1984*. And, after someone who rebelled was shot, Mr. Towers pointed out that people would lose hope, just as Winston from *1984* lost hope. Mr. Towers then stated, “lots of similarities to *1984*… only 3-4 pages, but [we] can draw a lot of connections to the 300-[page] novel we read.” He then led a discussion about whether or not the story would be appropriate for a Grade 6/7 audience, emphasizing that the shooting might not be appropriate. He also commented that the short story contained a lot of description, which is something they are aiming for in their own writing.

Afterwards, Mr. Towers showed a video based on the same short story so that they could see what their stories might look like when presented digitally. The following excerpt comes from my field notes after the students finished watching the video:

Mr. Towers noted that in that story/video, we can identify a setting (time, year, place, tone/atmosphere), protagonist (Was it Hazel or George?), antagonist (Who? Maybe Handicap General), conflict (What is the main conflict?) Different ideas [were] presented; Mr. Towers noted that there could be multiple conflicts, but agreed with [a student’s] idea that the government is trying to keep everyone equal as being the main conflict. Okay, that was to get you inspired, to show description. (Field Notes, May 15th)

A close examination of these class interactions reveals that the teacher used this short story as a mentor text to encourage his students to consider what content would be appropriate for their audience, to draw their attention to key elements of stories (e.g., setting, characters, conflict), to inspire them to write more descriptively, as well as to model the desired length of the stories they were going to write and to provide an example of a digital story, which is how their own stories were to be presented to their audience.

*Brainstorming and planning tools.* Mr. Towers used two tools to support his students to brainstorm ideas and plan their stories before they began writing. The first tool was a
brainstorming map. After arranging students in partners (and one triad) for the collaborative story writing assignment, he gave each group a large piece of paper and each student a different coloured marker. Mr. Towers instructed them to write “the future” in the middle of the page and then to brainstorm what the future means to them. He noted that their colour represents their voice so they should not let others write for them. While students were writing down their ideas, Mr. Towers prompted them (e.g., You can draw a picture. You can be specific if you think of something that might happen. If you have a catastrophe, what type of catastrophe?). After the students had written down their ideas, he explained that they would have 30 seconds to read over their ideas and then they would explain them to their partner. He noted that if an idea was vague, they should explain and/or elaborate as they shared with their partner. After sharing with their partner, they were asked to share their partner’s ideas with the whole class. As a final step, Mr. Towers gave each group a third colour, and asked them to write down any new ideas that came to mind. He encouraged them to talk with their partner while they did this. Figure 4.2 shows images of brainstorming maps created by two of the groups.

**Figure 4.2. Story Brainstorming Maps Created by Two Groups**

After the brainstorming activity, the teacher shared a Google Doc with each group with questions that they were to use to plan their stories. Table 4.3 shows the guiding questions that were provided.
Table 4.3

Guiding Questions for Planning Stories

<table>
<thead>
<tr>
<th>Characters:</th>
<th>Who is the protagonist? Who is the antagonist? Who are the supporting / minor characters, if any?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting:</td>
<td>What is the setting (time and place)? Is there more than one setting?</td>
</tr>
<tr>
<td>Conflict:</td>
<td>What is the central conflict in your story?</td>
</tr>
<tr>
<td>Plot:</td>
<td>Briefly outline the plot in point form. Identify the inciting incident, rising action, climax and resolution.</td>
</tr>
</tbody>
</table>

The teacher suggested that they could chat, write, or do both as they planned their stories. He also noted that they could begin writing their stories once they had flushed out their ideas.

Overall, it appeared that students benefited from the brainstorming and planning tools provided. The teacher noted in the post-project interview that “there were some good sparks and ideas happening” in the pre-writing stage. Moreover, one of the students asked for the brainstorming map that he and his partner had created the day before in order to support him as he started to plan his story. The planning that students did in their shared Google Docs was also reflected in the development of their stories.

Nevertheless, some students engaged in more planning than others, as Mr. Towers noted upon reflection in the post-project interview:

We did start with a planning stage, but again some already had the story written in their mind and others didn’t really know where to start, so that might be something to focus on before they actually start writing because I think some stumbled because they failed to plan appropriately.
During the interview, one of the students also reflected on the challenge he faced when the story changed direction unexpectedly:

Sometimes I would realize that the story changed a bit and I didn’t change it and then it’s hard to continue when somebody started their own thought, and then I had to pick it up and write it, so that was a little challenging. (Anton)

In summary, the brainstorming and planning tools helped students to develop and organize some of their ideas before they started writing. Nevertheless, the teacher observed that some students did not have a clear direction as they were writing and he felt that the planning stage should be emphasized more before they begin writing.

**Web-based collaborative writing applications.** All of the students and the teacher had their own Chromebooks, which enabled them to access and use web-based technologies during class. The teacher used the Chromebooks with his students on a daily basis, noting “it’s part of our routine.” Although the students appeared comfortable using Google Docs (which they access from their Chromebooks), they were probably less accustomed to using the application for collaborative projects. Before the students began the main collaborative story writing assignment, Mr. Towers assigned smaller tasks for students to complete using a shared Google Doc so that they could become more comfortable working collaboratively.

In the post-project interviews, I asked the students and the teacher about the benefits and challenges associated with using Google Docs for collaborative writing projects. They identified several affordances as well as a few constraints. One of the key affordances was the ease of sharing and working together, and the ability to see changes that are made to the document as they occur, as reflected in the following quotes from the student interviews:

We can share it [with] many people. (Daniel)

It’s very easy for multiple people to use it because of the ability to share the document and you can both type into it. (Cameron)
You can see real-time changes to the work. (Kobi)

It’s very easy because you see what your partner does; every second, it changes…. (Anton)

In the post-project interview, the teacher also noted that he liked those features: “… the live editing, or simultaneous editing, sharing of the doc; these are all things that I really like and I think the students like.” As these comments illustrate, Google Docs allows multiple people to edit the same document simultaneously, which makes this application distinct from some other web-based writing tools, such as wikis, which only allow one person to edit the document at a time.

Another key feature that students appreciated was the ability for another person, either the teacher or a peer, to make a comment or a suggestion on their document, as reflected in the following commentary from the focus group interviews:

It was very easy for the teacher to look at it and change it. (Jesse)

[Our teacher] doesn’t change it, he actually, he suggests, right; in Docs, there’s a function to suggest. (Anton)

[Our teacher] would give suggestions on the side because there’s a function of Google Docs that you can add suggestions. (Cameron)

Your teacher can e-mail you, put comments on the documents, and it’s just really easy to use…. (Morgan)

You can just be quiet and just write our ideas, and then if they don’t like it, then they can add a comment or just change it. (Shay)

The suggestions feature that students were referring to is an alternative to editing; by using the suggestions feature, someone can suggest a change, without actually making the change; the text is highlighted and the suggestion appears on the right-hand side of the document. For the teacher, it was important that the students turned on the “suggesting” feature when editing another
group’s story so that they could consider the changes and whether they wanted to accept them or not. In the post-project teacher interview, Mr. Towers also reflected on how he and his students were taking advantage of the commenting and suggestions features when using Google Docs:

Some students actively engaged in a dialogue through the comments feature of their doc.

It’s easier for me to quickly look at their story or paragraph and make a comment or make a quick little suggestion or a change, more so than having to take their paper away from them and then go through it and then they sit idle. I can do it in real-time or simultaneously I suppose.

As noted by the teacher, he was making comments and suggestions while the students were engaged in the writing process. Students would sometimes take a break from their writing to read through the teacher’s feedback and make changes accordingly. As such, the revision process overlapped seamlessly with the writing process, resulting in many different versions or drafts of their stories.

Another feature that a couple of students identified as useful was the grammar and spell check. As one student explained during the focus group interview, “if there was a spelling error, of course, Google Docs would say that there was an error.” The students also appreciated that their work was stored on-line as this allowed them to access it from anywhere and they were less likely to lose their work:

You can bring it with you. You can work from far away. (Morgan)

I like how the files are saved on-line, so you don’t have a risk of losing them. (Cameron)

The teacher expressed a similar perspective in the post-project interview:

You know that they have access to this document; they can’t lose it. And, if one student doesn’t bring their Chromebook, then at least they still have the document on another one or something like that, right, so it’s accessible and they can’t use “my dog ate my [homework].”
In the interview, Mr. Towers also noted that he appreciated being able to monitor student progress through the Google Docs because the application tracks all the changes that are made:

> I like to see, for the version history, you can see how much they’ve done. You can see when it was last edited very quickly, so you know if they did the homework or not. If the date stamp on the version history is 24 hours ago from the last class, so that’s helpful for the teacher.

However, the teacher’s ability to monitor progress was also seen as a disadvantage if a student has not completed the homework that they were asked to do. As a student commented during the focus group interview, “your teacher and your classmates can see that you actually did nothing, so that’s not good.”

The teacher and students also noted challenges associated with using Google Docs for collaborative writing assignments. One of the challenges is that if students are not sitting together, they do receive immediate feedback on their writing. For example, if students pose a question through the commenting feature, they would need to wait until their partner opens the document in order to receive a response. The teacher felt that the immediate feedback was important, and as such, he provided students with ongoing opportunities to write and discuss their stories while sitting together in class. One of the students also noted that she and her partner communicated through Snapchat, a digital messaging app, when they were not together in the same space.

Another drawback that was identified was that it is necessary to have access to the Internet in order to use Google Docs. While this did not present any difficulties as the students worked on their projects, a problem occurred when they went to share their projects with an outside audience. When the teacher tried to log into his G Suite account from the elementary school, he was unable to do so. Fortunately, one of the groups had their story already open on a
Chromebook and they were able to share it, but this situation demonstrated a challenge that can occur when the work is stored on-line.

The teacher also observed that although the students were accustomed to using Google Docs, they did not have a good understanding of how to use all of the features. The following excerpt comes from the post-project interview with Mr. Towers:

They are used to [Google Docs], but I don’t think they know how to use them in the most efficient way. So, that’s what I was trying to do throughout the project. So, things like the comments, making the comments, and actually reading them, and not just hitting the check mark or the “x,” or even something simple like that. It’s interesting to note that they viewed the “x” as a close button, not a reject button, because in all other applications, the “x” just means close the window, but it actually means that that suggestion or edit will be rejected so then nothing gets changed, but you get rid of that little window. So, little things like that where you can improve their understanding of the application is helpful.

It was apparent that Mr. Towers had a very good understanding of the different features available through the application, so one of his roles was to assist his students with the use of the technology. The following excerpts from the field notes show evidence of the ways in which he was able to support his students to use the application:

At one point, he also helped [a student] find the Google Doc (encouraging him to refresh his e-mail browser). (Field Notes, May 14th)

He showed them how to comment (highlight and use ‘+’ sign) and how to add suggestions. (Field Notes, May 29th)

He showed them how to highlight the word and either “explore” or “define” the word. “Explore” will take you to Wikipedia. “Define” will give you a definition and synonyms. (Field Notes, May 29th)

[A student] asks why the first paragraph [of her story] is pink. Mr. Towers says to click on it to see the comment he had written: “indent first line.” He cues her to hit “accept” and it will go away. (Field Notes, May 30th)

After a few minutes of work, Mr. Towers says, “sorry to interrupt again” and explains how to accept a suggestion/comment by clicking the check mark (as opposed to the x) – seems people are used to closing things by clicking “x,” but since they proceed to make
the change, they are doubling the work b/c if they clicked the check mark, “accept,” it would make the change for them. (Field Notes, May 31st)

It also became apparent that working on the Chromebooks to complete the story writing assignment afforded students the opportunity to access on-line reference tools to help them develop their story. For example, in the post-project interview, one student talked about using a magic name generator, while another student mentioned using a thesaurus. In the field notes, I also noted instances of students using on-line thesauruses, such as Word Hippo (www.wordhippo.com), to look up synonyms so that they could use more descriptive words in their writing. While it was helpful to have access to on-line references tools, working on the Chromebooks was also a distraction for some students. For example, a student talked about accessing BuzzFeed, an on-line news website, during class, and another student elaborated that “if your mind is on something else, when you have the Chromebook, you can look up anything you want.”

In summary, the use of Google Docs was an important component of the project. The students used this web-based tool for some of the pre-writing tasks as well as the main collaborative writing project. The teacher and students held favourable views of the application. The key affordances were the ease with which they could share the document and work on the project simultaneously, the ability to see changes in real time, and the commenting and suggesting features that allowed the revision process to be integrated seamlessly with the writing process. The teacher took steps to address the main drawbacks. For example, he provided extended opportunities for students to write in class as he felt that immediate feedback was important. Moreover, he assisted students with the technology to ensure that they were using the application in the most effective and efficient way.
Importantly, Google Docs was not the only web-based application that the teacher used. He also used a real-time word cloud application called Mentimeter (www.mentimeter.com). Word clouds (also known as word collages) are visual displays of words that give prominence to words that are entered more frequently by showing them in a larger font. Mr. Towers had created an account through the Mentimeter website. He gave his students the link and a code, and he projected an image of a place on the screen. When the students accessed the link and entered the code, they were prompted to enter descriptive words to describe the landscape or scene depicted in the image. All of the users’ responses were then assembled in real time to create a word cloud. The teacher repeated this activity with three different images, and each time, he shared the word cloud on the screen and provided feedback by emphasizing which words were effective and which words could be more descriptive. Figure 4.3 shows an example of what the product looked like, with the image on the left and the word cloud on the right. This figure is a sample as the original images and word clouds from the class were not collected as an artefact.

Figure 4.3. Photograph of a Scene and Real-time Word Cloud


The following excerpt from my field notes suggests that the students were responding to the teacher’s encouragement to use more descriptive language:
Although it seemed repetitive to do this activity with multiple images, it appeared that students got the idea as they moved from using common [colour] words… when describing the lake scene to using “mustard” to describe the ground of the convenience store. (Field Notes, Apr. 24th)

Moreover, in his written reflections, Mr. Towers explained how the use of web-based collaboration tools prompted students to consider word choice both within their own writing and also their peers’ writing: “the two main collaboration strategies used were the real-time word cloud generator and the shared Google Doc. Both of these applications require students to consider other students’ work and evaluate content for clarity of description and word choice.”

In the focal classroom, the teacher used a variety of procedural tools to mediate the writing process for his students. The mentor texts served as a model for students to emulate in their own writing and provided a common language for the teacher and students to discuss key elements of narrative writing. The brainstorming and planning tools helped students visually organize and map out some of their ideas before writing. And, the web-based collaborative writing tools allowed students to engage with each other’s writing and for the teacher to provide ongoing feedback without interrupting the writing process.

**Adopting a socio-cognitive apprenticeship model.** Another important finding was that Mr. Towers adopted a socio-cognitive apprenticeship model to guide his students toward higher levels of proficiency with narrative writing. Dennen (2004) describes apprenticeship as an experienced person supporting a less experienced person to acquire skills and attain goals through modeling, scaffolding, coaching, and mentoring. She further notes that while apprenticeship is traditionally associated with learning a trade or a craft and the acquisition of psychomotor skills, a cognitive apprenticeship model supports the acquisition of cognitive skills. Meanwhile, a socio-cognitive apprenticeship model emphasizes the importance of co-participation and guided practice as key features of the teaching and learning process (Englert,
Mariage, & Dunsmore, 2006). Within the focal classroom, the teacher used the following techniques to support his students to become more competent with narrative writing: engaging students in collaborative dialogue and guided practice with key story elements, and using supportive scaffolding throughout the collaborative story writing process.

**Collaborative dialogue and guided practice.** Rather than adopting a didactic, teacher-centered approach, Mr. Towers valued a collaborative, student-centered approach to teaching and learning. The lessons that preceded the story writing project were designed to support students to develop their understandings of key story elements, while also encouraging them to write more descriptively. In addition to providing mentor texts to model key elements of narrative writing, Mr. Towers engaged his students in a series of class discussions and class brainstorms, interwoven with guided practice. The following three excerpts from the teacher’s written reflections demonstrate that class discussions were a key component of pre-writing lessons focused on setting, character, and conflict respectively:

During this lesson, we introduced the main components of story writing, which included plot, setting, character and figurative language. We followed this general discussion with a focus on setting and its role in stories. (Teacher reflections, May 4th)

We began the lesson by discussing how to develop strong characters. We then looked at images of characters and collectively decided on a description for each character. (Teacher reflections, May 6th)

I introduced the term conflict and we discussed different types and then how and why it [is] used. We used the characters to consider what an appropriate conflict would be for each character. (Teacher reflections, May 13th)

The emphasis on class discussion for introducing key concepts, coupled with the teacher’s use of “we” in his reflections, reveals that he viewed his students as co-participants in the teaching and learning process. Through these class discussions, Mr. Towers was able to assess prior
knowledge and explain key concepts, as demonstrated in the following excerpt from the field notes:

Mr. Towers then asked students, “Why do we have conflict?” [A student] noted that it creates a story. Mr. Towers agreed and emphasized that it is difficult to have a story without conflict. He elaborated that conflict moves the story along; it is what diverts path from normal routine. Mr. Towers used himself as an example and noted how boring it would be if he went home and told his wife all the normal occurrences. It’s only interesting if something happens, which “alters the path of my regular day” (student suggested falling off bike, so he told story of falling on black ice). [A student] clarified that conflict is something that’s not regular, and Mr. Towers confirmed, adding that “there can be many subtleties of conflict” and that conflict can happen for many reasons. (Field Notes, May 7th)

In addition to assessing prior knowledge and explaining key concepts, this excerpt shows that the teacher was validating and expanding on his students’ ideas, while also using an illustrative example (i.e., a personal anecdote) to mediate their understandings. While leading class discussions, the teacher commonly asked students to brainstorm ideas, while he jotted notes on the board in the form of web diagrams or lists. To follow are examples of class brainstorming from the field notes and a photo of the notes the teacher wrote on the board after the class brainstorm on character development:

He then moved onto asking students to brainstorm different parts of a short story. He asked, “What aspects are important?” (Field Notes, Apr. 23rd)

Mr. Towers put a picture on the board and asked students to brainstorm: “What words come to mind?” (Field Notes, Apr. 24th)

Mr. Towers led a discussion about character development. He began by asking them what was important to know about the character of a story. From there, they brainstormed and created a mind map. (Field Notes, Apr. 30th)
After engaging students in modeling (facilitated by mentor texts) and collaborative dialogue (through class discussions and class brainstorming), the teacher provided an opportunity for students to engage in guided practice of each of the story elements. The teacher’s objective was to break the story writing task into smaller components before they wrote their own stories. In the post-project interview, Mr. Towers explained: “we started with the pre-writing activities and worked on just breaking that down into small chunks, right down to what’s an adjective that describes this visual, and then building on that in terms of a setting, and then a character, and then looking at conflict.”

To follow is an overview of the pre-writing activities that were used, followed by a description of the role the teacher adopted while the students engaged in the pre-writing tasks.

Task #1: Describe a place that is important to them in 5 sentences (individually using Google Docs).

Task #2: Use descriptive language to describe images of places that the teacher projected on the screen (initially they brainstormed words aloud and then they entered words into the web-based application to create a class word cloud).

Task #3: Write a paragraph describing an image of a scene chosen by the students (collaboratively using Google Docs).
Task #4: Use their imagination to describe a character – images projected on screen (collaboratively using pen and paper).

Task #5: Choose an image of a person (not famous) and write a half-page description of the person (collaboratively using Google Docs).

Task #6: Describe three conflicts the character could be facing (collaboratively using Google Docs).

While the students practiced their writing skills, the teacher circulated and prompted them to add more ideas. He also emphasized the importance of considering word choice and writing descriptively, as the following excerpts from my field notes illustrate:

Mr. Towers encouraged students to use more descriptive words than blue, yellow, brown, and to avoid cliché words, such as “calm.” (Field Notes, Apr. 24th)

Mr. Towers provided prompts (e.g., What do the mountains look like? The lake?). (Field Notes, Apr. 24th)

Teacher prompted students (e.g., one student could describe the sights, another the sounds, etc.) and circulated (Write about the buildings, colours you see.). (Field Notes, Apr. 24th)

Mr. Towers circulated and checked in on each group. He discussed word choice with them and prompted them as needed. (Field Notes, Apr. 30th)

He prompted students: “What’s on her mind? It looks like she’s thinking about something.” (Field Notes, May 1st)

Mr. Towers was also prompting students to add more details regarding their characters (e.g., What else can you tell us? What will make him happy? What’s his life goal? What are his challenges?). (Field Notes, May 7th)

Another role that the teacher adopted was to support students with ideas and suggestions. For example, when the students were working on their descriptions of their chosen scene (Task #3), one of the students was working alone because her partner was absent. She told Mr. Towers that
She was stuck so he went over to help. Mr. Towers also clarified the expectations for the different tasks and responded to any questions that the students had while they were writing.

Two key affordances arose from the guided practice of the different story elements. The first affordance was that the students and the teacher felt that the pre-writing activities supported the development of the students’ stories. The following excerpts come from the focus group interviews with the students when I asked them about the teacher’s role in supporting them throughout the story writing unit:

He kind of got us prepared for the story, for the writing process. (Shay)

You could almost say he set the mood for the writing project. (Alex)

I think he taught us how to bring together different parts of the story, how to describe the setting and how to develop characters, stuff we needed to get the story together. (Kobi)

I think he did a really good job at preparing us for the story 'cause he went in really deep detail with the character’s description and the setting description and stuff, and then by the time that we were writing the story, it was just kind of subconsciously in our heads, so it made it pretty easy. (Morgan)

I agree, it was really easy with our pre-kind-of-set-up before we actually did the story, the exercises on what makes a good short story, what is a short story; it helped give us kind of like a baseline on what we should expect to make. (Jesse)

Similarly, the teacher remarked on the benefits of the pre-writing tasks in the post-project interview, noting that “[the students] were applying what I had hoped they were going to in terms of the pre-writing activities” and that “through the pre-writing activities, I noticed some students identified places where their writing could be improved.” Therefore, from the teacher’s perspective, the pre-writing activities afforded the students the opportunity to not only apply key elements of stories in their writing, but also to be able to reflect on how their writing could be improved.
Another affordance was that through the class discussions and guided practice, the teacher and students were developing a metalanguage they could use to discuss narrative writing. As the teacher explained in one of his reflections, “as we worked through the material, I was mindful to ensure that they understood key terms and relevant vocabulary to facilitate discussion during their collaborative writing.” The metalanguage related not only to story elements, but also to literary devices that the students were using in their writing. All of the terminology shown in Figure 4.5 was referenced throughout the story writing unit. Words that appear larger were referenced more often.

