Exploring peer revision in writing through online collaboration in a middle grades classroom

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EXPLORING PEER REVISION IN WRITING THROUGH ONLINE COLLABORATION IN A MIDDLE GRADES CLASSROOM

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Curriculum and Instruction

by
Sarah Hunt-Barron
August 2011

Accepted by:
Dr. Lienne Medford, Committee Chair
Dr. Tharon Howard
Dr. Rebecca Kaminski
Dr. David Reinking
ABSTRACT

Using the method of a formative experiment, this investigation examined how the use of peer revision and collaboration in an online environment could be implemented in a seventh-grade classroom to increase revision of writing over multiple drafts and improve the quality of student expository writing. Thirty-six students in two sections of a seventh-grade English language arts class participated in the study. Quantitative and qualitative data were collected prior to the intervention to establish baseline data and determine progress toward the pedagogical goal. Qualitative data were also gathered and analyzed throughout the intervention to assess progress toward the goal. Quantitative data included student writing samples and Piazza and Siebert’s (2008) Writing Dispositions Survey. Qualitative data gathered included classroom artifacts, electronic communications between students and teachers, student interviews, focal student interviews, focal student think-alouds, teacher interviews, and field notes. Analyses revealed improvement in the amount of student revision and quality of student writing, as well as improved peer feedback using an online community for peer revision and collaboration. The success of this intervention was related to the teacher’s commitment to writing and reflective practice, positive student attitudes and strong bonds between students, explicit time and structures for writing and revision in the classroom, and the visibility and sense of playfulness brought to the peer revision process by technology. Inhibiting factors, unanticipated effects, and transformations to the instructional environment are also discussed.
DEDICATION

To my father, who exemplified life-long learning.

You have been with me every step of the way.
ACKNOWLEDGMENTS

To my advisor, Lienne Medford: Thank you for your unwavering support and confidence in me throughout this journey. Your presence has been a calming force in the whirlwind of graduate school. I am honored to be your first official “hood-ee.”

To my committee: Dr. Howard, you fueled my interest in online communities and the possibilities technology could bring to classrooms. Thank you for taking an interest in me, a random student from the school of education. Dr. Kaminski, there are not enough words to thank you for all of the opportunities you have given me. Thank you for the endless support and nurturing my love of both writing and research. Dr. Reinking, when I met you six years ago, I had no idea the influence you would have on my career. Thank you for introducing me to the world of research.

To my husband, Brad: Thank you for what must have seemed like endless evenings of single parenting while I was working, reading, writing, or thinking. Without you, this would never have been possible.

To my boys, Henry and Elliot: You help me keep everything in perspective. Thank you for everything you have sacrificed so I could continue my studies.

To my mom, Ann: You taught me I could do anything I set my mind to and here is the evidence! Thank you for always believing in me.

To “Ms. Piper” and her students: Thank you for letting me join your classroom community. I will miss you all!
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CHAPTER 1
INTRODUCTION

As in other areas of our national life, technology and software cannot be expected to substitute for human judgment, but they can undoubtedly become invaluable allies in the quest to improve writing instruction, learning, and assessment (The National Commission on Writing in America’s Schools and Colleges, 2003, p. 31).