**Figure 4.5. Word Cloud of Terminology Referenced in Class**

![Word cloud image]

Figure 4.5. Word cloud created using Mentimeter ([www.mentimeter.com](http://www.mentimeter.com)).

Mr. Towers used teachable moments to illustrate literary devices. For example, when modeling settings descriptions, Mr. Towers pointed out that “green grass” was an example of “alliteration.” And, when the students were brainstorming words to describe scenes/landscapes projected on the screen (Task #2), he suggested that they could use “juxtaposition” or words that are not usually associated with the image/scene. In another lesson, students were working with a partner to describe an image they had chosen (Task #3), and Mr. Towers recommended to one group that they change a simile to a metaphor to be more direct, while explaining the difference between the two terms.
After engaging in collaborative discourse and guided practice of key story elements, the teacher introduced the main collaborative story writing project. From there, several lessons were devoted to the writing process. While the students worked alongside their peers to write and revise their stories, Mr. Towers provided supportive scaffolding.

**Supportive scaffolding during the writing process.** Once students began writing their stories, Mr. Towers released more responsibility to his students and adopted the role of facilitator. As he explained in his reflection, “my role for these lessons is to facilitate the work in groups and be careful not to direct the creative direction of their work.” At this stage, the teacher provided supportive scaffolds, which are “learner-centred events” that provide opportunities for students to “co-construct learning” with their teacher (Lenski & Nierstheimer, 2002, p. 130). Two examples of supportive scaffolds were integrating mini-lessons in response to students’ needs and providing ongoing suggestions and feedback to enhance their writing.

**Integrating mini-lessons.** Mr. Towers integrated mini lessons during the writing process. For example, one day he spent about 10 minutes talking about the “rules to format dialogue,” using the following website: https://firstmanuscript.com/format-dialogue/. He explained that they needed to know how to punctuate the dialogue and how to divide it up between speakers. He went through the rules on the website, emphasizing the importance of skipping lines between speakers. He also asked students if they knew what an ellipsis was and explained how to use it. When I asked Mr. Towers about this mini-lesson in the post-project interview, he noted that “it wouldn’t be something I would focus on normally, but it was more just a reaction to how they were writing” as he had noticed “it was unclear who was speaking when they were using dialogue, so it would be all blocked together without he said, or she said, or Jane said, or John said; it would get muddled.”
Similarly, before the students exchanged their stories with another group for peer editing, he asked them, “What do we look for when we’re editing?” and led a class brainstorm. He wrote the students’ ideas on the board, as depicted in the photograph in Figure 4.6.

**Figure 4.6. Class Brainstorm on Peer Editing**

Next, Mr. Towers projected one group’s story on the screen and demonstrated how to make comments (i.e., highlight and use “+” sign) and how to make suggestions. Before they exchanged their stories, he made sure that they knew how to make suggestions, as opposed to edits. As Mr. Towers explained in his reflections, “I had to remind and physically check to make sure that all students had selected ‘Suggesting’ and no ‘Editing’. This is an important aspect of the editing process that allows for voice and choice within the document.”

*Providing suggestions and feedback.* In his reflections, Mr. Towers noted that one of his roles was to provide “suggestions for enhancement of story elements and plot development.” Mr. Towers was able to read the students’ stories while they were writing them, and he would give ideas both verbally and through the commenting and suggesting features of Google Docs. Many of the suggestions he provided orally pertained to word choice and using more descriptive language, as the following examples from the field notes illustrate:

He also pointed out that “newborn” might be a better word than “infant” … for a baby who was just born. (Field Notes, May 23rd)

He then proceeded to help [a student] find the right word to describe something that is everywhere all the time, suggesting, ‘omnipresent.’ (Field Notes, May 23rd)
Mr. Towers also suggested that “unkind” was used incorrectly. (Field Notes, May 29th)

[A student] asks about a more scienly or professional way of saying “ugly” (not nice to look at). Mr. Towers suggests “displeasing” …. (Field Notes, May 30th)

Mr. Towers: “‘Biggest’ sounds very simple… not the most descriptive of language.” He suggests and makes the change to “gigantic” …. (Field Notes, June 6th)

A review of the Google Docs reveals that the teacher feedback included reformulations as suggestions for the students to accept or reject (i.e., direct feedback) and comments that the students were expected to respond to (i.e., indirect feedback). Direct feedback was provided more often than indirect feedback. The comment and suggestion history also showed that the feedback was related to word choice, grammar and syntax, clarifying meaning, reducing wordiness, story content, prompting, punctuation and capitalization, spelling, and formatting. An example of each of the revision types is shown in Table 4.4.

Table 4.4

**Teacher Feedback on Stories**

<table>
<thead>
<tr>
<th>Revision type</th>
<th>Students’ original text</th>
<th>Teacher feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word choice</td>
<td>“They sent a bunch of spaceships…”</td>
<td>Replace “sent” with “deployed” Replace “bunch” with “fleet”</td>
</tr>
<tr>
<td>Grammar and syntax</td>
<td>“In the center, there were two words.”</td>
<td>“verb tense agreement”</td>
</tr>
<tr>
<td>Clarifying meaning</td>
<td>“It was his third time visiting the gym.”</td>
<td>“ever? in a week? a month?”</td>
</tr>
<tr>
<td>Reducing wordiness</td>
<td>“The procedure would do this by putting…”</td>
<td>Replace “would do this by putting” with “put”</td>
</tr>
<tr>
<td>Story content</td>
<td>“The year was 2100.”</td>
<td>“Is this the best opening line? You want a hook. This line reads like basic setting description. It might be interesting if the date was significant in some way (eg, it was the year 5397 BD)”</td>
</tr>
<tr>
<td>Prompting</td>
<td>“Once five years of high school were gone…”</td>
<td>“This is a big leap in time. Is there more to say about this?”</td>
</tr>
</tbody>
</table>
The student and teacher interviews revealed some key affordances and constraints associated with the teacher’s feedback. First of all, the students tended to think that the feedback was helpful to their learning and to the development of their stories, as reflected in the following quotes from the student interviews:

He could make the changes that we couldn’t do… and point out the grammatical mistakes that we made that we missed or whatever. (Morgan)

Whenever we had problems with word choices or whatever, he would always help us with that. (Morgan)

In my story, there was a little too much dialogue so he told me maybe put more description of what’s happening to move along the story and everything, so I used less dialogue halfway through. (Jesse)

When there were points where I wasn’t sure where to continue, he would help me, give ideas on how I should continue the story…. (Jesse)

At a certain point, he added his own ideas [that] he thought [would] suit the story better. (Kobi)

I remember one phrase, one sentence that he contributed… we mentioned that the main character was a lot shorter than other people, and so he said, “some people look down on him both literally and figuratively”; then I thought, “oh yeah, that’s really good,” so I added that to the story. (Cameron)

Our teacher was pretty supportive… he gave us lots of ideas, right. (Anton)

He suggests where to improve, where to add something, correct, and yeah, I think it helps a lot. And, you actually learn something from it because you see your mistakes, and yeah, you improve them yourselves…. (Anton)

In my field notes, I noted a couple of instances in which students were requesting feedback from their teacher. For example, one student asked, “Mr. Towers, could you look over what we have?”
and another student said, “when you read our story, tell us what you think about it; tell us what we can do to improve it.” These examples illustrate that the students valued their teacher’s input.

In the focus group interviews with the students, I asked them how they responded to their teacher’s feedback. Their responses showed that they sometimes contemplated the teacher’s feedback, but that there was also a tendency to accept his suggestions because they felt that the changes helped to improve their writing, and also because “he’s the teacher”:

Think and then we had to ask him to explain why he thought this would be better…. (Kobi)

I think we took almost all of them… because he’s the teacher right. (Kobi)

Took them all into account. Don’t have to listen to all of them, but make sure you definitely think about them. (Shay)

Yeah, we didn’t listen to all of them, but, yeah, we took his advice or we didn’t…. (Alex)

We accepted a lot of them, but some of them were a bit weird, like he suggested we use the phrase “more fresh” instead of “fresher,” and I was wondering why he did that. I couldn’t really understand why he said that, so we didn’t accept that one. (Cameron)

I agreed with everything. He’s the teacher; he’s smarter anyways. He’s the teacher, right, so I just agree with everything he improves, he corrects. (Anton)

As I said before… he would make a suggestion, right, and then we would follow him, we would agree. Obviously, we would discuss it with him, we would ask what’s better this way, the other way…. (Anton)

I chose “resolve all of them” because it was grammatical issues or maybe his word choice was maybe a bit better or maybe helps with the flow of the sentence. (Jesse)

I accepted all of them usually… because they were just basic grammar…. (Morgan)

The teacher recognized that students may accept his suggestions without necessarily considering them carefully, so he felt it was sometimes better to provide a comment to which they were required to respond. The following excerpt comes from the post-project interview with Mr. Towers:
I think they responded better when it was a more detailed comment or suggestion. I did briefly go over the process of accepting or rejecting comments in Google Docs, and I think that improved things slightly. There’s a tendency for students to just hit the check mark or there’s an option to accept all with one click of the button and then it just changes everything. So, rather than making a suggestion as an edit, I find sometimes asking a question or making a statement on a certain section is better because then they are forced to either respond to that or ask me a follow-up question.

One day when I was observing the class, I heard an exchange between two students, in which one was quickly going through their shared document accepting the teacher’s suggestions and his partner said, “stop, I want to read it.” The first student continued to accept the suggestions and commented that the story was getting better and better. His partner nudged him and again said, “stop.” This exchange shows a potential constraint with using Google Docs for classroom-based collaborative projects. When one of the collaborators accepts the teacher’s suggestions before the other one has read them, those suggestions no longer appear on the main page, making it less likely that each student will benefit from the feedback.

In the focus group interviews, a few students also expressed that the teacher’s feedback was unclear at times:

Sometimes we didn’t know how to correct it. He didn’t tell us how to correct it; he just pointed [out] the mistake.... (Daniel)

Some comments were unclear, but then I would just ask him and he would explain what he meant. (Morgan)

Some of them were a bit strange; we used the phrase “a far cry from something” and he said that sounded cliché, so I wasn’t really sure why that sounded cliché because that’s not really a phrase I see a lot, you know. (Cameron)

The lack of clarity regarding some of the teacher’s comments was also reflected in the field notes when one of the non-native speaking students said to his teacher, “you showed us our mistakes, but we don’t know how to correct them.” The teacher responded by going over to sit with the student and his partner to conference with them about their writing; he explained the feedback...
that he had provided and helping them to resolve the suggestions and comments, most of which related to word choice (i.e., being more descriptive) and clarification of ideas. As a result of this student-teacher conference, none of the suggestions or comments on this group’s story were left unresolved, while the other students’ stories had suggestions and comments that were left unresolved.

It also appeared that not all students were inclined to ask for support or clarification regarding the feedback. During the focus group interview, after another non-native speaking student noted that his teacher had not shown them how to fix their mistakes, I asked him what he would do in that case, and he responded, “in that case, I just left it there.” These two latter examples also suggest that the lack of clarity regarding how to resolve some of the teacher’s comments may be higher amongst the second language learners.

The teacher also used abbreviated editing symbols (e.g., ww = wrong word; wc = word choice; sp = spelling; cs = comma splice) in the comments he was making on their Google Docs. He did not go over what these abbreviations meant, so some students asked him about it during class, while others left the comment unresolved. For example, the teacher highlighted the comma in the following excerpt: “Dweeble and Chubby caught a crucial detail from the ship: ‘SE0198’ was written on the side, they realized that it was the Snucuphus E0’s property” and he wrote “cs” for “comma splice” as a comment, but it was never resolved. The teacher reflected on his use of abbreviations in the post-project interview, as follows:

My shorthand did confuse some students, so I’m used to teaching all the students, and some students are new, so the students who have had me before knew the terminology, but some of the newer students didn’t. So, just short-hand, like “wc” for word choice or “sp” for spelling. Yeah, I probably took that for granted more than I should, that they would know that, so that just required an extra step of explaining when they asked that question.
In summary, the findings illustrate that the students benefited from the teacher’s feedback and suggestions, but there were a couple of constraints, one being a tendency for some students to accept his suggestions without necessarily considering them carefully, and another being a lack of clarity regarding some of the comments.

Another finding that emerged during the writing process was that the teacher was experiencing some tension regarding his role. On the one hand, he wanted to support his students, while on the other hand, he did not want to intervene too much. For example, in the post-project interview, Mr. Towers noted, “it just became my role to be chief editor, which is fine, but it was more my purpose to get other people within the group to self-assess and peer-edit. As an intervenor, I guess, it was hard to draw back.” This tension was also evident in his reflections when he wrote: “I am trying to remove myself as much as possible from the writing process at this point; however, it is very difficult to simply let certain students and interactions play out at this stage.” These comments suggest that it can be difficult for teachers to decide when to step in and when to step back and let students resolve problems that they are encountering. The next section describes the steps that the teacher took to build a community of practice.

**Building a community of practice.** Another significant finding was that the teacher used various strategies to build a community of practice within his classroom. According to Hoadly (2012), one of the ways that educators can build a community of practice is by embedding learners in “supportive authentic contexts, or… quasi-authentic contexts in which they ‘do’ the knowledge that is desired” (p. 290). Englert, Mariage, and Dunsmore (2006) also explain that a community of practice requires that students “receive feedback on [their] written communications from teachers and peers” and that they “learn to use texts and ideas as thinking
devices that can be questioned and extended to create an elaborate knowledge reflective of the group” (p. 214). In the focal classroom, the teacher created a community of practice using three key strategies: emphasizing the use of collaborative writing tasks, providing extended opportunities for students to write in class, and encouraging students to share their writing with and receive feedback from their peers.

**Collaborative writing tasks.** Throughout the story writing unit, Mr. Towers emphasized the use of collaborative writing tasks. As part of the project overview, he noted that “in a lead-up to the final completed story, you will be completing several smaller assignments individually and in your group to develop key aspects of story writing (character, setting, descriptive writing) and [to] get comfortable working collaboratively.” In fact, only one of the pre-writing tasks was done individually, while the others were all done collaboratively.

When students work collaboratively, teachers must decide how to form groups (e.g., student-selected or teacher-selected) and what size to make the groups. In the initial interview, Mr. Towers noted that he forms groups in different ways, “oftentimes, that’s where they are seated, sometimes it will be mixed up, sometimes they can choose, sometimes I will choose.” For the collaborative writing unit, he allowed students to select their own collaborators on one occasion, and he selected the groups for the other tasks, including the larger story writing assignment. He noted in his reflections that he wanted to ensure that students had the opportunity to work with different people and he also explained that “groups of 2 demand conversation and responses from all members.” As the class had an odd number of students, there was also one group of 3, which Mr. Towers noted would “provide a good comparison.” There were three groups in which all students were participants in the study. One of the groups had three native
English speakers and the other two groups were comprised of one native English speaker and one non-native English speaker.

In the post-project interview, I asked Mr. Towers to elaborate on the considerations he made when selecting the groups for the main collaborative story writing project, and he explained as follows:

So, again a small group with different personalities, different backgrounds, different skill abilities. And, with this project, thinking about who is participating and who wasn’t. Those were all considerations. Behaviour-wise, there are certain individuals who would be set apart. There were certain people who are better communicators with the ones who are quieter or not as communicative or willing to be the leader. I think there are certain students who work better with other students just in general from the 3 months that I’ve known them in this class.

From these comments, it was clear that the teacher considered different factors when forming the groups, but a primary concern was to ensure that students were grouped with people with whom he thought they would work well. He also noted that “the pairing was designed to be as equal as possible” and that he did not think there were “any serious imbalances in their skills… most of the groups were fairly evenly matched.”

From the perspective of the teacher and students, the collaboration was associated with both affordances and constraints. One of the key affordances was that students appreciated being able to bring their different ideas together to develop the story, as demonstrated by the following excerpts from the focus group interviews with the students:

I think it was interesting being able to see the main ideas… everyone’s different ideas being able to create one story from three completely different ideas… combining all of them. (Shay)

It was not as closed in as if you were doing it by yourself. It was easier for me 'cause working alone is a bit hard for me 'cause I have ideas, but they’re always conflicting with each other, so I’m just there deciding what to type. But, having someone who has an idea I can expand on with my own ideas, it’s easier. (Alex)
We would just pick up after everybody, right, so if he was stuck or something, I would give him an idea, or if I was stuck, I didn’t know what to do, he would give me an idea what to write… so it was pretty supportive I would say. (Anton)

People can come up with different ideas. They can think of some things that you might not think of. (Cameron)

Another student also commented that he and his partner “tried to incorporate ideas from [their] different backgrounds to make it more interesting” and when I asked him to explain, he noted “where our story was situated… Rukrainia, yeah a mix up of Ukraine and Russia, and this other place we brought up… Hogbetsotso is a festival where I’m from.” A couple of students also remarked that it was interesting being able to see each other’s unique abilities, such as the creativity of their peers.

Nevertheless, the diversity of ideas was also a challenge in some instances as students explained that their ideas were conflicting with one another:

We had some conflicts of ideas.... (Cameron)

We had different opinions, ideas, so it’s hard to put it in together. (Daniel)

Two is okay, but three is a crowd… there were so many people working on the same document and then all of our ideas would just clash…. (Shay)

The quote, “two is okay, but three is a crowd,” was fitting in this case study as the group of three appeared to experience the most difficulties working together. Challenges arose from the outset when one of the group members came to the project already committed to an idea for the story. During the time when they were asked to brainstorm their ideas for the project, he started to expand on his idea with the beginnings of a storyline. The teacher expressed concern that this may have “supress[ed] creativity and comfort with contribution” from another member of the group, and that the others “became followers, rather than collaborators.” He also noted that over
the duration of the project, they were “able to overcome that in certain areas” but that “the main thrust of the story” came from one group member.

The teacher’s reflections in the post-project interview also showed that while it can be overpowering to have a group member who is headstrong in their ideas, it can also be detrimental when the group lacks a leader. He noted that the students in another group were “both more passive” and “the lack of leadership created a weaker story because both students didn’t really have a strong direction, so they just relied on each other, but then nobody took the reins.”

Another constraint reflected in the focus group interviews was uneven patterns of participation. For example, a student from one of the groups explained that he felt like he was the only one writing at the start and that he did a lot of things himself. A participant from another group noted that, “at the beginning, it was the two of us,” but “at the end, it was kind of just me….” And, in a third group, one of the participants commented that sometimes his partner was busy so he did quite a bit of the writing, and then his partner could look through it and make edits and revisions.

It appeared that part of the reason for the uneven patterns of participation was that some students were spending more time working on the writing project outside of class than their peers, as reflected in the Google Doc version history, as well as a couple of the students’ comments in the focus group interviews. For example, one student noted, “I didn’t really put a lot of time into the story writing… outside of school…,” while another student commented, “I quickly wrote the entire second half in one night before the deadline.”
The teacher also noted that attendance was a concern and that he needed to reinforce the importance of attendance. The following quotes come from the post-project interview with Mr. Towers:

I knew that there would be certain students who wouldn’t maybe be always in attendance.

That becomes an issue when [it’s] a two-person group and when one person isn’t there, then the onus is on them to do the work alone, rather than in a collaborative way, so I think reinforcing that attendance was important… was part of my role there.

Another issue mentioned by a few students was a lack of communication between group members during the story writing process:

Our group didn’t make decisions; we just kind of did everything. (Shay)

We didn’t actually communicate much about it. We just wrote the story. (Anton)

We didn’t really have much communication at all… my group just wrote some stuff and then someone will delete that stuff without telling them and then put in their own stuff and continue both sides. Yeah, we didn’t really have much communication because we didn’t really have chemistry in our group. (Cameron)

Because of the challenges associated with working with others, some students expressed a preference for working alone:

In my opinion, it would be easier if I wrote it by myself…. (Anton)

I don’t enjoy writing stories with… other people because I always feel that they’re always way too dependent on me and I don’t want to let them down. (Morgan)

I felt I was slowed down by the fact that I had to do it with other people because I like to just express my own ideas by myself. (Cameron)

A student also expressed that “it felt limited” because “once you started, there was no going back” and this caused frustration and negatively impacted the enjoyment of the process. Two students also indicated that they would have preferred to pick their group members so that they could choose people with whom they get along better or with whom they have more in common.

For example, during the interview, one of the students noted that “they’re just not a present
person in my life, so I don’t really know what he’s thinking,” and another student commented, “if my sister was my group member instead of someone else, I think we would do a lot better.” These students felt that how well you connect and get along with your partner is more important than cultural or linguistic backgrounds and proficiency levels in facilitating the collaborative process.

In spite of the challenges, students were finding ways to engage with each other’s writing, as reflected by the following quotes from the focus group interviews:

We kind of let him go through and then we kind of opened it up and put our stuff in also, just to like make it fit, you know, edit their work and our work [at the] same time. (Alex)

I kind of planned out the plot and the names and stuff, and then he added a couple things… and then he would write the story and I’d go over it, edit it…. (Morgan)

You have an idea, [put] it down… look at it together. If it makes sense, we keep it. If it doesn’t, we just scrap it out. (Kobi)

Students also recognized the need for making compromises when working with others and that the collaborative writing process takes longer than writing individually:

We kind of just made a compromise [with] most of our stuff. (Alex)

I would say that collaborative writing is slower than one person writing it because you have to suggest to the other, “we should do this,” and the other person might say, “no, no, no, we should do this instead” and you have to agree to compromise or just give in to the other person. And, it’s a slower process because it’s like you are pushing one way and the other person is pushing a different way. And, it’s slower to reach the end. (Cameron)

A group project will take longer than doing it by yourself…. (Alex)

In the post-project interview, Mr. Towers similarly reflected on the idea that the writing process took longer due to the collaborative nature of the project:

I think it got slowed down when we transitioned into the story. I think pairing up presented challenges, whereas they are used to just writing a story by themselves. It slowed the process down because we had to wait for a face-to-face. I couldn’t do it more for homework where I just say go and write a story at home. It was more about the process, so that took longer.
In this excerpt, the teacher mentioned two other key features of the collaborative writing unit, which were that students spent time writing face-to-face and that emphasis was placed on the process; these ideas that will be elaborated on in the next section.