In 2003, the National Commission on Writing concluded that writing was the “neglected r” in schools and urged educators to double the time spent writing in classrooms. In 2006, the same commission released Writing and School Reform, urging schools to encourage more writing for a variety of purposes in classrooms. In 2007, the Carnegie Corporation published Writing Next, a report that declared American schools are facing a “writing proficiency crisis,” again noting that extended opportunities for writing in the classroom were needed (Graham & Perin, p. 3). Each of these reports, when published, drew some attention to writing in American schools today, yet few of the recommendations seem to have infiltrated instruction in any sustained or consistent manner. The National Commission on Writing recommended “…the amount of time students spend writing (and the scale of financial resources devoted to writing) should be at least doubled” (2003, p. 4), but this recommendation has yet to be realized. After reviewing a national survey of writing in the primary grades, Cutler and Graham (2008) also recommended more time be given to writing in the classroom, particularly
expository text. A 2009 survey of high school teachers by Kiuha, Graham, and Hawken (2009) concluded that nearly 50% of teachers surveyed did not have students write a multiple-paragraph response even once a month. Despite some improvement in writing scores over the past decade, data from the National Assessment of Educational Progress (NAEP) suggests students continue to struggle with expository writing (Salahu-Din, Persky, & Miller, 2008). In 2007, 23% of high school seniors scored at the proficient level and only 1% scored at the advanced level of the NAEP exam. The bulk of 12th graders tested scored at the lower level of basic writer (58%), and an additional 18% did not achieve a basic score. Only 1 in 50 seniors demonstrated advanced skills in expository writing. Middle school writing scores are similar to that of high school students. The 2007 NAEP data indicate only 1 in 50 eighth graders demonstrated advanced skills in writing, 31% of students were scored proficient in writing, and 55% of eighth graders scored at the basic level. An additional 12% did not score at the basic level. Significant gaps also persist between groups of eighth grade students. Eighth grade students who were not eligible for free or reduced lunch outscored students eligible for lunch subsidies, female students outscored male students, and white students outscored both Black and Hispanic students (Salahu-Din, Persky, & Miller).

These statistics paint a picture of students as less-than-able writers, yet other data indicates adolescents are writing, and writing frequently, outside of school. According to research by the Pew Internet and American Life Project, 94% of teens use the Internet at least occasionally and 85% of teens ages twelve to seventeen use some form of electronic
personal communication, from sending email to text messaging to posting comments on social networking sites (Lenhart, Arafeh, Smith, & Macgill, 2008). Teens form the backbone of social networks, including Facebook and MySpace, and are involved in multiplayer online role-playing games, such as World of Warcraft. These online spaces foster collaboration and interaction with others through writing.

If students are doing so much composing outside of school, why have writing scores improved so little, given the amount of writing students are potentially doing on their own? According to Tyner (1998), “there has been a growing bifurcation between the literacy practices of compulsory schooling and those that occur outside the schoolhouse door” (p. 8). Rather, literate activities outside the confines of the school building may be thought of as less valuable experiences than those offered in an academic environment. Students cannot always see a connection between the literacy of their everyday lives and the literacy valued in schools (Rhodes & Robnolt, 2009).

Writing instruction in schools, particularly when a writing workshop model is employed, requires students use the collaborative skills similar to those they are developing in online spaces outside the classroom, but these connections between students’ out-of-school literacies and the demands of academic literacies may not be evident to them. Collaboration and feedback, a vital part of online communities, are key elements of peer revision. Peer revision (also referred to as peer response, peer conferencing, or peer editing) has been shown to be an effective tool for improving student writing (Gere, 1987; Gere & Abbott, 1985; Gere & Stevens, 1985; Simmons, 2003), yet has also been difficult to teach successfully (Brammer & Rees, 2007;
Lawrence & Sommers, 1996; Simmons, 2003; Styslinger, 1998). This study examines how using an online community in a seventh-grade English language arts classroom might affect the peer revision process and student writing, using technology as a bridge between students’ out-of-school literacies and academic literacies.

This dissertation study uses a relatively new approach to research sometimes referred to as a formative experiment (Reinking & Bradley, 2008). Formative experiments are one of several approaches to research referred to collectively with overarching terms such as design-based research or design experiments (Barab & Squire, 2004; Brown, 1992; Design-Based Research Collective, 2003; Hoadley, 2004; van den Akker, Gravemeijer, McKenney, & Nieveen, 2007). In a formative experiment, the investigator sets a pedagogical goal and selects an intervention that has been previously researched and shows promise to achieve the goal or designs an intervention that may help achieve that goal, typically in a classroom. In education, formative experiments are often seen as a means to bridge the gap between theory and practice, because classrooms are not well-controlled laboratories for experimental investigations (Reinking & Bradley, 2008). In this approach to research, an investigator sets a valued goal and designs an intervention to achieve that goal. Formative experiments allow a researcher to make and describe changes to the intervention based on ongoing data collection and analysis in the interest of achieving the goal. This pragmatic approach is useful to provide authentic understandings of how interventions can be implemented realistically in classrooms, where it is not possible to control for every possible variable, yet where teachers need to achieve valued pedagogical goals.
Rationale