**Extended opportunities for students to write in class.** In the focal classroom, approximately ten classes were devoted to the story writing process, which included the brainstorming and planning stages, as well as writing, editing, and revising. Google Docs enables students to write from anywhere, anytime, but the teacher was concerned that if everything was done outside of class, one student may write all of it. However, he also recognized that students could get distracted in class. Similarly, during the focus group interviews, some students noted a tendency to lose focus in class:

> You can get distracted way easier. (Shay)

> Even when we’re doing the work, sometimes things can be you know a little bit funny, and then someone laughs a bit louder and it makes it even more funny. (Alex)

> At school, there’s always this air in class that people are not paying attention and goofing off…. (Cameron)

> You get vibes off other people too; I don’t know, I get like that and I just feel like it kind of spreads throughout the whole class a little bit towards the end. By the end, we’re all just talking about some random stuff. (Morgan)

One of the students expressed that because the class was scheduled at the end of the day, it was harder to stay focused. In the post-project interview, Mr. Towers also noted that students were sometimes tired and that when one student was unproductive, it could influence others:

> I think if one shuts down, then it’s harder, it’s easier for the others to shut down and be unproductive than for them to get the reluctant writer to write, which, I don’t know, I’ve seen both, but in this case, I’m just thinking more of certain days where maybe they were tired, or they were not as productive. And, I think if one was tired, the other would kind of follow along in that way.
In spite of the tendency for students to lose focus, some students felt that they were more productive at school than at home, as reflected by the following excerpts from the focus group interviews:

I feel it’s a good environment for most people... it will get your work done…. (Alex)

You don’t feel as bored. If you’re at home doing it, you’re just like, I could be doing way better stuff than this. But then when you are in a group, you are all talking, and laughing, and joking around, but at the same time doing your work. (Shay)

I get more work done at school than I do at home, so that’s usually when I did my work. (Morgan)

Students also noted that in the classroom, they can help keep their partners on task:

You can tell them to do the work. (Daniel)

You can keep your partner focused on the work. (Kobi)

Students also felt that working with their collaborators while sitting face-to-face led to better communication:

You can just say whatever is on your mind and what you want to say. Or you see them and you can see what they’re doing too at the same time, and if you see them use the wrong word or something like that, you could just right away say that to them and let them know, or even teach them if you want... it’s just way [easier] to communicate with them and get things done I find…. (Morgan)

When you’re facing your partner, you can communicate with him; it’s very easy, right…. (Anton)

I feel being face-to-face a lot better for this type of thing 'cause you get everything from them... I guess the body language and stuff, like if someone doesn’t feel comfortable, maybe you could change something to be more of their liking. (Alex)

Mr. Towers also recognized that working face-to-face led to better communication due to the immediacy of the feedback, as he noted in the post-project interview:

I think face-to-face is very helpful and the ability for them to ask a question or get clarification on an idea, or bounce an idea off somebody is much easier than sitting at home and writing a comment on Google Docs and waiting for a response. So, it’s just the immediate feedback is important.
In addition to being able to communicate better with their collaborators, writing together during class enabled the students to receive help from the wider class community, as noted by the teacher in his reflections and in the follow-up interview:

Students are also using their group members and the larger class for suggestions: “What kind of company can exist in the future?” (Teacher reflections, June 5th).

I recall a comment where one group was asking a question and then another group chimed in... I think having collaboration from group to group was helpful too. (Post-project teacher interview)

One of the students remarked that the small class size made it easier to be “more vocal” about their work. In my field notes, I jotted down several instances of students communicating within their group and with the wider class community for ideas. For example, I heard one student ask his partner if they should put a traitor in their story. She responded positively and they started talking about who could be the traitor and settled on the stepmother. In another instance, during the pre-writing activities, someone called out to the class asking for a negative word for magic and someone from another group responded, “sorcery” or “witchcraft.”

During face-to-face meetings, the students could also check in with their teacher for advice. For example, one day a student approached his teacher to ask about how much dialogue was too much. Mr. Towers advised him to find a balance between dialogue and narration. He noted that it is hard to read or follow if there is too much dialogue and also that the story can only go at the pace of conversation, whereas with narration, you can remove yourself from the scene and go do other things. He asked the student if that made sense and noted that it was a good question.

In summary, in spite of the distractions associated with writing with peers in class, students felt that they got some work done during these writing sessions. They were also able to
communicate more easily with their group members and with the wider class community and they received more immediate support and feedback from their peers and their teacher.

**Peer sharing and peer feedback.** Another prominent feature of the collaborative writing unit was that students had numerous opportunities to share their writing with their peers and to receive peer feedback. Mr. Towers felt that sharing their work with their peers would prepare them for sharing their work with the audience of elementary students, as is reflected in this excerpt from his reflections:

> Presentation of the group work allows students to become more comfortable with sharing their work in a public, yet safe, space. Becoming more comfortable with sharing will be increasingly important as the final story will be shared with an elementary school class. (Teacher reflections, May 4th)

The first three sharing opportunities were designed to be anonymous in order to give students an opportunity to develop their comfort levels with sharing their writing. After the students completed the first pre-writing task (writing a description of a place that is important to them), the teacher shared a Google Doc with the students and asked them to add in their setting description without putting their names. Although the intent was to make it anonymous, students could see whose name was popping up as they added in their descriptions, and one student expressed a reluctance to share her work with the class. After the class, the teacher noted that her reluctance to share could have been due to my presence as I was still an unfamiliar face.

In addition to helping students become more comfortable with sharing their work, the teacher wanted to provide an opportunity for students to give and receive feedback from their peers and their teacher. As such, Mr. Towers read each setting description out loud and then called on different students to say which words they liked and why. As time started to run out, Mr. Towers sped it up by commenting on what he liked about the remaining writing pieces.
The next sharing opportunity came in the following lesson when the students entered adjectives or descriptive words into a website to create a word cloud, which was then shared with the class on the screen so that they could discuss the students’ word choices. Again, this sharing opportunity was anonymous as there was no way for students to know who entered which words unless they indicated so themselves.

In a subsequent lesson, students wrote setting descriptions in collaboration with their peers and the teacher asked them to submit those to Google Classroom and he cut and pasted them into one Google Doc and projected it on the screen. Once again, he noted that no names would be provided and he instructed students not to try to identify the authors. Each setting description was accompanied by an image that the students had found on-line. To follow is the excerpt from my field notes illustrating the teacher/peer feedback and class discussion that ensued:

Mr. Towers places each image and description on screen. He comments on the pictures and reads the description aloud (from his desk). Then, he asks students to comment on what they like about each description. They discuss word meaning and word choice (“zephyr,” and also made-up word, “squashy”). They discuss grammar - sentence fragment – (Curvaceous structures… Mr. Towers notes that it could be “Curvaceous structures line the hillside.”) and punctuation (how to use a semi-colon). Discuss use of simile (“The distant boats look like freckles scattered among a ginger boy’s face.”). Discuss use of literal vs. figurative language in reference to description of reflection in lake. Discuss use of second person “you” (making personal connection, bringing character into setting, as opposed to observer describing setting). (Field Notes, May 1st)

This excerpt demonstrates that these sharing sessions also provided an opportunity for the teacher to extend the students’ understandings of literary devices (e.g., literal vs. figurative language, similes) and writing traits (e.g., word choice, grammar, punctuation).

As students became more accustomed to sharing their writing, the teacher no longer emphasized the anonymity. In collaboration with their peers, the students wrote descriptions of different characters that were projected on the screen and Mr. Towers asked the students to share
their ideas out loud in a circular fashion. Then, with the same peers, students chose a Google image and created a half-page description of the character. This time, the teacher only shared the image on the screen and he asked the students to describe their character, encouraging them to do so from memory, rather than by reading. Again, this sharing was followed up by peer and teacher feedback through a class discussion:

Mr. Towers instructed the audience to ask questions, identify holes or gaps in character, and to point out any flaws, or anything they find interesting. It was not anonymous this time as the teacher called on each pair/group by name. It appeared that he used the first one as an exemplar – [the students] provided a lot of detail about their character, and Mr. Towers noted that others should be aiming for the same amount of description. Mr. Towers was also prompting students to add more details regarding their characters (e.g., What else can you tell us? What will make him happy? What’s his life goal? What are his challenges?). Also prompted audience, “What else do you want to know?” He noted that they would be coming back to these characters. (Field Notes, May 7th)

This excerpt demonstrates another objective that the teacher had in sharing their work, which was to provide exemplars for other students to follow.

After sharing and discussing their character descriptions, the students were asked to work with the same collaborators to create 3 conflicts in the character’s life (i.e., 3 conflicts that would make their character’s life different, that would turn his/her life upside down, that would fit the character). Each group then orally shared their conflicts and the teacher led a discussion and encouraged the students to think about what types of conflict would be most likely to engage them as readers:

After each sharing, Mr. Towers engages students in a discussion about why some conflicts are better than others, noting, for example that [one student’s] 3rd conflict opens up so many more possible directions for the story than the other conflicts. He also asks the audience which of the three conflicts they like best and why (e.g., Which conflict is most compelling? Which one would you want to read a story about?). He sometimes provided positive reinforcement (e.g., “I think they are all winners”). At the end, he emphasized that the conflict is going to dictate the story, and that conflict, setting, and character are all important elements of a story. (Field Notes, May 7th)
In summary, the peer sharing that the students did in the pre-writing stage of the unit was designed to support them to become more comfortable with sharing their work with an outside audience; to give them an opportunity to see exemplars of different story elements (setting, character, conflict); to extend their understandings not only of story elements, but also of literary devices and writing traits they were expected to use in the larger writing assignment; and to give them an opportunity to receive feedback from their peers and their teacher. The teacher transitioned from anonymous sharing to non-anonymous sharing as students became more accustomed to the process.

Opportunities for sharing and receiving peer feedback continued once they began writing their stories. After the students were underway with their story writing, the teacher devoted a class to peer editing and revising. First, he projected an excerpt from one group’s writing on the projector and showed students how to add comments and suggestions. He then instructed them to exchange their stories with another group by adding them as editors. Students began the peer editing/revising process, and towards the end of the class, Mr. Towers noted that they should make sure they’ve gone through and peer edited the whole story and that the story writers should go through and decide what to accept and reject.

Mr. Towers also provided another opportunity for students to share their stories with the whole class by reading them aloud. The teacher provided positive reinforcement and further suggestions. The teacher noted two advantages of having students share their stories with their peers, first that it gave students more confidence, and second that it let them know where other groups were at with their writing. The following excerpt comes from the post-project interview with Mr. Towers:

At one point, we read a couple of the drafts about halfway through; we put one up on the projector, and I can’t remember if there were any specific comments at that point, but I
think exposing them to another person’s writing allowed them either explicitly or implicitly to get a little bit more confidence, so I think seeing where other groups were at was helpful.

One of the students also commented that “it helped to see where your story stands in relation to others.” In the focus group interviews with the students, I asked them how they felt about receiving comments and suggestions from their peers and some interesting trends emerged. The first trend was that the students felt that the peer feedback (both from their own group members and from others) helped them improve their writing:

I had a lot of grammar mistakes, and so I would like to receive their help. (Daniel)

I saw it and I’m like yeah, that makes more sense, it’s fine, or it made it better if it was a bit too bland. (Alex)

Can always make it better. (Kobi)

I like doing something in groups because if you don’t know something, if you need something, your partner can help you improve…. (Anton)

A native English speaker also talked about providing scaffolding to a partner who was a non-native English speaker by explaining word meanings and editing his writing:

I would edit his words and sometimes he’d use words and I feel like he assumed that it had a different meaning in English than it actually does, and I kind of explained that to him. It happened like once or twice, but yeah, other than that, I just edited his grammar.

The teacher also commented that students were making good observations about their group’s work and that the peer editing was helpful as it provided comments and it also helped students become better at the peer editing process.

I’ve noticed some students providing good observations and edits to their group’s work: “Every sentence in the second paragraph starts with ‘he’” (Teacher reflections, June 5th)

I think the peer editing was helpful in two ways, one it gave the author some comments, but it also gave the editor a chance to read someone else’s work so they can see how to comment and how maybe their comments are taken, so then they become better at this process. (Post-project teacher interview)
A second trend that the students’ comments revealed was that the peer feedback tended to focus on grammar and word choice, as opposed to story ideas:

We gave very basic suggestions, like just correcting grammar… didn’t really give them story suggestions. (Cameron)

I didn’t change much… I didn’t change the idea of what was happening. I just said a better word or explain what this meant. (Alex)

I remember the story. It was mostly grammatical issues and maybe just structure of the sentence, and I think that was about it. I didn’t really give anything past that. (Jesse)

It was just maybe if a word sounded funky or off, we’d give maybe a word suggestion, but you wouldn’t be…, I don’t know, I didn’t really edit much. (Morgan)

The students tended to accept their peers’ suggestions because they emphasized grammar and word choice. Nevertheless, a couple of students expressed a preference for receiving feedback from their teacher, rather than their peers:

I felt the teacher was more serious about giving feedback, definitely. (Cameron)

[Other students] still might be better at something, but I prefer listening to the teacher. (Anton)

A couple of students also expressed a reluctance to provide feedback or to edit their peers’ writing:

I hate giving suggestions. I feel like they work so hard on it and then you’re just like “no, that’s bad, change that” …. (Shay)

A lot of it was kind of half-hearted because we didn’t really know what to do. We didn’t really want to do it. (Cameron)

They also expressed concerns about making revisions to their own group’s story, in case it might upset their peers or increase the conflict within the group:

You just have to make little changes so that you wouldn’t hurt their feelings. (Shay)

There were a few times I just didn’t want to trouble them about the changes because… then we’d have too much conflict; even though we were having conflict, I didn’t want to
have too much of it, so I just left their stuff there even though I kind of disagreed with it. (Cameron)

In summary, the teacher provided numerous opportunities for students to share their work and receive feedback from their peers. The main trends that emerged were that the peer editing process helped students develop their writing, peer editing tended to emphasize grammar and word choice over story ideas, some students expressed a preference for receiving feedback from their teacher, and some students were reluctant to edit their peers’ work out of concern that it might hurt their feelings or cause unwanted conflict.

**Enabling a positive and productive learning environment.** Another important finding from this case study was that Mr. Towers took steps to create a positive and productive learning environment by building relationships with students, facilitating their work in groups, and monitoring their progress.

**Building relationships.** One of the ways that Mr. Towers built relationships with his students was by engaging with them in small talk about a variety of topics that interested them. Sometimes, small talk would occur at the beginning of the lesson and other times during a lesson. A common trend was for the teacher to engage with his students about a topic that they would initiate and then when he felt it was going too far, he redirected them back to their work.

The following excerpts come from my field notes:

A few times during the work period, students are off topic - discussions regarding food, ASMR.... Mr. Towers allows this and even engages sometimes. Then, if he thinks they’re taking it too far, he reels them in. (Field Notes, May 17th)

After a short time, some students began chatting (some off-topic chatter about the rain). Mr. Towers listened and engaged in the discussion. He didn’t steer them back until the end, when he said, “So you have 2 minutes. We get it... settle.” (Field Notes, May 29th)

There is some off-topic chatter initiated by a student about danger of leaving windows open – bird flew into Social Studies class in the morning. Mr. Towers participates in the
conversation, and eventually says, “okay… calm, we’re going to move on from the bird talk.” (Field Notes, May 31st)

Mr. Towers also used humour and there was a playfulness that went back and forth between the teacher and his students. For example, in the first lesson, he explained that the focus would be on “setting” because it “sets it all off, no pun intended.” Mr. Towers also repeatedly shared his pet-peeves about writing as a way of discouraging his students from adopting these traits in their own writing. One day during class, he noted that “nice” was one of his pet-peeve words as it does not create an image like other words might. Then, in the next activity, students were contributing words to the class word cloud to describe a scene and a student entered “nice” several times so that it appeared larger than all the other more descriptive words that the students came up with.

The lessons tended to wrap up on a positive note with Mr. Towers applauding his students for their good work (e.g., “Thank you for your descriptive writing. See you tomorrow.”) and/or with students expressing their appreciation to their teacher (e.g., “Thank you, Mr. Towers, have a great weekend.”)

**Facilitating groups.** Mr. Towers explained in his reflections that a key role he had adopted was to help facilitate the groups as they worked on their stories. Early on in the assignment, one of the groups was struggling to work together because the beginning of the story had been written by one person who was now absent and the other students were unsure how to revise what he had written without hurting his feelings. Mr. Towers chatted with them, offering suggestions on how to move forward. For example, he suggested that they could add comments into the Google Doc instead of changing what the other person had written. He also suggested that they could write a new introductory chapter and move down what was already written. On the whiteboard, he showed them how to add to each paragraph and how they might want to move
the conflict down. He noted that they could add to sections and then move sections. Based on the comments from the teacher and students in the post-project interviews, it appeared that the students were able to add in some of their own ideas and make it all fit together. Interestingly, however, one group member noted that you could tell that the story was not all written by one person; he described it as a “Frankenstein story” with “different parts stitched together.”

There was also an instance in which two group members disagreed about a transition within their story and the teacher was invited into the discussion:

S1: Mr. Towers, could you look at our doc? What do you think of the 3rd paragraph – transition from 2nd paragraph?

*Mr. Towers takes a look and notices that the 2nd paragraph ends with the doctor frowning and that something has gone wrong in the blank space of time.*

S1: I think it’s okay, but S2 thinks we need a transition.

S2: I just think there needs to be more context.

S1: Not sure what to write.

S2: Tell what happened.

*Mr. Towers notes that taking S2’s point, maybe the reader wants to know why, but he also suggests that they risk getting bogged down in details. He concludes by saying, “I can see both sides, but I think it’s fine the way it is.”*

Through these dialogues, Mr. Towers was supporting his students to work together, and ensuring that all of the students’ voices were heard and that they were all able to contribute to the story. In the post-project interview, one of the students noted that he appreciated having his teacher as a “moderator” or an “outside party” who “can judge [the] story, without preference for one person or the other’s ideas to be more shown than the other.”

*Directing and monitoring their progress.* The teacher used a few different strategies to ensure that students continued to move forward with their stories, such as keeping track of the
time during class, setting goals and sub-goals, monitoring their progress, and reminding them of the deadline when they would share their stories with the elementary students.

During class, Mr. Towers kept his eye on the clock, and when students started to lose focus, he would sometimes redirect them back to their work by letting them know how much time was remaining:

“20 minutes left. Let’s stay focused.” (Field Notes, May 30th)

“10 minutes remaining. Make sure you get as much done as you can on your presentation or finish up your story.” (Field Notes, June 4th)

One day, Mr. Towers provided his students with an incentive to continue working hard on their stories. He noted that they had done some good writing and that they should continue for another 15 minutes and then they would play a game of Kahoot! for the last 5 minutes. The students appeared to enjoy this on-line game, which tracked their scores as they responded to trivia questions.

Another role that the teacher adopted throughout the project was to set goals and clarify the expectations for his students. In addition to the overarching goals for the project, which were posted on Google Classroom and explained in class, Mr. Towers set smaller goals for students along the way. To follow are some excerpts from the field notes demonstrating this trend:

Mr. Towers began by explaining the project again, but in more detail – he went through the assignment overview on Google Classroom. (Field Notes, Apr 23)

He also noted that 35 minutes wouldn’t be enough time to do all four questions, so they could focus on characters and setting. (Field Notes, May 14th)

Mr. Towers noted that the short story contained a lot of description (something they are aiming for in their own writing). (Field Notes, May 15th)

Mr. Towers suggested that their stories should be 3-4 pages as a minimum and 6 pages as a maximum. (Field Notes, May 15th)
He recommended 10 points on the plot, inciting action, climax, etc. and then they’re ready to start writing. (Field Notes, May 17th)

Mr. Towers says, “Okay, just a few minutes left.” He notes that they should make plans to work on this over the weekend, and that they should talk with their peers to discuss who’s going to work on which part. He notes that they should have their drafts 90% done by [the next class]. (Field Notes, May 25th)

At the end of class, Mr. Towers said they should make sure they’ve gone through the whole story (peer editing) and the story writers should go through and decide what to accept or reject. (Field Notes, May 29th)

Mr. Towers notes that they should be getting into a climax/resolution tomorrow and then finish their stories over the weekend. (Field Notes, May 30th)

Someone asked how long [the] digital story should be and Mr. Towers said 15 min. at most. (Field Notes, May 31st).

I’ll see you on Monday; that means you have 3 days to finish your stories. (Field Notes, May 31st)

He reminds the class that it is not going to be them standing up there in front of the audience with their Chromebook. It’s all supposed to be pre-recorded. (Field Notes, June 5th)

It was evident that Mr. Towers was monitoring the students’ progress, both through the Google Docs and by checking in to ask them how much longer they thought they would need to finish their stories. He also noted regularly that they should be working on their stories for homework. Nevertheless, Mr. Towers did not have clear measures for holding his students accountable for working outside of class, and while some students were making good progress on the story writing on their own time, it appeared that others were not.

Some students also struggled to stay motivated and focused, and time became an issue towards the end of the project. The following comments were made by students during the focus group interviews:

At the end, it was kind of just me, so [I was] just pushing through. (Kobi)
I felt like quite a few times in the story, it [was] just like, there was no emotion… it just felt really flat and boring… ’cause whenever I was writing, I was just tired and I just wanted to go home, so it was just kind of like “kay, I just want to get this over with” …. (Morgan)

We had a few weekends where we didn’t do anything and it was only the last weekend where I just quickly, “Oh no, the time’s coming up,” so I quickly wrote the entire second half in one night before the deadline. We were kind of lazy to be honest. (Cameron)

I guess time was a thing too. We really got most of the work done really near the end. Surprisingly, we got it done at a decent level, but it could have been better if we kind of weren’t distracted by other stuff. (Alex)

In the post-project interview, Mr. Towers reflected on how he would manage the time differently next time:

I would stick to a tighter timeline, just so there’s a little bit more incentive to get finished… I like doing the pre-writing because it does warm them up to starting small and then developing, but on the other end of things, we could have spent another 2 or 3 weeks editing their final drafts and refining those and developing those and peer editing and commenting, and workshopping them, reading them out and practicing, so I think we just ran out of time, and managing that. Maybe not doing it at the end of the year, so that we can have some flexibility or spreading it out throughout the year… so that they have time to write on their own, and they’re not just relying on the face-to-face.

Mr. Tower’s reflections show that he recognized that time had become an issue and he wished that they could have had more time to refine and edit their writing. A solution that he proposed was to extend the project over a longer time frame and to provide longer spaces between writing sessions in class so that they could make more progress on their own time.

Nevertheless, an impending deadline appeared to be the incentive students needed to finish their writing projects. In fact, a particular strategy that Mr. Towers used to help move the project along was reminding students of the date on which they would be sharing their stories with an outside audience. In class on May 29th, he talked about the significance of “D-day” in history, explaining that it was the day during WWII when the British Forces put plans into action to storm the beaches of Normandy; he then noted that the term “D-day” has been co-opted as
“any day you put a plan into action.” He went on to say that June 7th is their D-day as this is the day they’ll be sharing their stories with the elementary students. In class on June 4th, which was a Monday, he explained that they had three days to create their digital presentations as they were scheduled to go to the elementary school on Thursday. A student said, “this is exciting,” and Mr. Towers responded, “yeah, it’s exciting, but you guys need to finish your work.” Finally, in class on June 6th, Mr. Towers said, “we’re at the anniversary of WWII D-day. We’re at our D-day” and noted that they should have their presentations completed by the end of the class.

As these examples illustrate, Mr. Towers used a variety of strategies to build positive relationships with his students, to help them work better within their groups, and to ensure that they continued to make progress with their stories. Although some of the work was completed in the final hours, all of the groups managed to finish writing their stories and preparing their digital presentations in time for sharing with the elementary school students.

Transitioning to a new curriculum. Another key finding was that the teacher was adopting some new practices and maintaining some old practices as he transitioned to a new curriculum. In recent years, the BC Ministry of Education has been modernizing all of its curriculum to respond to a “technology-rich world” that has changed the way people communicate and access information (BC Ministry of Education, 2015). The New Media 11 curriculum that Mr. Towers chose to use was still in its draft phase; full implementation would take place the following year. The curriculum, which is shown in Appendix G, was collected as a data source in this case study in order to corroborate some of the findings that were emerging. One of the findings was that the teacher was integrating learning activities that he had done before with some new activities. As Mr. Towers explained in the post-project interview:

The course itself is part of the new curriculum, and still in its draft phase, but it will be implemented fully in 2019/2020 school year, so we still have one more year to implement
and experiment as we see fit. And, [I] tried to follow the draft curriculum as much as possible, but I used things that are done in the past, but also new things as well….

To explore the ways in which the teacher was connecting the learning activities to the new curriculum, I examined the overview/goals of the collaborative story writing assignment alongside the new curriculum and was able to identify several connections. Table 4.5 illustrates these connections, and in the pages that follow, I elaborate on some of the connections.

**Table 4.5**

*Connections between Story Writing Project and New Media 11 curriculum*

<table>
<thead>
<tr>
<th>Collaborative Story Writing Assignment</th>
<th>New Media 11 Learning Standards (BC Ministry of Education, 2018)</th>
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</thead>
<tbody>
<tr>
<td>You will be working in groups (likely 2 or 3).</td>
<td>Students are expected individually and collaboratively to be able to:</td>
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</table>
| • In a lead-up to the final completed story, you will be completing several smaller assignments individually and in your group to develop key aspects of story writing (character, setting, descriptive writing) and get comfortable working collaboratively. | • Transform ideas and information to create original texts, using various genres, forms, structures, and styles.  
• Respectfully exchange ideas and viewpoints from diverse perspectives to build shared understandings and extend thinking. |
| • Peer editing will be a regular part of this assignment. You will be expected to regularly and formally edit your own work as well as other students’ work. | • Reflect on, assess, and refine texts to improve clarity, effectiveness, and impact according to purpose, audience, and message.  
• Use the conventions of Canadian spelling, grammar, and punctuation proficiently and as appropriate to the context. |
| • All work MUST be created through Google apps (Docs, Slides, etc.) unless otherwise instructed. | • Select and use a variety of media appropriate to purpose, audience, and context. |
| • There will be a presentation aspect to this assignment where you will be expected to create a digital performance of your finished story. This presentation will (potentially) be played for elementary students. | • Use digital and multimedia writing and design processes to plan, develop, and create engaging and meaningful literary, imaginative, and informational texts for a variety of purposes and audiences. |
Student are expected to know the following:

<table>
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<tr>
<th>You will be assessed on writing style, content, organization and conventions of writing as well as your final digital presentation.</th>
<th>Language features, structures, and conventions: elements of style, usage and conventions, literary elements and devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text forms and genres</td>
<td>Writing processes</td>
</tr>
<tr>
<td>Multimedia presentation processes</td>
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Three components of this project that were directly related to the curriculum were the creation of a digital presentation of the story, the identification of an authentic audience, and the consideration of the assessment component of the project.

**Digital presentation.** When Mr. Towers first introduced the collaborative story writing assignment, he explained that they would eventually be creating a digital presentation of their story, with audio and visual components integrated. As the students got closer to finishing their stories, he went into more detail about the digital presentation, emphasizing again that it should contain two elements: audio (the story would be the main part, but they could also add background music or sound effects) and visuals (still images or video, stop motion). Mr. Towers also provided a list of options for tools they could use to create the presentation, which included iMovie, Windows Movie Maker, Google Slides and screen casting, PowToon, Pixton, We Video, Adobe Spark video. He also welcomed suggestions from the students.

Mr. Towers then briefly modeled some of the digital tools, such as how to insert a video from YouTube into Google Slides and how to use screen casting to record the computer screen and their voice. He projected the Pixton website on the screen and suggested that they could create a comic and then narrate their story over top. He then moved onto the PowToon website, noting that it would allow them to do animation, but that it is really a “supped up Google Slides or PowerPoint.” Mr. Towers suggested that they play around with it and he concluded by saying that his choice would be Google Slides with narration or Pixton with narration.
Mr. Towers believed that the story writing was the more difficult part of the assignment, whereas the digital presentation is something they are good at and they enjoy; as such, he expected that they would be able to create the digital presentation relatively quickly. Nevertheless, since the story writing had taken longer than expected, the digital presentation aspect of the assignment was not formally introduced until three days before they were expected to share them with a group of Grade 6/7 students at a nearby elementary school. In the focus group interviews, a couple of students noted that they wished they could have had more time:

I think we should have started earlier with the animations and stuff…. (Morgan)

Yeah, we could have been given more time to do the whole visual presentation part. (Cameron)

Due to the time constraints, they were not able to do multiple recordings of their stories, which impacted the quality of the final product. As one student explained, “we didn’t do multiple takes. We were really stutter[ing] and stumbl[ing] and we read some things wrong, and we’d repeat the sentence. It was very uneven.” Another student noted that he would prefer to read his story out loud to the audience “because at least it’s understandable when you mess up a word or something,” whereas, “when you’re listening to a presentation, you are kind of expecting it to be perfect…."

The teacher also reflected on some of the challenges associated with the digital presentation during the post-project interview:

I think I noticed a deficiency in their understanding [of] how to get the final product into a presentation, so the combination of creating a visual with an audio baffled a few people. So, yeah, that’s what I would do differently next time, is make sure they know how to get whatever they are creating onto a platform like Google Slides where they can record audio with a visual and have it flip through.

And then the digital presentation was something that I hadn’t really done before so that was a challenge for me. I think the students enjoyed it, but the end result maybe could be improved.
These findings suggest that because it was the first time that Mr. Towers had asked his students to convert their stories into a digital presentation, he underestimated the time that students would require to do a polished job, as well as the level of support they would need with some of the technical components.

**Audience.** Audience is an integral component of the New Media 11 curriculum, and it is suggested in the curriculum document that “students expand their understanding of the range of real-world audiences. These can include children, peers, community members, professionals, and locally and globally connected digital conversations” (BC Ministry of Education, 2018, p. 5). As has been discussed already, students had frequent opportunities to share their writing with their peers, who along with their teacher, became their first audience. However, Mr. Towers was also interested in finding an elementary school class that would provide a more authentic audience for their stories. With my help, we were able to contact a Grade 6/7 teacher at a nearby elementary school who was open to having the Grade 11 students come into his classroom to share their stories.

Providing an audience of elementary pupils presented both affordances and constraints in the current context. One key benefit of the audience was that it motivated the students to finish and to do a good job, as demonstrated by the following quotes from the student interviews:

[The audience] kind of put the pressure on you to finish the story, to get it done. And you wanted it to be good… for them to be interested in it. (Morgan)

Sometimes we tried to make it fun…. (Daniel)

In the post-project interview with Mr. Towers, he expressed a similar perspective:

I think it focused them. If they were just told that they were going to present to their classmates, they wouldn’t have taken it as seriously. I think there would have been less of a desire to do a more polished job. I think by providing an outside audience, there’s a
certain, not nervousness, but a certain desire to do a better job and reflect their true abilities, rather than, maybe a less, a lesser job.

Another significant affordance was that it encouraged students to consider their audience while they were writing, which is one of the goals of the curriculum. The following notes were made by the teacher in his reflections:

One student asked about dark nature and if it was going to be too scary for the audience. We will have to discuss as they progress through their story. (Teacher reflections, May 14th)

It was interesting to see students think about their audience and how certain issues and topics needed to be considered. For instance, one student asked aloud whether bullying and suicide would be appropriate. Interestingly, some disagreed on what would be acceptable. This could have been a whole lesson, but time and focus of that lesson meant we needed to move on. Audience is a key consideration in writing, so I was pleased to see this level of thought and contemplation. (Teacher reflections, June 5th)

During the lessons that I observed, I also noticed students considering their audience and engaging in conversations with their teacher and peers about what would be appropriate content. For example, a student asked the teacher if it would be okay if a character was under the influence of a hallucinogenic. The teacher responded that it would be okay if it were an accident and that it should have a negative consequence so that the person wouldn’t want to do it again. Similarly, a student explained in the focus group interview how his peers helped him realize when a topic should be avoided:

When writing the summary of the story, I wrote that I wanted the character to think about killing himself, but then the other two people in my group said, “no, no, no, we can’t do that, they’re Grade 6s” and then I just went, “oh yeah, I forgot, we’re presenting to kids.” (Cameron)

A student also expressed how his teacher was able to support him to ensure his writing was appropriate for the audience:

Say if you wrote something that you’re not very sure of, that would make sense to… maybe that age group, you would ask him and he would tell you. (Alex)
While some students were clearly thinking about their audience while writing, other students recognized that they were not thinking about their audience while writing:

> When I was writing the story, I didn’t really think about the audience, maybe I should have, because I was just writing what I would write… not what I would write for someone, you know what I mean. (Cameron)

> I kind of just had a thought of how I wanted the story to go and I went with it, but… I wasn’t really thinking of the audience…. (Jesse)

The teacher also reflected in the post-project interview that “certain topics or certain word choices were maybe above where they could have been,” but he felt that “the stories that they were writing were appropriate for the most part.”

> A student noted that he experienced some difficulty coming up with ideas that would be appropriate for the given audience, and students also expressed that certain content had to be censored and removed when it wasn’t appropriate:

> The ideas couldn’t go past a certain limit. You always had to keep it down there at PG. (Kobi)

> We had some political stuff so… Mr. Towers told us to cut it out. (Daniel)

> Some parts of our story were not appropriate for that age. It would be fun if [they were in] high school or the last 3 years, but not appropriate for Grade 7s, so we had to remove all of that. (Shay)

The teacher expressed that he had some difficulty assessing where the elementary students would be with their skills given that he had not taught that grade level before. Interestingly, when they arrived at the elementary school, they learned that the Grade 6/7 students were reading *Hunger Games* by Suzanne Collins, and afterwards, one student reflected, “they were reading dystopian things that maybe have been a little gritty….” This realization suggests that it might have been helpful for the teacher and students to have known what kinds of stories the Grade 6/7 students were reading beforehand so they could better gauge what themes would be appropriate.
Another constraint was that the students had mixed feelings about presenting their stories to the Grade 6/7 audience. Some of them were feeling quite nervous about how the students would react and also because they thought that their stories could be better, as reflected in the following excerpts from the student interviews:

I was nervous just because I knew that our story could be better, right. (Anton)

I was scared. I was shaking. I was shaking like a leaf, I was so worried… [that] they’re going to judge me. They’re going to judge my story. (Shay)

One of the students also expressed that he felt “scared and awkward” because he was going to be presenting in front of strangers, which illustrated that part of the nervousness came from the fact that the audience was unfamiliar to the high school students.

When they were not able to play their recordings due to technical difficulties, the students experienced a mixture of relief and disappointment about not getting to share their digital presentations:

I had mixed feelings. From one side, I was happy I didn’t have to read that and then I was kind of, ah man, I could have showed my work. (Anton)

I’m glad our recording didn’t get played because we were really stumbl[ing] with our words. (Cameron)

We didn’t really get a reaction to what we worked on…. (Kobi)

The students also commented on the lack of attentiveness of the children when one group read their story to the class:

'Cause our presentation was just us reading out loud and nothing else, it would have been very boring for them. (Cameron)

So, my group read our story, and well, the children’s reactions weren’t, I don’t know, they didn’t seem… [interested]… there was a lot of stretching and not really questions. (Alex)

They were paying attention in the beginning like what, minute, two, and then they kind of just gazed off. And they didn’t really have any questions. (Jesse)
As mentioned previously, the teacher had intended for the high school students to share the digital presentations of their stories so that the elementary students could see the images that accompanied the oral text. However, the technical difficulties meant that the elementary students were forced to just listen and this may have impacted their level of attentiveness.

In summary, in the current context, providing a real audience for the students’ stories helped motivate the students to finish and to do a good job, and it also encouraged some students to consider their audience while writing. Nevertheless, the lack of familiarity between the writers (Grade 11 students) and their audience (Grade 6/7 students) caused students to feel nervous about presenting and it also made it challenging to assess what topics and word choices would be appropriate for the age group.

**Assessment.** Curriculum and assessment are always intertwined. The curriculum articulates what students will be able to understand, do, and know within different subject domains (BC Ministry of Education, 2015). Assessment then provides a way for teachers and students to gauge where the students are at in their learning with the aim of moving their learning forward. In order to explore the classroom assessment practices within the current context, it is helpful to consider three types of assessment: assessment *for* learning, assessment *of* learning, and assessment *as* learning.

Assessment *for* learning is ongoing and takes place throughout the learning process. It involves “identifying particular learning needs of students or groups,” “selecting and adapting materials and resources,” and “providing immediate feedback and direction to students” (Manitoba Education, 2006, p. 29). Many of the assessment *for* learning strategies that Mr. Towers was using have already been discussed. For example, the teacher was engaging in assessment *for* learning when he recognized that students were having difficulties integrating
dialogue into their stories and he provided a mini lesson on this topic. He was also using assessment for learning when he was providing ongoing feedback while they were writing their stories.

Assessment of learning is a summative form of assessment, which is used to confirm what students know and what they are able to do in relation to the proposed curricular objectives. To be effective, assessment of learning should be “transparent” with “clear descriptions of the intended learning” and of the “assessment process” (Manitoba Education, 2006, pp. 55-56). In the focal classroom, Mr. Towers introduced the assignment expectations to his students, and he showed them that there was an assessment rubric that he had posted on Google Classroom (Appendix H), but he did not go through it with them in class. The rubric contains a 4-point scale: not yet within expectations, meets minimal expectations, fully meets expectations, and exceeds expectations. The criteria fit within four main categories: style, meaning, organization and form, and conventions and spelling. A review of the rubric shows that it aligns with some aspects that were emphasized in the lessons, such as using “varied and appropriate vocabulary,” using “figurative language,” using “literary devices,” and being “aware of [one’s] audience.” Nevertheless, the rubric does not reference the key story elements that were central to the unit, such as setting, character, and conflict. The rubric also does not provide criteria for the digital presentations that were noted as being part of the assessment. The rubric is titled, “English 11 - Narrative Story Writing Rubric,” so it is possible that this was a rubric Mr. Towers had used in the past, and he had not had a chance to update it to reflect the new components of the project.

In the post-project interview, I asked Mr. Towers to briefly explain the assessment component of the project, and he noted the following:

We started with an outline of the assignment; there was a rubric that was laid out, which admittedly we didn’t revisit. I think because of time constraints, it just maybe was more
about getting finished than focusing on hitting on assessment points for the students for peer editing. That would have been maybe something we took a class to do and look at in a little more detail, focusing on some of the targets and doing a mock assessment of their own or someone else’s work. So, yeah, as far as marking it, just doing a summative assessment will be one of the main ways and then just observational homework completion, that sort of thing.

The above excerpt demonstrates that the rubric was the main form of summative assessment of their project, and that if time had allowed, Mr. Towers would have spent more time reviewing the criteria as a class and using it to guide peer and self-assessment. In the interview, Mr. Towers also elaborated on his preference for assigning everyone in the group the same grade for the assignment:

The final piece, yeah, so that would be based on the group effort, so to break it down into individuals would be… yeah, I don’t really like doing that in groups, because then it becomes too difficult unless there’s an obvious student who missed the whole unit or something, so I think this particular project really was a collaborative effort, so everyone can get the same assessment….

The teacher’s comments in the interview showed that in special cases, such as student absences, he would look at overall contributions, but otherwise, he would prefer to assign the group members the same mark.

Assessment as learning occurs when students become involved in the assessment process. The teacher’s role in assessment as learning is to “model and teach the skills of self-assessment,” “guide students in setting goals and monitoring their progress toward them,” and “provide regular and challenging opportunities to practice, so that students can become confident, competent self-assessors” (Manitoba Education, 2006, p. 43). In the focal classroom, the students had opportunities to engage in peer editing, but they were not encouraged to reflect on their own writing or their peer’s writing in relation to the assessment criteria. Moreover, the project goals were usually set by the teacher, rather than the students. In the post-project interview, Mr. Towers noted that he might have involved his students in assessing their own work or their
peers’ work if there had been more time and if his students were not already discussing their learning experiences as part of the research study:

If we had more time and maybe if they weren’t already getting questions from you, I would potentially do a peer assessment or a self-assessment, just something that they can provide feedback on their own vision of what they think they should get and what other people participated, and what they think other students should have as a mark…. 

In the final class before students were going to present their stories to the elementary students, students were considering questions that they could ask the Grade 6/7s after sharing their stories, and one student proposed, “what did you learn from our story?” and then he had a realization and turned to his partner and said, “there’s nothing to learn from our story,” to which his partner responded, “I told you.” This interaction suggests that the students were reflecting on their story and identifying a gap, but unfortunately, it was too late to make any significant changes.

In summary, in the focal classroom, the teacher engaged in assessment for learning and assessment of learning. Mr. Towers emphasized and valued the writing process as an integral component of the project, but the final grade emphasized the end product. Opportunities for students to engage in assessment as learning were limited due to time constraints.

**Conclusion**

This chapter described the open-coding process that was followed to reach a deeper understanding of how the teacher facilitated the collaborative story writing project for his students, as well as the affordances and constraints associated with the pedagogical supports, the social context, and the use of Google Docs. The data analysis revealed that the teacher’s facilitation of the collaborative writing project was multidimensional and led to the articulation of five significant themes. The first key theme was that the teacher integrated a variety of procedural facilitators to scaffold the writing process for his students; these facilitators included mentor texts, brainstorming and planning tools, and web-based writing tools, including Google
Docs and an application for creating real-time word clouds. The second theme was that the teacher adopted a socio-cognitive apprenticeship model to guide his students toward higher levels of proficiency with narrative writing. He did so by engaging students in collaborative discourse and guided practice with key story elements (setting, character, and conflict), and then by releasing more responsibility to his students as they started writing their own stories. The third theme was that the teacher built a community of practice by using collaborative writing tasks, providing extended opportunities for students to write in class, and engaging students in peer sharing and peer editing of their writing. Another important theme was that the teacher took steps to create a positive and productive learning environment by building relationships with his students, facilitating their work in groups, and directing and monitoring their progress with their stories. The last significant theme was that the teacher was in the process of transitioning to a new curriculum, which meant that he was experimenting with some new teaching practices, which included asking students to create a digital presentation of their stories and finding an outside audience with whom they could share their stories. Several key affordances and constraints associated with the teaching and learning process within the focal classroom were identified and explained throughout the chapter. The next chapter includes a discussion of the major findings and their implications for teaching.
Chapter Five: Discussion and Implications for Teaching

This chapter comprises a discussion of the key themes and significant findings, with connections to relevant empirical and conceptual literature. The objectives of this descriptive case study were to examine an experienced teacher’s facilitation of a collaborative story writing project in a diverse high school English class and to inquire into the affordances and constraints associated with the pedagogical supports, the collaborative learning context, and the use of Google Docs. The findings cohered around five key themes: (1) the teacher integrated a variety of procedural tools to scaffold the writing process for his students; (2) the teacher adopted a socio-cognitive apprenticeship model to guide his students toward higher levels of proficiency with narrative writing; (3) the teacher built a community of practice by using collaborative writing tasks, providing extended opportunities for students to write in class, and engaging students in peer sharing and peer editing of their writing; (4) the teacher took steps to create a positive and productive learning environment by building relationships with his students, facilitating their work in groups, and directing and monitoring their progress; and (5) the teacher experimented with some new teaching practices as he transitioned to a new curriculum.