Writing in the 21st century is no longer confined to pencil and paper. Web 2.0 tools are in common use and we are all creators of media for public consumption, part of an increasingly participatory culture (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2009; Yancey, 2009). Yancey called for the development of new models of writing, new curriculum, and models for teaching that enable our students to become “the citizen writers of the world” (p. 1). As digital technologies have changed, so has writing. The bifurcation of academic literacy practices and out-of-school literacies can be confounding to teachers, who may struggle to engage students in academic activities that students too often view as irrelevant. Prensky (2006) argued students are becoming less engaged with instruction that ignores the digital skills they bring to the classroom. Teachers may not view the writing student’s engage in outside of school as sufficiently rigorous (Williams, 2005). How can educators engage students, help them develop as readers and writers, and prepare them with skills necessary in the 21st century? What skills are students developing outside of school that can contribute to their growth as writers?

Capitalizing on collaborative environments is one way to engage students in writing in our classrooms. The writing workshop model is inherently collaborative, but many classroom teachers spend little time on peer revision (National Writing Project, 2003). Recent studies suggest adolescents struggle with the peer revision process. Students reported they were not always honest in their appraisal of one another’s work, for fear of alienating peers (Styslinger, 1998; Styslinger, 2008). Differences in perceived writing ability, as well as group members who are reticent to speak, or group members
who may overwhelm their peers are also issues that have emerged in peer revision groups (Sommers, 1993). Peer status, gender, and race may also affect the feedback students receive from one another and whether that feedback is valued (Christianakis, 2010). Both teachers and students may become disenchanted and abandon the process (Lawrence & Sommers, 1996; Styslinger, 1998). One study suggests it takes years for high school students to develop the necessary skills to become helpful peer reviewers (Simmons, 2003), again leaving both teachers and students frustrated with the process.

The result is student writing that may receive little useful feedback for revision and that consequently may not communicate effectively with an audience. Teaching middle school students how to successfully respond to peers’ text, as well as to read and understand critiques of their own work, provides adolescents with the skills they will need to move forward, both in academic environments and in the larger world. Revision gives students the opportunity to not only re-examine their own ideas, but also examine and internalize elements of effective writing in a variety of contexts. An online environment may alleviate adolescents’ concerns regarding offering of constructive criticism or suggestions to peers; developing a Discourse (Gee, 2005) with peers online may allow students to try on new identities, offering potential avenues for honest feedback. As participants in an online community, students are preparing themselves to be full participants in an increasingly participatory culture.

**Significance of the Study**

“Being literate no longer means just learning to read and write traditional print texts; people need to be sociotechnically literate” (Moje & Young, 2000). Schools often
struggle to make learning relevant to students, and writing instruction is no exception. Meanwhile, students are actively composing through texts, tweets, and Facebook posts, as well as developing their own blogs and participating in multiplayer online games. We need to consider how these online activities may make school more relevant for students and the strengths these activities may foster in students that could then be used for academic purposes. School leaders need to prepare a literate and collaborative workforce, and being literate may be defined more broadly than in the past. Scholars have developed definitions of literacy that include multiliteracies, new literacies, situated literacies, digital literacies, information literacy, media literacy, and visual literacy (Alvermann, 2009; Rhodes & Robnolt, 2009). These definitions attempt to capture the multimodal, rapidly-changing characteristics of digital media. This intervention using digital media as an integral part of writing in a classroom environment may help students see the applicability of skills learned in school, as well as further develop their writing skills and prepare them to become active participants in the world outside of school.