This chapter is divided into four additional sections. The first section considers connections between the findings from this descriptive case study and the theories that were articulated at the outset of the study. The second section discusses the significant findings and their implications for teaching and learning. The third section addresses the limitations of the study and the final section makes recommendations for future research.

Connections to Theoretical Constructs

Descriptive case study begins with the articulation of a descriptive or conceptual theory. This theory then guides the researcher through all stages of the inquiry, from formulating the
research questions to selecting the focal case. The researcher must then “assess [the case] in detail and in depth” in order to “reveal patterns and connections, in relation to theoretical constructs” (Tobin, 2010, p. 2). The purpose of this section is to identify the connections between the findings from my study and the conceptual frameworks that I articulated at the outset.

The overarching theoretical framework that guided this study was Vygotsky’s (1930/1978) sociocultural theory of learning, which proposes that learners acquire the ability to carry out cognitively-demanding tasks through socially-mediated interaction. Within the writing classroom, this theory implies that teachers are responsible for mediating their students’ ability to adopt cognitive strategies used by experienced writers. Several of the strategies that were used in the focal classroom correspond with a sociocultural perspective on learning. For example, the teacher provided mediating tools to support his students during the writing process. Scholars describing writing instruction from a sociocultural perspective have referred to these mediating tools as “procedural facilitators” (Baker, Gersten, & Scanlon, 2002; Englert, Mariage, & Dunsmore, 2006). Baker et al. (2002) suggest that procedural tools can provide a common language for discussing a cognitive activity and create a system for providing ongoing feedback. In the focal classroom, mentor texts provided a common language for discussing narrative writing and the Google Docs application provided a mechanism for students to give and receive suggestions and comments from their peers and their teacher.

Directly related to sociocultural theory is the construct of scaffolding, which is a metaphor that was first proposed by Wood, Bruner, and Ross (1976) to describe temporary assistance provided by an “adult” or “expert” to someone who is “less adult” or “less expert” (p. 89). The purpose of scaffolding is to allow the novice to carry out tasks that he or she is not
yet able to do independently. In the focal classroom, the teacher adopted many of the scaffolding strategies described by Wood and his colleagues, such as chunking the task into manageable components, keeping the students focused on the goals of the task, helping to reduce frustration, and modeling problem-solving solutions. More concretely, the teacher scaffolded the narrative writing process by breaking the narrative writing task down into story elements (setting, character, and conflict) and providing guided practice with each element before they started planning their own stories. The teacher also played a role in refocusing students when they became distracted and reminding them about the deadline for finishing their stories and sharing them with an outside audience. Finally, the teacher intervened to support students during the writing process, such as by facilitating their work in groups and providing suggestions and feedback on their stories. At the same time, the teacher expressed that he did not want to intervene too much as he wanted his students to take responsibility for the creative direction of their writing. In this way, the teacher’s pedagogy mimicked the “step-in” and “step-back” moves described by Englert, Mariage, and Dunsmore (2006, p. 210). The teacher steps in to provide instruction and modeling of new writing processes (such as how to provide suggestions to peers using Google Docs) and then steps back to ensure that the learners assume as much responsibility as possible for fulfilling the requirements of the task.

Providing opportunities for students to co-construct knowledge in collaboration with their peers also supports a sociocultural view of learning (Englert, Mariage, & Dunsmore, 2006; Storch, 2013). As the students in the focal classroom wrote together in class, they supported each other with ideas and suggestions for their stories. The sharing of ideas occurred both within and across groups as the class was small and students could pose questions to their group members, as well as to the larger class community. Students were also encouraged by their teacher to share
their writing with and provide feedback to their peers. The students felt that the peer feedback helped them to improve their writing. For example, one of the non-native speakers noted that he appreciated receiving feedback on his writing from his peers as they could help him with his grammar. Due to the capacity for students to pool their knowledge and provide reciprocal feedback, collaboratively written texts have been shown to be more accurate compared to texts produced by students working alone (Wigglesworth & Storch, 2009). Other studies have also revealed positive effects of collaboration on organization and content selection in writing (Elola & Oskoz, 2010; Strobl, 2014).

The findings from this study also expand on sociocultural theory by demonstrating how the main theoretical underpinnings of Vygotsky’s theory support two of the most common pedagogical approaches used in writing classrooms, genre and process approaches. Teachers using genre approaches commonly provide students with model texts to illustrate the defining characteristics of the target genre (Hyland, 2003; Rose, 2016). In the focal classroom, the teacher provided mentor texts to guide class discussions regarding key story elements in order to support his students to write in the narrative genre more effectively. In process-oriented classrooms, students engage in cycles of planning, writing, and revising (Tribble, 1996; Badger & White, 2000), while the teacher adopts a facilitating role by exposing students to processes and strategies used by experienced writers (Graham & Sandmel, 2011). In the focal classroom, the teacher guided his students through stages of planning and writing, which were interwoven with opportunities for peer and teacher feedback. The teacher also introduced his students to key strategies and processes, such as creating a story outline before beginning the writing process and instructing them on how to integrate dialogue into their stories in a clear and accurate manner.
Another conceptual theory that guided this study was the affordances framework introduced by Kirschner, Strijbos, Kreijns, and Beers (2004) for analyzing digital collaborative learning environments. In order to assess the factors that may support or hinder the use of digital tools for collaborative tasks within education contexts, it is important to consider the affordances and constraints associated with the technology (technological affordances and constraints), the pedagogy (educational affordances and constraints), and the collaboration (social affordances and constraints). Kirschner et al.’s (2004) classification system helped me to develop a more detailed understanding of the affordances and constraints of three interrelated components of the collaborative writing unit in the focal classroom: the use of Google Docs as a procedural tool, the pedagogical supports provided by the teacher, and the ongoing collaboration between the students as they wrote their stories. Several key affordances and constraints were identified and these findings have important implications for teachers who may wish to use collaborative story writing projects or web-based writing tools within their classroom contexts. An overview of these implications is provided in the next section.

**Implications for Teaching and Learning**

This section discusses the significant findings, with a focus on their implications for teaching and learning. Each of the significant findings is accompanied by a quotation from one of the research participants in order to honour their voices in the discussion. Connections are also made to relevant literature on writing pedagogy and the collaborative writing process.

**Mentor texts.**

*Mentor texts provided a common language to guide class discussions and a model for students to emulate in their own writing.*

“That was to get you inspired, to show description.” (Mr. Towers, Field Notes, May 15th)
A key feature of the collaborative writing unit in the focal classroom was mentor texts. The teacher and students had just finished reading George Orwell’s novel, *1984*, prior to the collaborative story writing unit. Mr. Towers also shared a short story titled *Harrison Bergeron* by Kurt Vonnegut, which had many similarities with *1984*. For example, both of these stories were dystopias and they featured protagonists who felt trapped by an oppressive government that was restricting independent thought and freedom.

The findings from this case study showed that the mentor texts were beneficial in several ways. First of all, the novel *1984* was referenced repeatedly by the teacher and students throughout the unit when discussing different elements of stories, such as characters and conflict. In this way, it provided a common language for the teacher and his students to discuss the narrative genre. It also became evident that students were emulating aspects of *1984* in their own writing. For example, one group’s story incorporated “Thought Police,” which was the term used in *1984* to refer to the secret police who monitored the citizen’s thoughts and punished people whose political views were unfavourable to the governing party. Meanwhile, the short story, *Harrison Bergeron* by Kurt Vonnegut, afforded the teacher and students an opportunity to contemplate what topics would be appropriate for the target audience, to continue to discuss the key elements of stories, while also allowing students to see another example of descriptive writing and to envision the length of story that they were aiming to write. Providing students with model texts that they can emulate as they grow as writers has been shown to have a positive effective on writing achievement (Ahn, 2012; Graham & Perin, 2007).

The teacher wrote in his reflections that “students’ view of the future had a tendency to be bleak and dystopian in nature.” When I asked the students about this in the focus group interviews, some of them indicated that they wrote about dystopian themes because they felt it
would be more interesting, while some of them mentioned that they had just finished reading *1984* and they thought this is what their teacher expected. These findings suggest that teachers can influence their students to adopt certain themes based on the mentor texts that they provide. Therefore, teachers might consider providing a larger repertoire of mentor texts. For example, the mentor texts could illustrate examples of desirable writing traits (e.g., descriptive word choice, appropriate conflict), while approaching the topic in a unique way (e.g., one story that is a dystopia, another story that uses time travel). Nevertheless, the mentor texts served their purposes; they provided a common language for discussing narrative writing and they offered a source of inspiration for students in their own writing.

**Pre-writing activities.**

*Pre-writing activities helped prepare students for the story writing process.*

“It helped give us kind of like a baseline on what we should expect to make.” (Jesse, Focus group interview)

Mr. Towers engaged his students in a series of pre-writing tasks before they started writing their own stories. These pre-writing activities, which focused on setting descriptions, character descriptions, and conflict, provided an opportunity for the students to practice writing collaboratively with their peers and to become more familiar with using Google Docs to facilitate the collaborative writing process. In addition, through the pre-writing activities, the students had repeated opportunities to share their writing with the class and to receive teacher and peer feedback.

An important finding was that through the pre-writing tasks, the teacher and his students were developing a metalanguage for talking about narrative writing. As the teacher noted, “I was mindful to ensure that they understood key terms and relevant vocabulary to facilitate discussion during their collaborative writing.” The metalanguage related to story elements (e.g., setting,
character, inciting action, climax), as well as literary devices (e.g., simile, metaphor, alliteration).

In his analysis of genre-based literacy approaches, Rose (2016) points out that a metalanguage provides a tool for teachers and students to explicitly discuss the characteristics of particular text types, such as their purposes and their organizational patterns. As the students in the focal classroom were engaged in the writing process, the teacher could refer back to terms that had been discussed in previous lessons; for example, one day during class, the teacher emphasized that they should be getting into a climax/resolution by the following day.

Another significant affordance of the pre-writing activities was that they helped prepare the students for writing their own stories. As the teacher noted, “they were applying what I had hoped they were going to in terms of the pre-writing activities.” Meanwhile, students observed that the pre-writing activities “taught [them] how to bring together different parts of the story” and that “the exercises on what makes a good short story… helped give [them] kind of like a baseline on what [they] should expect to make.” It was beyond the scope of this study to assess the effect that the pre-writing activities had on the quality of the student’s writing, but studies using pre-tests and post-tests have shown that pre-writing activities, including concept-mapping and class discussion, have led to positive effects on students’ writing achievement when experimental groups were compared with control groups (Al-Shaer, 2014; Mahnam & Nejadansari, 2012).

**Planning process.**

*Planning should be emphasized at the beginning of the writing process and it should also occur on a cyclical basis throughout the writing process.*

“I think some stumbled because they failed to plan appropriately.” (Mr. Towers, Post-project interview)
Graham and Perin (2007) conducted a meta-analysis to identify instructional techniques that support adolescents to improve their writing, and their findings showed that activities designed to help students generate and organize their ideas had a positive effect on writing achievement. In the focal classroom, there were two steps involved in the planning process. The first step was for students to create a brainstorming web and share their ideas aloud with their peers. Providing an opportunity for students to brainstorm ideas face-to-face before they begin writing is supported by Kwan and Yunus’ (2015) study of Malaysian teenagers involved in web-based collaborative writing activities; the participating students felt that “certain stages of the writing process, especially brainstorming, were better done face-to-face” (p. 64).

After the brainstorming stage, the teacher shared a Google Doc with each group that contained four questions to guide them to plan their stories. These questions focused on characters, setting, conflict, and plot. The findings revealed that the planning process helped students generate ideas that were then integrated into their writing. Nevertheless, the teacher observed that not everyone had planned thoroughly and that some may have “stumbled because they failed to plan appropriately.” A student also talked about the difficulty he faced when his partner changed the direction of the story and he had to try to pick up from where his partner had left off.

These findings suggest that effective planning is integral to the success of the collaborative writing project, leading to two key recommendations. The first recommendation is that the teacher build in accountability for students to have a well-developed plan at the start. For example, the students could be asked to share their story outline with the teacher before they begin writing. The teacher could also use this opportunity to ensure that the collaborators agree on the plan and direction for their story and to assist them with developing convergent goals.
Moreover, since research demonstrates that the writing process is a recursive process whereby the writer moves continuously between the stages of planning, writing, and revising (Flower & Hayes, 1981; Liu, 2013), it is recommended that teachers ensure that their students engage in planning on a cyclical basis throughout the collaborative writing process. For example, the teacher could periodically cue student to pause their writing, read over what they have written so far, and then discuss with their collaborators where they are going next. Each group could then articulate their “goals” or “next steps” to the teacher or to the class as a whole. Teaching self-regulation strategies, including goal setting, planning, and self-monitoring, should be an integral component of the teaching and learning process as it has been shown to improve writing performance (Graham & Harris, 2000).

**Google Docs.**

*Google Docs helped to facilitate the collaborative writing process. Instructional scaffolding on key features of the application is important.*

“I use [the Chromebooks] every day; it’s part of our routine.” (Mr. Towers, Post-project interview)

Google Docs played a central role in facilitating the collaborative writing process in the focal classroom. The students brainstormed ideas using pen and paper, but the planning, writing, and revising of their stories mostly occurred through the web-based application. The interviews with the teacher and student participants showed that they held favourable views of the Google Docs application. The features they found most helpful were the ease with which the document could be shared with other people, the capacity for the collaborators to edit the document simultaneously and to see the changes their partner was making in real time, and the ease with which the teacher and students could make suggestions and comments. Students also appreciated the grammar and spell check that are built into the application and the fact that the document is
stored on-line, allowing them to access it from different places and decreasing the likelihood that they would lose their work. The teacher also felt that the version history feature of Google Docs was helpful as he could monitor whether or not students completed their homework.

Overall, the students appeared comfortable using the application, but there were instances in which they required support from their teacher to use the technology effectively. For example, he explained that some students viewed the “x” as a close button since this is what it represents in other applications. But, in the case of Google Docs, clicking the “x” means that the user is rejecting the comment or suggestion. He felt that it was part of his role to ensure that the students understood how to use the application in the most efficient and effective manner. Mr. Towers also provided his students with opportunities to practice using Google Docs for collaboration by assigning smaller tasks using the tool before beginning the larger story writing project. The findings from this study parallel other studies that have emphasized the importance of providing students with opportunities for teacher-guided practice using the web-based collaboration tools that they are expected to use for their assignments (Cole, 2009; Li & Zhu, 2013). In order for teachers to be able to provide instructional scaffolding on the use of these tools, they must have a good understanding of the applications themselves. Fortunately, in the current context, the teacher had undergone training on the G Suite for Education applications and he was using them in his classes on a regular basis, so he was able to recognize when students needed support and he could step in to assist them as needed.

Writing in class.

Providing extended opportunities for students to write in class led to better communication and facilitated immediate feedback and suggestions from others.

“Students are also using their group members and the larger class for suggestions.”
(Mr. Towers, Written reflections)
The teacher provided extended opportunities for his student to write while sitting face-to-face. During several classes, the students sat in table groups with their collaborators and they each had their shared document open on their individual Chromebooks. Most web-based writing projects featured in the research literature have not included a face-to-face component (e.g., Elola & Oskoz, 2010; Lee, 2010; Strobl, 2014), making this a unique aspect of the collaborative writing project in the focal classroom. There were several reasons why the teacher felt it was important to provide opportunities for students to write during class time. First of all, the teacher expressed a concern that if the writing was all done outside of class, one person may end up writing all of it. A second reason that he used class time to write was that he felt immediate feedback was important. As he explained in the post-project interview, “I think face-to-face is very helpful and the ability for them to ask a question or get clarification on an idea, or bounce an idea off somebody is much easier than sitting at home and writing a comment on Google Docs and waiting for a response.” Finally, the teacher noted that he was emphasizing the writing process, and it was easier for him to facilitate the writing process in the face-to-face environment.

From the perspective of the students, writing while sitting together in class facilitated better communication between themselves and their peers than would have been possible if they were collaborating on-line. During class time, the students were also asking their teacher for suggestions and guidance on their story development. These findings support other studies, wherein participants have shown a preference for face-to-face collaboration over on-line collaboration because the former is less likely to lead to misunderstandings and provides the opportunity for students to interact not just with each other, but also with their teacher (Kwan & Yunus, 2015; Yusoff, Alwi, & Ibrahim, 2012). The teacher also observed that the face-to-face writing sessions afforded his students an opportunity to ask the larger class community for
suggestions and ideas. Because it was a small and casual class, students would sometimes call out a question and someone from another group or their teacher would provide a response.

One drawback of the face-to-face writing sessions in the focal classroom was that students sometimes got distracted by their peers and discussions sometimes veered to unrelated topics. As such, it became part of the teacher’s role to re-direct them back to their work. In spite of the distractions, some of the student participants indicated that they made more progress on their stories during class, as opposed to outside of class. Some also noted that during class time, they can keep their partner focused on the story writing. Overall, the findings from this study highlight the benefits of providing opportunities for students to write while sitting face-to-face (or Chromebook to Chromebook) as a component of web-based collaborative writing activities.

**Collaborative writing process.**

*Collaborative writing is a multifaceted endeavor and requires careful planning and guidance from the teacher.*

“Two is okay, but three is a crowd….” (Shay, Focus group interview)

When Mr. Towers decided to integrate a collaborative writing project into his course, he was guided by the belief that collaboration is beneficial because students can co-construct knowledge and scaffold learning for one another. For example, in the pre-project interview, he noted that “if somebody doesn’t understand something, someone else will answer that question and then they can work on the answer together.” Also, because he teaches in a culturally diverse learning context, he observed that “diverse cultural perspectives bring unique opportunities for creative responses, I think because of the difference in viewpoints, the difference in perspectives.”

As the study unfolded, it became apparent that the diversity of ideas amongst the students was both an affordance and a constraint. On the one hand, the students enjoyed being able to
bring their different ideas together to develop their stories. For example, one student noted that it is helpful when someone has an idea that he can expand on with his own ideas, while another student noted that he and his partner incorporated ideas from their different backgrounds. Nevertheless, the students also found that their ideas were sometimes conflicting with one another. For example, a student remarked that he and his partner had different opinions and ideas about the story and it was challenging to bring them together.

Another finding was that the group of three appeared to experience greater challenges consolidating their ideas than the groups of two. As one of the students noted, “two is okay, but three is a crowd… there were so many people working on the same document and then all of our ideas would just clash….” One group of three was necessary as the class had an odd number of participants. Nevertheless, the teacher noted at the outset that he generally prefers groups of two because they “demand conversation and responses from all group members.” And, while web-based writing applications can support collaboration between larger numbers, pairs are a popular choice among teachers and researchers (Elola & Oskoz, 2010; Kost, 2011; Storch, 2017). Similar to the perspective shared by the teacher in the focal classroom, Storch (2017) notes that pairs “may encourage greater learner involvement in the decision-making processes in collaborative writing activities” (p. 135).

The students’ reflections in the post-project interview also showed that they were finding ways to work together, such as by making compromises and by engaging in peer scaffolding. For example, in the post-project interview, a native English-speaking student talked about how she explained word meanings and edited the writing of her peer, who was a non-native English speaker. This finding supports studies that have shown that mixed proficiency pairings offer opportunities for language-related exchanges and peer correction (Kim & McDonough, 2008;
Leeser, 2004). Meanwhile, a couple of students suggested that sharing commonalities and getting along well with one’s collaborators are more important than cultural or linguistic backgrounds and proficiency levels, which correlates with a finding from Watanabe’s (2008) study showing that “learners preferred to work with a partner who ‘shared many ideas,’ regardless of their proficiency level” (p. 605). Moreover, this study concurs with Li and Zhu (2013) and Storch (2017) that member familiarity should be a consideration when selecting groups for collaborative writing projects. As Storch (2017) notes “students admit to being more willing to share ideas and to being more comfortable about challenging each other and accepting criticism (including corrective feedback) when working with familiar peers” (p. 138).

This study also shares findings with studies that have found uneven patterns of participation during web-based collaborative writing (Kwan & Yunus, 2015; Lee & Wang, 2013; Li & Zhu, 2013). In the focal classroom, uneven patterns of participation appeared to be due in part to group dynamics, such as one person taking more ownership over the writing task, as well as differences in work habits. Although the teacher repeatedly asked the students to work on their stories for homework, there did not appear to be any explicit accountability for doing so. Therefore, in addition to teaching self-regulation strategies, such as setting goals and self-monitoring their progress, teachers can consider the extent to which their assessment practices recognize students’ individual efforts, while also encouraging group accountability. For example, Storch (2017) suggests assigning “a composite grade that includes an overall text grade (the same for all members of the group) and an individual component that captures each student’s contribution to the activity” (p. 139). She also notes that the assessment of students’ contributions should “take into account not only the quantity (i.e., the number of postings) but also the quality of contributions and the level of engagement with the contributions made by
other members of the group” (p. 139). Students’ contributions to the collaborative writing project could be assessed through a combination of reviewing the Google Doc version history, teacher observation in class, as well as self and peer assessment.

Similar to findings from a study conducted with high school students at an English-medium school in Hong Kong (Tsui & Ng, 2000), students in the focal classroom appeared to favour their teacher’s feedback over their peer’s feedback, but they also recognized that peer feedback could help them improve their writing. A couple of the student participants also expressed a reluctance to make significant changes to their peers’ writing as they did not want to hurt their feelings or create further conflict within the group, which parallels a finding from Lee’s (2010) study showing a concern among students about “the overriding of each other’s ideas” (p. 271). These results emphasize the importance of the teacher discussing the role of peer feedback and mediating the students’ work in groups. For example, the teacher can model problem-solving solutions, such as showing students how to provide constructive feedback and how to integrate their own ideas without diminishing their partner’s ideas, which are important skills in collaborative learning environments.

Ultimately, the findings from this study show that there are many factors that need to be considered when using collaborative writing activities in class, and teachers play a key role in facilitating the collaborative writing process. For example, teachers are tasked with choosing how to assign students to pairs or groups, considering the role of assessment in supporting high levels of participation and engagement in the collaborative project, dialoguing with students about the role of peer feedback, and modeling how to bring their diverse ideas together so that everyone’s voices are represented. The findings from this study concur with other researchers, who have noted that classroom-based collaborative writing offers an opportunity for students to
develop their team work skills (Storch, 2017), and that the teacher plays an important role in helping to break down relational barriers between students, especially when they are working with classmates with whom they are less familiar (Russell, 2010).

**Teacher feedback.**

*The students valued the feedback they received from their teacher (both verbally and through Google Docs). Conferencing with students about their writing provides an opportunity for teachers to ensure that the feedback is clear.*

“He would help me, give ideas on how I should continue the story….”

(Jesse, Focus group interview)

In the focal classroom, the teacher took on the role of “chief editor” providing suggestions and comments on the students’ stories as they continued to develop them. Feedback was provided both verbally in class as well as through Google Docs. The interview data and field notes revealed that the students valued their teacher’s feedback and felt that it was helpful to their learning and to the development of their stories. During class, a couple of students made explicit requests for their teacher to read over their stories and provide feedback.

Another finding was that some students carefully contemplated the teacher’s feedback, but there also appeared to be a tendency for some students to accept his suggestions without necessarily considering them carefully. As a result, the teacher noted that it was sometimes more effective to ask a question or make a statement through the commenting feature of Google Docs, as opposed to making a direct suggestion, because “they are forced to either respond to [the question or comment] or ask [their teacher] a follow-up question.” This observation aligns with a finding from a study by Storch and Wigglesworth (2010) that showed that indirect feedback (through editing symbols) elicited more discussion and a higher level of engagement among students than direct feedback (though reformulations). The researchers explained that
engagement with reformulations was limited to students simply reading and expressing consent, while indirect feedback encouraged students to attempt to identify the nature of the error and then edit their work accordingly. In Google Docs, students can accept the teacher’s suggestion with one click of the button. Also, when they are working collaboratively, if one student accepts a suggestion or resolves a comment, it is no longer viewable from the main page so the other student(s) may not learn from the correction. Given these findings, when teachers provide feedback on collaborative writing projects using Google Docs, it is recommended that they use the commenting feature more than the suggesting feature, and that they encourage students to read through and address the comments together.

Moreover, similar to Zhao’s (2010) study investigating Chinese English learners’ use and understanding of teacher feedback on writing, students in the present study reported a lack of clarity with respect to some of the teacher’s feedback. Bitchener (2017) points out that second language (L2) learners may not benefit if “the linguistic focus of the feedback… is inappropriate given their level of proficiency” or if “the type of feedback given (that is, its level of explicitness) is inappropriate… and prevents them from understanding or comprehending what it says” (p. 138). Importantly, writing conferences have been shown to be an effective way for teachers to ensure that their written feedback is clear for their L2 learners (Maliborska & You, 2016). Therefore, in diverse learning contexts, such as the one in which this study took place, it is recommended that teachers engage in conferences with students as part of the writing process. Maliborska and You (2016) suggest that teachers take steps to ensure that the students are active participants in the writing conference; for example, before the conference, students could be asked to jot down reflections on what they are struggling with or they could be directed to read through their teacher’s comments and prepare questions to guide the conversation. Writing
conferences can also be used to teach self-regulation strategies and to support students to engage in assessment as learning, by having them reflect on the writing process and set goals for their writing development (Cumming, 2012).

**Outside audience**

*The outside audience encouraged the students to write a more interesting story and to finish their projects in time to share them. Greater familiarity with the audience may have helped the students assess what themes would be appropriate and become more comfortable with sharing their stories.*

“[The audience] kind of put the pressure on you to finish the story, to get it done. And, you wanted it to be good… for them to be interested in it.” (Morgan, Focus group interview)

The New Media 11 curriculum recommends that students be given opportunities to “expand their understanding of the range of real-world audiences” (BC Ministry of Education, 2018). In the focal classroom, the teacher expressed interest in finding an outside audience with whom his students could share their stories. As such, a Grade 6/7 class at a nearby school was identified. The Grade 11 students were aware throughout the writing process that they would be presenting their stories to the upper elementary students. And, as was hoped, some students were considering their audience and what themes would be appropriate or inappropriate as they were writing. The outside audience had an added benefit of encouraging students to make their stories more interesting, as well as ensuring that they finished their projects in time to share them.

To prepare students for sharing with an outside audience, Mr. Towers provided repeated opportunities for his students to share their writing with their classmates. As the teacher noted in his reflections, “presentation of the group work [in class] allows students to become more comfortable with sharing their work in a public, yet safe, space. Becoming more comfortable with sharing will be increasingly important as the final story will be shared with an elementary school class.” Importantly, however, in spite of having had practice sharing their writing,
students expressed considerable nervousness about presenting their stories to the children. For example, one student expressed that she was worried because she thought that the children would judge her story, while another student noted that he felt awkward about presenting in front of strangers.

Another constraint was that the students had some difficulty assessing what themes would be appropriate for their audience and some of their word choices may have been advanced for the children’s reading levels. Some students also expressed that they felt limited in the ideas that they could incorporate since it had to be appropriate for a younger audience. Although the teacher was able to help his students make judgements regarding themes, he noted in the post-project interview that he had some difficulty assessing the skill levels of the elementary students since he had not taught that grade level before.

Given these findings, it is recommended that the student authors and their teacher have an opportunity to get to know their audience ahead of time. Establishing a relationship with the children and familiarizing themselves with the setting might have helped to ease some of the high school students’ fears and make them more comfortable with sharing. Moreover, if they had an opportunity to meet the elementary school students ahead of time, they could ask them about the books they are reading and what kinds of stories they enjoy. Interestingly, upon visiting the elementary school, Mr. Towers and his students discovered that the Grade 6/7 class was reading *Hunger Games*, a trilogy of dystopian novels geared toward young adults by Suzanne Collins. Knowing beforehand that the children were reading these books may have helped the Grade 11 students to better assess what themes would be appropriate for the target audience.
Limitations of the Study

The findings from this descriptive case study contribute to the discussion on considerations that should be made when using web-based collaborative writing projects to support student learning. Because the findings are derived from a small qualitative study, they support transferability, rather than generalizability. In other words, educators who are thinking about using collaborative writing projects and web-based tools are invited to read the description of this case and the teaching practices and experiences that were shared in order to determine whether the findings and recommendations resonate with them and could be applicable to their contexts. When considering the transferability of the findings, readers are reminded that this study took place at an independent high school that students pay tuition to attend; as such, the students would tend to come from higher socio-economic backgrounds and the class size would be smaller than is typical at most public high schools.

An important limitation of this study was that I was not able to engage in a thorough analysis of the patterns of participation and interaction that developed between the collaborators. At the outset of the study, I had anticipated that the students would engage in planning face-to-face and then work on Google Docs outside of class for the remainder of their writing assignment. As such, I did not seek permission to audio record or video record their face-to-face writing sessions. Ultimately, much of the writing occurred during class while the learners were sitting together, and the field notes I was taking could not capture all of the interactions that were occurring. An analysis of the patterns of participation and interaction between the native English speaking and non-native English-speaking collaborators would have been a valuable addition to the existing literature, while also contributing to the goal of informing teachers about the collaborative writing process in linguistically diverse classrooms.
Another limitation of this study was that not every student in the class chose to participate in the study, so the experiences and perspectives I could report on were limited to the participating students. It is also possible that the teacher and student participants acted differently because I was present in the classroom, which is known as the observer effect. As I spent more time in the classroom, I believe the teacher and students became comfortable with my presence. The class observations also facilitated a much deeper and greater scope of understanding of the research phenomena than would have been possible otherwise.

Bias is also a concern for case study researchers. My prior experiences and my beliefs about teaching and learning influenced the research questions that I asked as well as the methods that I adopted to study those questions. My research design then steered me toward a teacher participant who was interested in integrating a collaborative writing project, and who was therefore guided by similar beliefs about the benefits of collaboration, scaffolding, and other sociocultural principles of teaching and learning. Rather than trying to avoid this bias, I strove to be transparent about it and I also scrutinized the data carefully to ensure that I was sharing the diverse perspectives of the students and the teacher in my reporting.

Focus group interviews were one of the main methods of capturing the students’ perspectives. Smithson (2000) argues that “limitations of focus groups include the tendency for certain types of socially accepted opinion to emerge, and for certain types of participant to dominate the research process” (p. 116). During the interviews, students appeared to be expressing their opinions freely and openly, and there were instances in which students expressed both agreement and disagreement with what another person had said. While moderating the focus group, I also made sure to circle around and provide an opportunity for everyone to speak. Nevertheless, some students tended to expand on their experiences and ideas
more than others, and it is possible that not all students were comfortable sharing the totality of their experiences or perspectives, especially if they differed from what others’ experienced or may cast themselves or others in a negative light. Moreover, in the current study, the teacher’s experiences and perspectives were reflected more than the students in the findings as I conducted both pre- and post-project interviews with the teacher and he wrote ongoing reflections throughout the collaborative writing unit. Nevertheless, by triangulating these data sources with the field notes and the students’ shared Google Docs, I was able to develop an in-depth understanding of the research context and the web-based collaborative writing process that unfolded within the focal classroom.

Recommendations for Future Research

The present study was unique in that it carefully examined the teacher’s role in facilitating the collaborative writing project for a diverse group of learners. The findings resulted in some preliminary recommendations, but further research is needed in order to develop a more thorough understanding of the pedagogical supports that are most likely to promote high levels of participation and interaction, and the development of strong writing skills, within diverse learning environments. The instructional supports that warrant further investigation include providing opportunities for students to write together in class while using web-based tools, prompting students to engage in planning at the outset of the project and on a cyclical basis throughout the project, conferencing with each pair/group to discuss challenges and clarify the feedback, and teaching self-regulation strategies, such as setting goals and monitoring progress toward those goals. Through a small qualitative study, it is possible to identify patterns and trends, but it is not possible to assess causation. To determine whether or not these aforementioned pedagogical supports would lead to the desired results (e.g., high levels of
student participation and collaboration, improvements in writing), it would be necessary to design a study that includes pre- and post-writing activities and/or experimental and non-experimental groups.

This study also contributed to the cumulative body of research on the factors that may support or hinder effective collaboration. More research is still needed to reach a deeper understanding of the effect that group size, group member familiarity, and language proficiency have on the collaborative writing process. Another fruitful area of research would be to examine students’ patterns of participation and interaction over an extended period of time to explore whether or not any changes occur as they become more accustomed to the collaborative writing process.

**Conclusion**

This descriptive case study demonstrated the multifaceted nature of the teacher’s role in facilitating collaborative writing projects within a diverse learning environment. The teacher adopted many roles, such as providing mentor texts, developing a metalanguage for discussing narrative writing, scaffolding the writing process, and facilitating students’ work in groups. This study also led to some preliminary recommendations for teachers who are using collaborative story writing projects in their practice by emphasizing the potential benefits of using pre-writing tasks to prepare students for the narrative writing process, allowing students to work with familiar peers, combining face-to-face writing with web-based writing, engaging students in conferences about their writing, and choosing an outside audience that students have an opportunity to become familiar with before sharing their writing. This study also provided an example of how the key principles of sociocultural theory support both process and genre teaching approaches in the writing classroom.
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Appendices

Appendix A: Recruitment Script (Teacher)

Recruitment Script for Teachers (E-mail)

Dear Teacher’s Name,

My name is Deirdre Wilson. I am a PhD student at the University of Victoria and I am also an instructor in the Faculty of Education at Vancouver Island University. I am writing to tell you about a study that I am conducting and to invite you to participate. The research project is titled, “Exploring web-based collaborative writing among students with diverse linguistic backgrounds”. Examples of web-based collaborative writing tools include Google Docs and Google Sites. Google Docs is a web-based word processing program and Google Sites is a wiki and webpage creation tool. They are both provided by Google as part of their G-Suite for Education productivity tools, designed to support classroom collaboration by enabling students and teachers to login to their accounts to create and modify shared resources. Data collection for this study will take place during the current school year. Below you will find an overview of the study. More details are also provided on the consent form, which is attached.

What is the study about?

This study has a threefold purpose: (1) to investigate how students with diverse linguistic backgrounds and different English proficiency levels co-construct content and knowledge as they engage in a collaborative writing project in a web-based learning environment; (2) to explore the roles of the teacher in web-based collaborative writing; and (3) to examine the benefits, challenges, and complexities of using web-based collaborative writing with linguistically diverse students at different levels of English language proficiency. The precise time frame for the web-based collaborative writing project and the nature of the writing task will be agreed upon in consultation with participating teachers in order to support work that is already being done as part of your students’ educational program. The findings from this study may have implications for pre-service and in-service teachers who work with groups of students at different levels of English language proficiency, as well as ELL specialists and teacher-educators.

What are the procedures in this study?

(1) Researcher seeks the consent of teachers and offers to visit in person to respond to any questions or concerns. The researcher is also available to answer questions by telephone or e-mail.
(2) Researcher meets with teachers to discuss the parameters of the web-based collaborative writing project (e.g., writing genre/topic, number of writing sessions).
When it is convenient for the teachers, the researcher comes into his/her class to inform students about the study and to invite them to participate. The researcher will distribute the consent forms and a letter to parents/guardians for students to take home. Should the students wish to participate, they return the signed consent form to their teacher in a sealed envelope.

Researcher interviews the participating teachers to explore any prior experiences they have with supporting students in an online environment and/or using collaborative writing activities.

Researcher gathers background information on student participants (e.g., birth country, # of years in Canada). The researcher will also ask for student writing samples and/or indicators of English proficiency levels.

Researcher provides training on the key features of the collaborative writing tools to both students and teachers.

Teachers and researcher collaborate to form pairs/groups and teachers introduce and facilitate the web-based collaborative writing project. The researcher reads and analyzes the writing process of participating students.

During the project, the teachers keep a reflective log to document their observations of their students’ writing process and their perceptions of the benefits and challenges of utilizing the web-based tools to facilitate collaboration.

As the project draws to a close, the researcher conducts focus group interviews with participating students and one-on-one interviews with the teachers.

Teachers are given an opportunity to read over a draft version of the research report and to provide feedback to the researcher.

Your participation in this research study is completely voluntary. Choosing to participate or not will not affect your employment or standing. More information about the study can be found on the consent form attached. Before you sign the consent form, I would be happy to meet with you in person or by telephone to discuss any questions you may have about the proposed study. I can be contacted by telephone: XXX, or by e-mail: XXX

Thank you for considering participating in this research project,

Deirdre Wilson
Appendix B: Participant Consent Form (Teacher)

Participant Consent Form – Teachers

STUDY TITLE:
EXPLORING WEB-BASED COLLABORATIVE WRITING AMONG STUDENTS WITH DIVERSE LINGUISTIC BACKGROUNDS

You have been invited to participate in the above-mentioned study, which is being conducted by Deirdre Wilson, a graduate student in the Department of Curriculum and Instruction at the University of Victoria. This research study is being completed in partial fulfillment of the requirements for a PhD in Educational Studies under the supervision of Dr. Ruthanne Tobin and Dr. Carmen Rodríguez de France.

Purpose(s) and Objective(s) of the Research
This study has a threefold purpose: (1) to investigate how students with diverse linguistic backgrounds and different English proficiency levels co-construct content and knowledge as they engage in a collaborative writing project using web-based tools; (2) to explore the roles of the teacher in web-based collaborative writing projects; and (3) to examine the benefits, challenges, and complexities of using web-based collaborative writing with students at different levels of English language proficiency. Web-based technologies, such as the G-Suite for Education tools, allow students and teachers to collaborate online by logging into their accounts to create and modify shared resources.

Importance of this Research
Classrooms in British Columbia are becoming increasingly diverse, both culturally and linguistically, due to a continuous influx of new immigrants and international students. In these heterogeneous classrooms, it is common for students to work on projects with peers at different levels of English proficiency. Web-based tools, such as Google Docs and Google Sites, represent a new approach to facilitating collaboration and writing skills development in both first language and second language learning contexts. The findings from this study may have implications for pre-service and in-service teachers who work with groups of students at different levels of English language proficiency, as well as ELL specialists and teacher-educators.

Participant Selection
You have been invited to participate in this study because you teach at a school that enrolls students with diverse linguistic backgrounds. Both native and non-native speakers of English may participate.

What is involved?
If you consent to voluntarily participate in this research, your participation will include:

1. meeting with the researcher to set up the parameters of the wiki-mediated collaborative writing project (e.g., writing genre, duration of project);
2. learning about the features of the web-based tools (training provided by researcher);
3. assessing student writing levels at the outset of the project to facilitate the formation of pairs/groups;
(4) taking part in two interviews (one at the outset of the study and one at the conclusion); 
(5) facilitating the collaborative writing project for your students; 
(6) keeping a reflective log (6 entries) over the duration of the project, noting your observations about the writing process the students are engaged in, your role in supporting their learning; and any perceived benefits and challenges of engaging students of mixed English proficiency levels in collaborative writing projects using web-based technologies; 
(7) providing time for the participating students to take part in focus group interviews at the end of the study; and 
(8) reading a draft version of the research findings to clarify meanings and/or elaborate further as needed.

Inconvenience
Participation in this study may cause some inconvenience to you, such as the time commitment required to meet with the researcher, to participate in the interviews, to facilitate the collaborative writing project for your students, and to make entries in a reflective log.

Risks
There are no known or anticipated risks to you by participating in this research.

Benefits
Participation in this study will provide an opportunity for you to gain deeper insight into the collaborative writing process among students with diverse linguistic backgrounds and different levels of English proficiency, as well as the benefits and challenges of utilizing web-based technologies within your teaching context. You will also have an opportunity to reflect on the roles you adopt when your students are carrying out learning tasks in an online environment.

Compensation
This research would not be possible without your support and cooperation. Due to the time required to participate in the research activities, release time from teaching (i.e., a substitute teacher) will be provided for one full day. Also, to assist you in facilitating the wiki-based collaborative writing project with your students, you will be provided with relevant resources, including “Blogs, Wikis, Podcasts, and Other Powerful Tools for Classrooms” by Will Richardson.

Voluntary Participation
Your participation in this research is completely voluntary. Choosing to participate or not will not affect your employment or standing at your institution. If you decide to participate, you may withdraw at any time without consequence or explanation. You can clarify at the time you choose to withdraw whether you wish to allow your data to be used for the study or not. If you choose not to have the data used, it will be destroyed.

On-going Consent
To ensure that you continue to consent to participating in this research, I will ask you to initial your original consent form before we begin the final interview.

Anonymity and Confidentiality
There are limits to the protection of your identity during the data collection phase of this research project as students, other teachers, and the school principal will know that you are a participant. Nevertheless, pseudonyms will be used to protect your anonymity in papers or presentations made in
relation to the data collected during this study. Electronic data will be stored and coded on a password-protected computer to protect your confidentiality and that of the data.

The collaborative writing projects will be accessible to the students, the teachers, and the researcher by logging into their accounts. The web-based writing projects will be stored on servers located around the world, including in the United States. As such, there is a possibility that the content could be accessed without your knowledge or consent by the U.S. government in compliance with the USA Freedom Act.

**Dissemination of Research Findings**
The research findings will form part of the researcher’s dissertation (to be represented in writing and orally at her defense). A copy of the dissertation will be posted online through the University of Victoria library. The researcher also intends to disseminate the findings to other educators through conference presentations and academic journal publications. Selected quotes from the various data sources (interviews, reflective logs, students’ web-based projects) will be used to reinforce the interpretations that are made.

**Maintenance & Disposal of Data**
Paper generated research data from this study will be stored in a locked filing cabinet and carefully shredded within 3 years from the completion of the study. Electronic data collected by the researcher will be stored on a password-protected computer and will be erased within 3 years from the completion of this study. You and your students are responsible for managing the accounts that contain the students’ web-based projects, so it is up to you how long you choose to maintain the data.

**Contacts**
If you have any questions or concerns in regards to this study, you may contact:
- the researcher, Deirdre Wilson, XXX; or
- the researcher’s PhD supervisors: Dr. Ruthanne Tobin, XXX; and Dr. Carmen Rodriguez de France, XXX

In addition, you may verify the ethical approval of this study, or raise any concerns you might have by contacting the Human Research Ethics Office at the University of Victoria: 250-472-4545, ethics@uvic.ca

**Consent for Participation**
Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researcher, and that you consent to participate in this research project.

<table>
<thead>
<tr>
<th>Name of Participant</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

---

**Addendums to Participant Consent Form (Teacher)**

In addition to the research activities outlined in the original participant consent form, your participation in this study also includes:
allowing the researcher to observe your New Media 11 lessons throughout the collaborative story writing unit and take field notes on the class activities and interactions;

10) sharing the writing (Google Docs) of students who have consented to participate in the research study with the researcher and facilitating the collection of other relevant artifacts at your discretion (e.g., photographs of notes on white board, student brainstorming notes, classroom set-up).

Your signature below indicates that you understand the above addendums and that you continue to consent to participate in the research study.

____________________________    ________________________    ____________________
Name of Participant        Signature       Date
Appendix C: Recruitment Script (Students)

Recruitment Script for Students
(In person)

Introduction

My name is Deirdre Wilson. I am a PhD student at the University of Victoria and I am also an instructor in the Faculty of Education at Vancouver Island University. I am here today to invite you to participate in a study that I am conducting. After I’ve told you more about the study, I will hand out a consent form, which you can take home and read over before deciding whether or not to participate in the research activities.

What is the study about?

The title of the study is “Exploring web-based collaborative writing among students with diverse linguistic backgrounds”. The purpose of the study is to explore how students with diverse linguistic backgrounds and different English language proficiency levels collaborate on a writing project using web-based tools, such as Google Docs and Google Sites. These tools allow students and teachers to collaborate online by logging into their accounts to create and modify shared resources.

What is required of me if I agree to participate?

Everyone in the class will participate in the web-based collaborative writing project as a class activity. Before you begin the project, your class will receive training on the tools that you will use to write and collaborate with your peers. Your teacher will provide more information about the writing project before you begin.

If you volunteer to participate in the study portion of this project, you will be agreeing to three things: (1) allowing me to gather background information about you (e.g., your native language, your English proficiency/writing level); (2) permitting me to read and analyze your face-to-face planning notes and interactions, as well as your digital and web-based writing and interactions; and (3) taking part in a group interview at the end of the project.

If you choose not to participate in the study portion of this project, you will still participate in the web-based collaborative writing task as a class activity, but I will not be analyzing your written work for research purposes and you will not take part in the group interviews at the end of the project.
Your teacher may use the collaborative writing projects for instruction and assessment purposes. Please note that your teacher is not conducting the research study, and choosing not to participate in the research activities will not affect how you are graded on the project.

**Is it possible for me to withdraw if I change my mind?**

Participation in the study portion of this project is completely voluntary and you may withdraw at any time without giving a reason by contacting me. My contact information is on the consent form.

**Do you have any questions?**

I will now hand out the consent forms and a letter for your parents/guardians. You are welcome to take them home to read over and discuss the information with your parents/guardians.

Returning the consent form is voluntary, but if you wish to do so, please return one copy to your teacher in the envelope provided by ________ and your name will be entered into a draw for a $50 Amazon gift card. On the consent form, you can indicate whether or not you consent to participating in the research study. Your name will be entered into the draw either way, as long as the form is returned to your teacher by ________.
Appendix D: Participant Consent Form (Students)

Participants Consent Form – Students

STUDY TITLE: EXPLORING WEB-BASED COLLABORATIVE WRITING AMONG STUDENTS WITH DIVERSE LINGUISTIC BACKGROUNDS

You have been invited to participate in a research study that is being conducted by Deirdre Wilson, a graduate student in the Department of Curriculum and Instruction at the University of Victoria. This study is being completed as part of the researcher’s PhD in Educational Studies under the supervision of Dr. Ruthanne Tobin and Dr. Carmen Rodríguez de France.

Purpose(s) and Objective(s) of the Research
The goals of this study are: (1) to investigate how students with diverse linguistic backgrounds and different English language proficiency levels collaborate on a writing project using web-based tools; (2) to explore the roles of the teacher in web-based collaborative writing; and (3) to examine the benefits and challenges of using web-based collaborative writing with students at different levels of English language proficiency. Web-based technologies, such as the G Suite for Education tools, allow students and teachers to collaborate online by logging into their accounts to create and modify shared resources.

The Importance of this Research
Classrooms in British Columbia are becoming increasingly diverse, both culturally and linguistically. In these classrooms, it is common for students to work on projects with peers at different levels of English proficiency (including both native and non-native speakers). Web-based tools, such as Google Docs and Google Sites, represent a new approach to facilitating collaboration and writing skills development. The findings from this study will be shared with other teachers who are interested in the potential of innovative technologies to improve teaching and learning in linguistically diverse classrooms.

Participant Selection
You have been invited to participate in this study because you are studying at a school that enrolls students with diverse language backgrounds. Both native and non-native speakers of English can participate.

What is Involved?
All students in the class will contribute to the web-based collaborative writing project as a class activity. If you agree to participate in the study portion of this project, your participation will include the following research activities:

1. allowing me to gather background information about you from the teacher (e.g., native language, English proficiency/writing level);
2. permitting me to read and analyze the writing process you and your peers participate in (e.g., face-to-face planning notes and interactions, as well as digital and web-based writing and interactions); and
3. taking part in a group interview at the end of the project. The interview will be audio-recorded.

Students who choose not to participate in the study portion of this project will still participate in the collaborative writing project as a class activity, but I will not be reading their projects for research purposes and they will not take part in the interviews at the end of the project.

Inconvenience
Participation in the study portion of this project may cause some inconvenience, such as the time required to participate in the group interviews (approximately 1 hour).

Risks
There are no known or anticipated risks to you by participating in the research activities.

Benefits
The potential benefits of your participation in the research activities include an opportunity to reflect on and discuss your experiences writing collaboratively with peers from diverse linguistic backgrounds using innovative web-based technologies.

Compensation
This research would not be possible without your support and cooperation. To compensate you for the time required to participate in the group interview, a $10 Starbucks gift card will be provided.

Voluntary Participation
While all students in the class will participate in the web-based collaborative writing project, your participation in the research activities noted above is completely voluntary. If you decide to participate, you may withdraw at any time without consequence or explanation. If you choose to withdraw whether you wish to allow your data to be used for the study or not. If you choose not to have the data used, it will be destroyed (with the exception of the web-based writing, which will be an ongoing class project).

Your teacher may use your writing projects for instruction and assessment purposes. Please note that the teacher is not conducting the research study, and choosing not to participate in the research activities will not affect how you are graded on the collaborative writing project.

On-going Consent
To ensure that you continue to consent to participating in this research, I will ask you to initial your consent form before we begin the group interviews.

Anonymity and Confidentiality
Your identity cannot be protected during the data collection phase of the research as the participating teachers and your peers will know that you are participating in the research study. Participating students will be asked to keep the information that is shared during the group interviews confidential. Pseudonyms will be used to protect your identity in papers or presentations made about this study. Paper data from this study will be kept in a locked filing cabinet and electronic data will be stored and coded on a password-protected computer to protect your privacy.

Your writing projects will be accessible to students, teachers, and the researcher by logging into the accounts. The web-based writing projects will be stored on servers located around the world,
including in the United States. As such, there is a possibility that the content could be accessed without your knowledge or consent by the U.S. government in compliance with the USA Freedom Act.

**Dissemination of Research Findings**
The research findings will become part of the researcher’s dissertation. A copy of the dissertation will be posted online through the University of Victoria library. The researcher also intends to share the findings with other educators through conference presentations and academic journal publications. Selected quotations from the writing projects and the group interviews will be used in the write-up of the research findings.

**Maintenance & Disposal of Data**
Paper data from this study will be stored in a locked filing cabinet and carefully shredded within 3 years from the completion of the study. Electronic data collected by the researcher will be stored on a password-protected computer and erased within 3 years from the completion of this study. You and your teachers are responsible for managing the content that you create and store on the web-based technologies.

**Contacts**
If you have any questions or concerns about this study, you may contact:
- the researcher, Deirdre Wilson, XXX; or
- the researcher’s PhD supervisors: Dr. Ruthanne Tobin, XXX; and Dr. Carmen Rodriguez de France, XXX

In addition, you may check the ethical approval of this study, or raise any concerns you might have by contacting the Human Research Ethics Office at the University of Victoria: 250-472-4545, ethics@uvic.ca

**Consent for Participation**
Your signature below indicates that you understand the above conditions of participation in the study portion of this project and that you have had the opportunity to have your questions answered by the researcher.

__________________________    ___________________________  ____________________
Name of Student       Signature       Date

(Please initial one of the boxes below):

| I consent to participating in the research activities as described in this form. |
| I do not consent to participating in the research activities as described in this form. |

Note: Returning the consent form is voluntary, but if you wish to do so, please return one copy to your teacher in the envelope provided by ______________. Your name will be entered into a draw for a $50 Amazon gift card. Your name will be entered into the draw whether you consent to participating in the research study or not, as long as the form is returned to your teacher by ______________.
[Date]

Re: Research project being carried out through [school name]

Dear Parents/Guardians,

My name is Deirdre Wilson, and I am a PhD student at the University of Victoria, as well as an instructor in the Faculty of Education at Vancouver Island University. I am writing to inform you that your child has been invited to participate in a research study that I am carrying out as part of my PhD program. The purpose of the study is to explore how students with diverse linguistic backgrounds and different English language proficiency levels co-construct content and knowledge as they engage in a collaborative writing project in a web-based learning environment. Web-based tools (e.g., Google Docs, Google Sites) allow students and teachers to collaborate online by logging into their accounts to create and modify shared resources.

All students in the New Media 11 course at [school name] will be carrying out a web-based collaborative writing project as a class activity. Participation in the research study is not a requirement of your child’s program and choosing not to participate will not affect how your child is graded on the collaborative writing project. If your child chooses to participate, he/she will be agreeing to: (1) allow me to collect background information about him/her (e.g., first language; English proficiency/writing level); (2) permit me to read and analyze the writing process he/she participates in with his/her peers (e.g., face-to-face planning notes and interactions, as well as digital and web-based writing and interactions); and (3) participate in a group interview at the end of the project. The findings from this study will be shared with other teachers who are interested in the potential of innovative technologies to improve teaching and learning in linguistically diverse classrooms. Pseudonyms will be used to protect your child’s identity in papers and presentations made about this study.

I encourage you to discuss this information with your child, and if you have any questions or concerns, please contact myself (contact information provided below), or [principal’s name], the principal of [school name], by telephone: [principal’s contact #], or e-mail: [principal’s e-mail address]. In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria: 250-472-4545 or ethics@uvic.ca.

Sincerely,

Deirdre Wilson, PhD Candidate
Department of Curriculum & Instruction, University of Victoria
[Researcher’s contact # & e-mail address]
Appendix F: Pre-Project Interview Questions (Teacher)

Pre-Project Interview Questions - Teacher

Preamble: As you are aware, the title of my study is “Exploring the use of web-based collaborative writing among students with diverse linguistic backgrounds.” With that in mind, the purpose of this preliminary interview is to explore your prior experiences in two key areas: (1) using collaborative writing activities with your students, and (2) supporting learners in an on-line (web-based) learning environment. This is a semi-structured interview and I have prepared some open-ended questions to guide us. Feel free to ask me for further clarification of the questions as needed.

1. Could you describe your current teaching context?

2. Do you have experience using collaborative writing projects in your teaching? If so, could you briefly describe your experiences?

3. In your experience, what does the collaborative writing process look like?

4. Do you have experience supporting learners in an on-line (web-based) learning environment? If so, could you briefly describe your experiences?

5. What do see as the potential benefits of engaging students in collaborative writing in a web-based learning environment?

6. What do see as the potential challenges of engaging students in collaborative writing in a web-based learning environment?

7. In your experience, what happens when students of diverse linguistic backgrounds work together to complete tasks? (By diverse linguistic backgrounds, I mean different native languages and/or different proficiency levels).

8. What roles do you (the teacher) adopt when using collaborative tasks in class? How might your roles be similar or different when students are collaborating on-line?

9. What skills do you think students will need to able to engage effectively in a web-based collaborative writing project?

10. Why are you interested in participating in this study?
NEW MEDIA 11 (4 credits)

Description

New Media 11 is a program of studies designed to reflect the changing role of technology in today’s society and the increasing importance of digital media in communicating and exchanging ideas. This course is intended to allow students and educators the flexibility to develop an intensive program of study centred on students’ interests, needs, and abilities, while at the same time allowing for a range of local delivery methods. New Media 11 recognizes that digital literacy is an essential characteristic of the educated citizen. Coursework is aimed at providing students with a set of skills vital for success in an increasingly complex digital world by affording numerous opportunities to demonstrate understanding and communicate increasingly sophisticated ideas through a wide variety of digital and print media. Compared with New Media 10, New Media 11 features tasks and texts of greater complexity and sophistication. As well, the Grade 11 course extends the depth and breadth of topics and activities offered in New Media 10.

The following are possible focus areas in New Media 11:

- media and film studies – suggested content/topics include the globalization of the media industry, influence of media on users’ perceptions, and documentaries in the age of digital media
- journalism and publishing – suggested content/topics include the changing roles and structures within news organizations; and risks, challenges, and opportunities associated with professional journalism
- digital communication – suggested content/topics include blogging, writing for the web, writing for social media, gaming, and podcasting

BIG IDEAS

| The exploration of text and story deepens our understanding of diverse, complex ideas about identity, others, and the world. | People understand text differently depending on their worldviews and perspectives. | Texts are socially, culturally, geographically, and historically constructed. | Language shapes ideas and influences others. | Digital citizenship requires both knowledge of digital technology and awareness of its impact on individuals and society. |
Learning Standards

<table>
<thead>
<tr>
<th>Curricular Competencies</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Using oral, written, visual, and digital texts, students are expected individually and collaboratively to be able to:</strong></td>
<td><strong>Students are expected to know the following:</strong></td>
</tr>
<tr>
<td><strong>Comprehend and connect (reading, listening, viewing)</strong></td>
<td><strong>Text forms and genres</strong></td>
</tr>
<tr>
<td>• Read for enjoyment and to achieve personal goals</td>
<td>• form, function, and genre of multimedia and other texts</td>
</tr>
<tr>
<td>• Recognize and understand the role of story, narrative, and oral tradition in expressing First Peoples perspectives, values, beliefs, and points of view</td>
<td>• relationships between form, function, and technology</td>
</tr>
<tr>
<td>• Recognize and understand the diversity within and across First Peoples societies as represented in texts</td>
<td>• elements of visual/graphic texts</td>
</tr>
<tr>
<td>• Recognize the influence of land/place in First Peoples and other Canadian texts</td>
<td>• interactivity</td>
</tr>
<tr>
<td>• Access information for diverse purposes and from a variety of sources and evaluate its relevance, accuracy, and reliability</td>
<td>• narrative structures found in First Peoples texts</td>
</tr>
<tr>
<td>• Apply appropriate strategies in a variety of contexts to comprehend written, oral, visual, and multimodal texts, to guide inquiry and to extend thinking</td>
<td>• protocols related to the ownership of First Peoples oral texts</td>
</tr>
<tr>
<td>• Recognize the complexities of digital citizenship</td>
<td><strong>Strategies and processes</strong></td>
</tr>
<tr>
<td>• Recognize and appreciate how various forms, formats, structures, and features of texts reflect a variety of purposes, audiences, and messages</td>
<td>• reading strategies</td>
</tr>
<tr>
<td>• Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts</td>
<td>• oral language strategies</td>
</tr>
<tr>
<td>• Recognize and identify personal, social, and cultural contexts, values, and perspectives in texts, including gender, sexual orientation, and socio-economic factors</td>
<td>• metacognitive strategies</td>
</tr>
<tr>
<td>• Recognize how language constructs personal, social, and cultural identities</td>
<td>• writing processes</td>
</tr>
<tr>
<td>• Construct meaningful personal connections between self, text, and world</td>
<td>• multimodal reading strategies</td>
</tr>
<tr>
<td>• Evaluate how literary elements and new media techniques and devices reflect different purposes and audiences</td>
<td>• multimodal writing strategies</td>
</tr>
<tr>
<td></td>
<td>• multimedia presentation processes</td>
</tr>
<tr>
<td></td>
<td><strong>Language features, structures, and conventions</strong></td>
</tr>
<tr>
<td></td>
<td>• elements of style</td>
</tr>
<tr>
<td></td>
<td>• usage and conventions</td>
</tr>
<tr>
<td></td>
<td>• citation techniques</td>
</tr>
<tr>
<td>Create and communicate (writing, speaking, representing)</td>
<td>literary elements and devices</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>• Identify bias, contradictions, distortions, and omissions</td>
<td>• literal and inferential meaning</td>
</tr>
<tr>
<td>• Respectfully exchange ideas and viewpoints from diverse perspectives to build shared understandings and extend thinking</td>
<td>• advocacy</td>
</tr>
<tr>
<td>• Respond to text in personal, creative, and critical ways</td>
<td>• community building</td>
</tr>
<tr>
<td>• Demonstrate speaking and listening skills in a variety of formal and informal contexts for a range of purposes</td>
<td>• propaganda</td>
</tr>
<tr>
<td>• Select and use a variety of media appropriate to purpose, audience, and context</td>
<td>• manipulation</td>
</tr>
<tr>
<td>• Select and apply an appropriate oral language format for an intended purpose</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix H: Assessment Rubric

### English 11 - Narrative Story Writing Rubric

<table>
<thead>
<tr>
<th>Style</th>
<th>Not yet within expectations</th>
<th>Meets minimal expectations</th>
<th>Fully meets expectations</th>
<th>Exceeds expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Maturity; ‘flair’; control and manipulation of language</em></td>
<td>Immature; errors in language use make it difficult to read</td>
<td>Language is generally easy to read, with some awkward phrasing</td>
<td>Easy to read; controlled</td>
<td>Mature style; engaging.</td>
</tr>
<tr>
<td><em>Voice and tone</em></td>
<td>Inappropriate voice and tone</td>
<td>Starts with appropriate voice and tone, but often inconsistent</td>
<td>Effective voice; consistent tone</td>
<td>Voice feels honest and real</td>
</tr>
<tr>
<td><em>Variety and flow of sentences</em></td>
<td>Repetitive sentence structures; no sense of control or deliberation</td>
<td>Relies on basic sentence structures with some variety; little sense of control</td>
<td>Varied sentence structure</td>
<td>Shows control of sentence structure (manipulates length and pattern for effect)</td>
</tr>
<tr>
<td><em>Dictionary</em></td>
<td>Limited vocabulary; may make some odd or jarring word choices</td>
<td>Vocabulary is appropriate but not concise; some variety; predictable</td>
<td>Appropriately varied and appropriate vocabulary; some imagery and figurative language</td>
<td>Mature vocabulary with some creative, sophisticated turns of phrase, and strong verbs</td>
</tr>
<tr>
<td><em>Imagery; use of figurative language</em></td>
<td>Does not develop imagery or use figurative language appropriately</td>
<td></td>
<td>Effective imagery and use of figurative language and rhetorical devices</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meaning</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Thesis; purpose</em></td>
<td>Unfocused; thesis or theme may be missing; purpose unclear</td>
<td>Attempts to present and address an appropriate thesis, theme or purpose (may restate prompt)</td>
<td>Focused on a clear and logical thesis or theme</td>
<td>Focused on a mature and thoughtful thesis or theme (may be implicit); may be original; thought-provoking</td>
</tr>
<tr>
<td><em>Development</em></td>
<td>Does not show clear understanding of the topic</td>
<td>Shows basic understanding of the topic or event; little depth; may be vague or confused in places</td>
<td>Shows thorough understanding of topic or event</td>
<td>Shows depth or understanding and insight</td>
</tr>
<tr>
<td><em>Support (use of details, examples)</em></td>
<td>Insufficient relevant material to develop topic/thesis; may ‘list’ OR repeat the same information or ideas over and over again</td>
<td>Some development; often leaves gaps in reasoning, or deals unevenly with the task or prompt.</td>
<td>Well-developed with logical explanation and analysis (where appropriate)</td>
<td>Fully developed, in a natural and engaging way; often includes background in an interesting and subtle way</td>
</tr>
<tr>
<td><em>Engagement; creative thinking</em></td>
<td>Details and examples often seem disconnected from the thesis or theme</td>
<td>Some relevant details/examples; these may not be specific or well-connected to the thesis or theme.</td>
<td>Specific, appropriate details and examples that are clearly connected to the thesis, theme or purpose</td>
<td>Concrete, highly effective details and examples</td>
</tr>
<tr>
<td></td>
<td>Not engaging; may be confusing</td>
<td>Predictable and often vague.</td>
<td>Interesting to read; some ‘fresh’ ideas or insights</td>
<td>Highly engaging; may use humour or unusual content for effect; writer appears aware of audience</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization and Form</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Overall structure (relative to chosen form)</em></td>
<td>Lacks organization. Structure is weak and may be inappropriate for purpose and form.</td>
<td>Generally appropriate overall structure with some lapses. Organization does not help to support meaning and impact.</td>
<td>Carefully structured, with a beginning, middle and end; may be somewhat uneven (i.e., introduction often stronger than other sections)</td>
<td>Structure is highly effective and adds to the meaning and impact.</td>
</tr>
<tr>
<td><em>Pacing</em></td>
<td>Generally includes an introduction</td>
<td>Includes an introduction; this is often the strongest part of the writing</td>
<td>Interesting opening</td>
<td>Engaging opening grabs attention</td>
</tr>
<tr>
<td><em>Flow; paragraphing; transitions</em></td>
<td>No sense of pacing or control</td>
<td>Limited sense of pacing and control</td>
<td>Appropriate pacing (ideas are developed or revealed purposefully -- may deliberately create uncertainty or suspense)</td>
<td>Natural sense of pacing</td>
</tr>
<tr>
<td><em>Ending/conclusion</em></td>
<td>Tends to repeat a few simple transitions; connections among ideas is often unclear</td>
<td>Uses a limited range of transitions; basic paragraphing</td>
<td>Effective transitions and paragraphing</td>
<td>Ideas flow naturally from beginning to end; uses transitions effectively to enhance meaning</td>
</tr>
<tr>
<td></td>
<td>No control of paragraphing</td>
<td>Includes a weak ending or conclusion that is “functional”</td>
<td>Ending ties the writing together and leaves reader something to think about</td>
<td>Conclusion pulls everything together; may offer a memorable comment or reflection</td>
</tr>
<tr>
<td>Conventions &amp; Spelling</td>
<td>Frequently basic errors in spelling and sentences distract the reader, and often interfere with impact and meaning. Frequent, significant usage errors, including pronoun references and verbs (form and agreement)</td>
<td>Noticeable errors in spelling and sentences that may be distracting. Often, these could be fixed by careful proofreading. Noticeable usage errors, most often involving pronoun references and verbs</td>
<td>Some minor errors in spelling and sentences but these are not distracting; they usually involve complex language and structures. Some usage errors, most often in more complex language and longer sentences</td>
<td>Effectively presented with very few, if any, errors; these usually involve sophisticated language and structures. May include occasional usage errors in complex language and longer sentences</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sentence construction and punctuation</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>-Usage (e.g., agreement; tense)</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
Appendix I: Questions to Guide Teacher Reflections

Teacher Reflective Logs

Note: In your reflections, please do not provide any identifying information about students who have not consented to participate in the research study.

Reflection #1
(Completed following lessons & learning activities related to “Setting”)

Guiding Questions:
What strategies and activities are you using to prepare your students for the web-based collaborative writing storytelling project?

What were the big ideas, key concepts, and/or competencies you were developing through the lessons on “setting”? What are your observations about your students’ learning so far?

Reflection #2
(Completed following lessons & learning activities related to “Character”)

Guiding Questions:
What were the big ideas, key concepts, and/or competencies you were developing through the lessons on “character”? What do you consider to be your roles and responsibilities in supporting your students’ learning?

As you read your students’ collaborative descriptions of a “setting” and a “character” (Google Docs), what are you noticing about how they are co-constructing their written work?

Reflection #3
(Completed following lessons & learning activities related to “Conflict”)

Guiding Questions:
What were the big ideas, key concepts, and/or competencies you were developing through the lesson on “conflict”?

As you read your students’ collaborative descriptions of a “setting”, a “character” & three “conflicts” (shared Google Docs), what are you noticing about how they are co-constructing their written work? How might your observations influence your pedagogical decisions and actions?
Reflection #4
(Completed once students are underway collaboratively writing their stories on the theme of the “future”)

Guiding Questions:
How did you decide on the student groupings for this project? Why did you choose the genre (storytelling) and the theme (the future) for your students’ collaborative writing projects?

Now that the students have started their collaborative storytelling project (shared Google Docs), what do you see as your role?

What was the purpose of sharing Kurt Vonnegut’s story, titled “Harrison Bergeron”, with the students?

Reflection #5
(Completed once students are well underway with their collaborative storytelling project)

Guiding Questions:
What are you noticing about how students are co-constructing their stories? What are you noticing about their use of peer editing, revising, and commenting? How might your observations influence your pedagogical decision and actions?

What have been your roles and responsibilities throughout the story writing and editing process?
Appendix J: Post-Project Interview Questions (Teacher)

Post-Project Interview Questions - Teacher

Preamble: Thank you very much for participating in this research study and for being so welcoming of me in your classroom over the past several weeks. Now that the story writing unit is drawing to a close, I would like to learn more about your perspectives and experiences integrating a collaborative writing project into your New Media 11 course. Please feel free to consult the Google Docs with your students’ stories as needed. Also, please ask me for further clarification of the questions as required.

Ice-breaker questions:

1. How many years have you been teaching for? How many years have you been teaching at [school name]? Where did you teach prior to coming to [school name]?
2. How would you describe the atmosphere of your New Media 11 class?
3. Why do students choose to come to [school name] to study?
4. How are students trained in the use of the Chromebooks and G Suite for Education tools?

What are your reflections on the collaborative story writing unit as a whole? What opportunities and challenges arose during the collaborative writing process?

How did you decide on the task and topic for the collaborative assignment? What considerations did you take into account when choosing the groups for this assignment?

How did you scaffold the collaborative story writing process for your students? What were your other roles and responsibilities throughout the collaborative story writing unit? Did some students require different types of support than other students? Please explain.

What insights did you glean about your students’ writing behaviours as you observed the collaborative writing process through the Google Docs? How did these insights inform your pedagogical decisions and actions?

How were your teachings reflected in the students’ writing?

How did your students respond to the suggestions and comments you provided on their stories? How did the students respond to the suggestions and comments provided by their peers?
7. What role did George Orwell’s novel, 1984, play in the students’ writing? You also shared Kurt Vonnegut’s story, Harrison Bergeron, with the students. Could you talk more about that?

8. What role did the audience play in the development of the students’ stories?

9. Could you briefly explain the assessment component of this project?

10. You provided opportunities for your students to work on their stories while sitting face-to-face with their peers. What are your observations on this learning environment?

11. In your reflection, you noted that “some groups have developed defined (but unspoken) roles.” Could you elaborate more on this? You also noted that “work distribution has been one-sided in some groups; in other groups, it is more equally distributed.” What factors influenced the patterns of participation and interaction that developed between the group members? How did students support one another?

12. What were the benefits of using Google Docs for collaborative writing projects? What were the challenges of using Google Docs for collaborative writing projects? What Google Doc features were the most useful? How is the advent of web-based tools changing the way you teach writing?

13. Could you briefly describe the process that students went through to create their digital presentations? What opportunities and challenges came out of this component of the project?

14. If you were going to do another collaborative writing project in the future, what would you keep the same? What would you do differently?
Appendix K: Pre-Group Interview Questionnaire (Students)

Name: ___________________

A) The purpose of the first set of questions is to gather background information about you as a participant in the research study. You can use the responses provided below to introduce yourself at the beginning of the interview.

1. What grade are you currently enrolled in?

________________________________________________________________________

2. How old are you?

________________________________________________________________________

3. Where were you born?

________________________________________________________________________

If you were not born in Canada, when did you move to Canada?

________________________________________________________________________

4. What is your native language?

________________________________________________________________________

If English is not your native language, when did you start learning English?

________________________________________________________________________

5. Do you speak any other languages? If so, what other languages do you speak and how did you learn them?

________________________________________________________________________

B) The purpose of the second set of questions is to give you a chance to think about some of the questions that we will be discussing in the interview. Feel free to respond in note form.

1. What were the most valuable and interesting aspects of the collaborative story writing project?

________________________________________________________________________

________________________________________________________________________
2. What challenges did you encounter while working on the collaborative story writing project?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Describe the collaboration that occurred between you and your group member(s).

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. What roles did your teacher play throughout the story writing unit? What are some different ways in which your teacher supported you?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you gathering some of your thoughts!
We will begin the interview in a few minutes.
Appendix L: Focus Group Interview Questions (Students)

Focus Group Interview Questions

Preamble: Good afternoon. Thank you for taking the time to meet with me to discuss your experiences with the collaborative writing project. Before we begin, I wanted to provide a few guidelines for our discussion:

• First of all, it is important to be respectful of one another. Everyone will be given an opportunity to speak. After I ask a question, I’ll give you a moment to think about it, and then call on each of you one-by-one to respond. If you do not have anything to say, you can pass. After everyone has had a chance to respond, you can raise your hand to contribute any new ideas that come to mind.
• It is important to keep the information that is shared today confidential. Please do not discuss what your peers have said with anyone outside this room.
• There are no wrong answers. Feel free to share your point of view, even if it differs from what others have said.
• You’ve probably noticed the computer and the digital recorder. I am recording the session because I don’t want to miss any of your comments and I cannot write fast enough to get them all down. I will refer to you by your name when moderating the discussion. However, your names will not appear in the report I prepare afterwards.
• Feel free to ask me for further clarification if any of the questions are unclear.

Semi-Structured Interview Questions

1. Let’s start by having each of you introduce yourselves. You can use the guiding questions in the first part of the questionnaire, and if you’d like, you can add an interesting fact about yourself.

2. Could you briefly describe your experience writing stories in collaboration with your peers (using Google Docs)?

3. What were the most valuable and interesting aspects of the collaborative story writing project?

4. What challenges did you encounter while working on the collaborative story writing project? How did you respond to those challenges?

5. Describe the collaboration that occurred between you and your group members. Possible prompts: How did you make decisions about the content of your story and other aspects of the project? How did you share the work? How did you support one another?
6. You had the opportunity to work on your stories while sitting with your peers in class and using your Chromebooks. What are the benefits of this learning environment? What are the challenges?

7. What roles did your teacher play throughout the story writing unit? (The story writing unit started with pre-writing activities, and included the writing and editing phase, and then the creation of your digital stories.) What are some different ways in which your teacher supported you? How did you respond to the suggestions and comments that your teacher provided? Are there any other ways in which your teacher could have supported you?

8. Your teacher set up a peer editing process whereby you exchanged stories with another group. How did you feel about giving feedback to your peers? How did you feel about receiving feedback from your peers? How did you respond to the suggestions and comments that your peers provided?

9. Your teacher and I organized an audience of Grade 6/7 students for your stories. How did you feel about sharing your stories with a real audience? What role did the audience play in the development of your stories?

10. Please bring up your stories on your Chromebooks. Could you skim through your stories and identify how the lessons and teachings provided by [your teacher] are reflected in your stories?

11. I noticed that all of you wrote stories with a dystopian vision of the future. Could you tell me more about that?

12. What are the benefits of using Google Docs for collaborative writing projects? What are the challenges of using Google Docs? What Google Doc features did you find to be the most useful during the story writing process?

The goals of this study are to explore how you and your peers collaborated on the story writing project, as well as how your teacher supported you throughout the collaborative writing process. Please take a moment to think about whether there is anything you’d like to add. (Please note: If there is something additional you’d like to add that you do not feel comfortable sharing with the group, you can write it at the bottom of the questionnaire.)
Appendix M: First Cycle Codes for Question #1

<table>
<thead>
<tr>
<th>First cycle codes relating to the teacher’s facilitation of the collaborative story writing project (Frequency)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• articulating timeline &amp; lesson sequencing (28)</td>
<td>• responding to student questions (22)</td>
</tr>
<tr>
<td>• assessment (7)</td>
<td>• reviewing and connecting to prior learning (6)</td>
</tr>
<tr>
<td>• assigning for homework (10)</td>
<td>• scaffolding (8)</td>
</tr>
<tr>
<td>• assisting with technology (21)</td>
<td>• setting descriptions (6)</td>
</tr>
<tr>
<td>• audience (29)</td>
<td>• sharing his pet-peeves (5)</td>
</tr>
<tr>
<td>• avoiding clichés (7)</td>
<td>• sharing with peers - anonymously (6)</td>
</tr>
<tr>
<td>• character development (6)</td>
<td>• sharing with peers - not anonymously (15)</td>
</tr>
<tr>
<td>• Chromebooks (23)</td>
<td>• small talk (3)</td>
</tr>
<tr>
<td>• clarifying expectations (16)</td>
<td>• spelling (7)</td>
</tr>
<tr>
<td>• clarifying student meaning (13)</td>
<td>• stepping back (3)</td>
</tr>
<tr>
<td>• class brainstorm (4)</td>
<td>• story elements (13)</td>
</tr>
<tr>
<td>• class discussion (8)</td>
<td>• student accountability (6)</td>
</tr>
<tr>
<td>• class time to write (26)</td>
<td>• student creativity (3)</td>
</tr>
<tr>
<td>• collaboration with peers (64)</td>
<td>• student engagement (5)</td>
</tr>
<tr>
<td>• collaborative writing tasks (15)</td>
<td>• student participation (8)</td>
</tr>
<tr>
<td>• conflict (6)</td>
<td>• student voice &amp; choice (9)</td>
</tr>
<tr>
<td>• connecting to curriculum (20)</td>
<td>• student work as exemplar (6)</td>
</tr>
<tr>
<td>• descriptive writing (11)</td>
<td>• teacher feedback - verbally (14)</td>
</tr>
<tr>
<td>• dialogue (5)</td>
<td>• teacher feedback - via Google Docs (35)</td>
</tr>
<tr>
<td>• digital presentation (16)</td>
<td>• teacher-student rapport (5)</td>
</tr>
<tr>
<td>• dystopia (11)</td>
<td>• thesaurus (8)</td>
</tr>
<tr>
<td>• editing symbols (7)</td>
<td>• time management (17)</td>
</tr>
<tr>
<td>• emphasizing the process (2)</td>
<td>• tone (1)</td>
</tr>
<tr>
<td>• explicit instruction &amp; modeling (12)</td>
<td>• topic - the future (8)</td>
</tr>
<tr>
<td>• facilitating groups (24)</td>
<td>• word choice (21)</td>
</tr>
<tr>
<td>• forming groups (15)</td>
<td></td>
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<tr>
<td>• fun environment (4)</td>
<td></td>
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<tr>
<td>• G Suite tools (40)</td>
<td></td>
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</tbody>
</table>
Appendix N: Descriptions of Second Cycle Codes for Question #2

<table>
<thead>
<tr>
<th>Codes and Sub-codes (Frequency)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collaboration (Affordances)</strong></td>
<td></td>
</tr>
<tr>
<td>Balanced language/writing skills (5)</td>
<td>Comments by the students and teacher suggesting that the group members had similar language and/or writing skills. Example of this code: “most of the groups were fairly evenly matched”</td>
</tr>
<tr>
<td>Bringing ideas together (9)</td>
<td>Comments that suggested that students benefited from being able to bring their ideas together. Example of this code: “people can come up with different ideas”</td>
</tr>
<tr>
<td>Collaboration strategies (11)</td>
<td>Comments that described how students were working together and dividing up the work. Example of this code: “[my partner] started writing the middle part and then I finished the beginning”</td>
</tr>
<tr>
<td>Making compromises (4)</td>
<td>Comments that indicated that students were making compromises. Example of this code: “you have to agree to compromise or just give in”</td>
</tr>
<tr>
<td>Peer editing</td>
<td>Comments that suggested the peer editing emphasized grammar and word choice, over story ideas. Example of this code: “very basic stuff like correcting grammar”</td>
</tr>
<tr>
<td>Peer editing</td>
<td>Comments suggesting that the peer editing was helpful, either to their learning or in the development of their stories. Example of this code: “helped me to correct my grammar mistakes”</td>
</tr>
<tr>
<td>Seeing each other’s abilities (2)</td>
<td>Comments that suggested that they enjoyed seeing the different abilities of their group members. Example of this code: “seeing the unique abilities”</td>
</tr>
<tr>
<td>Sharing with peers (3)</td>
<td>Comments that described benefits associated with sharing their writing with their peers. Example of this code: “it helped to see where your story stands in relation to others”</td>
</tr>
<tr>
<td>Writing while sitting together in class</td>
<td>Comments suggesting that writing with peers in class improved the communication. Example of this code: “when you’re facing your partner, you can communicate”</td>
</tr>
<tr>
<td>Writing while sitting together in class</td>
<td>Comments made by the teacher suggesting that writing together in class enabled students to collaborate with the wider class community. Example of this code: “collaboration from group to group was helpful”</td>
</tr>
<tr>
<td>Writing while sitting together in class</td>
<td>Comments made by students suggesting that some of them were more productive in class or that they could keep their partner focused on the writing task. Example of this code: “I get more work done at school than I do at home”</td>
</tr>
<tr>
<td><strong>Collaboration (Constraints)</strong></td>
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<tr>
<td><strong>Attendance (5)</strong></td>
<td>Comments by a student or the teacher indicating that a lack of attendance created a problem. Example of this code: “when one person isn’t there, then the onus is on them to do the work alone”</td>
</tr>
<tr>
<td><strong>Challenges working with others (11)</strong></td>
<td>Comments by the students and teacher that illustrated that students were having trouble working with their group members (or an expressed interest in either working alone or having the option of choosing whom they work with). Example of this code: “I like to just express my own ideas by myself”</td>
</tr>
<tr>
<td><strong>Conflicting ideas (7)</strong></td>
<td>Comments by the students that suggested that they and their collaborators had opposing ideas about the story. Example of this code: “we had different opinions, ideas, so it’s hard to put it in together”</td>
</tr>
<tr>
<td><strong>Difficulty finishing or staying motivated (5)</strong></td>
<td>Comments by the students and teacher that suggested that they were having trouble completing the work and/or staying motivated. Example of this code: “this could have been a trilogy”</td>
</tr>
<tr>
<td><strong>Lack of communication (3)</strong></td>
<td>Comments by students suggesting that they were not communicating with their peers about the story. Example of this code: “We didn’t actually communicate much about it”</td>
</tr>
<tr>
<td><strong>Losing focus in class (10)</strong></td>
<td>Comments by the students and teacher indicating that they would sometimes lose focus while writing in class. Example of this code: “we can get carried away”</td>
</tr>
<tr>
<td><strong>Reluctance to edit others’ work (5)</strong></td>
<td>Comments by the teacher and students that indicated a reluctance to edit or revise someone else’s work. Example of this code: “afraid to make changes”</td>
</tr>
<tr>
<td><strong>Slower process (5)</strong></td>
<td>Comments by the students or teacher indicating that collaborative writing is a slower process than individual writing. Example of this code: “a group project will take longer”</td>
</tr>
<tr>
<td><strong>Some ideas dominated (6)</strong></td>
<td>Comments by a student or the teacher indicating that some students’ ideas may have dominated. Example of this code: “some had more ideas that they wanted to get down”</td>
</tr>
<tr>
<td><strong>Uneven patterns of participation (12)</strong></td>
<td>Comments by the students and teacher suggesting that there were some uneven patterns of participation. Example of this code: “I did a lot of things myself”</td>
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<table>
<thead>
<tr>
<th><strong>Pedagogy (Affordances)</strong></th>
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<tbody>
<tr>
<td><strong>Audience</strong></td>
<td></td>
</tr>
<tr>
<td>• bridging age (2)</td>
<td>Comments by the teacher that the age or level of the students was appropriate for the stories. Example of this code: “they were reading <em>Hunger Games</em>, which fit in nicely with the theme of dystopias”</td>
</tr>
<tr>
<td>• considering audience while writing (4)</td>
<td>Comments by the students or teacher suggesting that students were considering their audience while writing. Example of this</td>
</tr>
<tr>
<td><strong>Pedagogy (Constraints)</strong></td>
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<tr>
<td><strong>Assessment methods</strong> (5)</td>
<td></td>
</tr>
<tr>
<td>Reflections the teacher was making on his assessment methods, including what he could do differently. Example of this code: “I would potentially do a peer assessment or a self-assessment”</td>
<td></td>
</tr>
<tr>
<td><strong>Audience</strong></td>
<td></td>
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<thead>
<tr>
<th><strong>Motivation to finish and do a good job</strong> (4)</th>
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</thead>
<tbody>
<tr>
<td>Comments by the students and teacher suggesting that the audience encouraged students to finish and/or to do a good job. Example of this code: “you wanted it to be good… for them to be interested”</td>
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<table>
<thead>
<tr>
<th><strong>Developing vocabulary to facilitate discussion</strong> (2)</th>
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<tbody>
<tr>
<td>Comments by the teacher suggesting that he was trying to help students develop vocabulary that they could use throughout the unit to talk about their stories. Example of this code: “mindful to ensure that they understood key terms”</td>
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<table>
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<tr>
<th><strong>Giving ideas</strong> (7)</th>
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<tbody>
<tr>
<td>Comments from the students and teacher suggesting that a role the teacher played was to give students story suggestions. Example of this code: “give ideas on how I should continue the story”</td>
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<table>
<thead>
<tr>
<th><strong>Mentor text</strong></th>
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<tbody>
<tr>
<td><strong>choosing a dystopia</strong> (12)</td>
</tr>
<tr>
<td>Comments made by the students and teacher indicating why they had chosen to write a dystopia. Example of this code: “that was the freshest thing on our minds”</td>
</tr>
<tr>
<td><strong>provided an exemplar</strong> (3)</td>
</tr>
<tr>
<td>Comments by the teacher suggesting that the mentor texts were provided as exemplars to guide class discussion and to be used as models. Example of this code: “what was the name of something in 1984”</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>Pre-writing activities</strong> (12)</th>
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</thead>
<tbody>
<tr>
<td>Comments by the students and teacher indicating that the pre-writing activities helped them develop their stories. Example of this code: “he taught us how to bring together different parts of the story”</td>
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<thead>
<tr>
<th><strong>Teacher as facilitator</strong> (9)</th>
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</thead>
<tbody>
<tr>
<td>Comments by the teacher and students indicating that the teacher became a facilitator of the collaborative writing process. Example of this code: “I have intervened when groups are not working to their full potential”</td>
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<tr>
<th><strong>Teacher feedback</strong></th>
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<tbody>
<tr>
<td><strong>considering the feedback</strong> (7)</td>
</tr>
<tr>
<td>Comments by the students and teacher suggesting that students were considering his feedback. Example of this code: “Think and then we had to ask him to explain”</td>
</tr>
<tr>
<td><strong>helpful to learning</strong> (9)</td>
</tr>
<tr>
<td>Comments by the students indicating that the teacher’s feedback was helpful to their learning or to their story development. Example of this code: “helps with the flow of the sentence”</td>
</tr>
<tr>
<td><strong>teacher as chief editor</strong> (10)</td>
</tr>
<tr>
<td>Comments by the students and teacher that suggested that the teacher was the chief editor. Example of this code: “an overseer of corrections and ideas”</td>
</tr>
<tr>
<td>Category</td>
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<tr>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>inattentiveness (9)</td>
</tr>
<tr>
<td>lack of audience awareness (4)</td>
</tr>
<tr>
<td>limitations on content (4)</td>
</tr>
<tr>
<td>mixed feelings about sharing (9)</td>
</tr>
<tr>
<td>Digital presentation</td>
</tr>
<tr>
<td>more time to prepare (2)</td>
</tr>
<tr>
<td>room for improvement (4)</td>
</tr>
<tr>
<td>Story lacked a plan (5)</td>
</tr>
<tr>
<td>Teacher feedback</td>
</tr>
<tr>
<td>lack of clarity (5)</td>
</tr>
<tr>
<td>tendency to accept (6)</td>
</tr>
<tr>
<td>Tension regarding role (3)</td>
</tr>
<tr>
<td>Ease of sharing and working together (5)</td>
</tr>
<tr>
<td>Grammar check and spell check (2)</td>
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<tr>
<td>Category</td>
</tr>
<tr>
<td>----------------------------------------------</td>
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<tr>
<td>Monitoring progress (3)</td>
</tr>
<tr>
<td>Opportunity for learning (6)</td>
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<tr>
<td>Real-time changes (4)</td>
</tr>
<tr>
<td>Reference tools (2)</td>
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<tr>
<td>Stored on-line (4)</td>
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<tr>
<td>Suggesting and commenting (10)</td>
</tr>
<tr>
<td><strong>Technology (Constraints)</strong></td>
</tr>
<tr>
<td>Delayed response (2)</td>
</tr>
<tr>
<td>Difficulties with editing process (3)</td>
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<tr>
<td>Distractions (4)</td>
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<tr>
<td>Limitations of Chromebook (2)</td>
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<td>Reliance on Internet (4)</td>
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