In addition to exploring the impact of an online community on a writing classroom, this investigation offers another view of writing workshop, a method of writing instruction that has become increasingly popular over the last three decades (Pritchard & Honeycutt, 2005). To date, there has been one formative experiment examining possible impediments to implementing a writing workshop in a classroom (Tracy, 2010). This investigation focuses more narrowly on one key component of writing workshop, peer revision. Peer revision is a key component in the writing workshop (Atwell, 1987; Calkins, 1986; Elbow, 1973; Graves, 1983; Murray, 2003).
Peer revision gives students time to share their work with each other and develop a community of writers (Fletcher and Portaluppi, 2001; Gere, 1987). It also teaches students to read and write with a critical eye, with a goal of internalizing the qualities of effective writing (Elbow, 1973; Moran & Greenburg, 2008). This investigation serves as a refinement to existing literature on peer revision, exploring the effects of an online community on the quantity and type of peer feedback offered during peer revision and the peer feedback writers choose to pay attention to when revising.

Finally, this investigation situates peer revision in the context of an online community. Online communities have been examined through the lens of situated learning (Lave & Wenger, 1991), specifically communities of practice (Clarke, 2009; Gunawardena, Hermans, Sanchez, Richmond, Bohley, & Tuttle, 2009). The social structure assumes responsibility for the development and sharing of knowledge in a community of practice (Lave & Wenger, 1991). Learning is viewed as a form of membership, which changes over time, as the community changes. Learners “…pick up practices through joint action with more advanced peers, and advance their abilities to engage and work with others in carrying out such practices” (Gee, 2005, p. 77). Each community has its own Discourse, which develops from learners Discourses (home, culture, language, peers, and institutions). As members participate in the community, a new, shared Discourse emerges (Gee, 2005; Gunawardena, et al., 2009). Gee (2001) described Discourses as “identity kits.” Alvermann (2001) noted that Gee’s concept allows for “multiple identity formations within different Discourses” (p. 679). This feature of online communities allows adolescents to experiment not only with who they
are, but also to develop a separate identity in the context of the online community. Alvermann (2001) asserted that our literacy identities are often formed by labels we are given. This investigation will explore the potential of online communities to enable students to develop alternative identities in an online space as writers, potentially developing more positive views of themselves as writers.

**The Pedagogical Goal and Instructional Intervention**

The goal for this formative experiment was as follows: In a middle school English language arts classroom, increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing through online peer revision and collaboration. An important component of classroom instruction was an emphasis on collaboration and revision throughout the writing process. Prior to the intervention, the teacher in this study had limited success in getting students to revise their writing. To stress the importance of revision, the teacher structured her assignments to build in time explicitly devoted to revision at various points in the writing process. This study sought to examine the factors that enhanced or inhibited the effectiveness, efficiency, and appeal of using an online community as an environment for peer revision and collaboration through a formative experiment.

The intervention for this investigation was the use of an online community in an ELA classroom to foster revision and collaboration. At the time of this dissertation study, little research existed using online communities as a tool for peer revision and collaboration in classrooms. Existing research suggested online communities may be effective environments for peer revision and collaboration among student writers. Black
and Steinkuehler (2009) found that online spaces allow young people to become experts, a stance that is required in peer revision in which each writer and responder is viewed as having expertise in writing. Investigations into the use of online spaces for building academic communities suggest that students develop a set of community standards (Clarke, 2009) and these communities develop their own Discourses (Britsch, 2005; Clarke, 2009; Gunawardena, Hermans, Sanchez, Richmond, Bohley, & Tuttle, 2009). These shared Discourses may be viewed as “identity kits” (Gee, 2001), allowing students’ to develop “multiple identity formations within different Discourses” (Alvermann, 2001). This feature of online communities seemed a promising way for students to develop an identity as a writer, potentially fostering more positive views of themselves as writers and encouraging students to devote more time and energy to their writing.

Digital technology has been explored as a tool for revision in college classrooms and found to improve the quality of peer feedback. Crank (2002) found the use of email for peer response resulted in students thinking more deeply about their responses to one another and made student reactions more student-centered. Honeycutt (2001) noted that students made more explicit references to the document being reviewed and focused more deeply on the content of the piece. Research of the effect of computers on writing suggest students who use a computer may write more (Russell & Cook, 2003), and may support clarity and support for ideas as students may feel they have an authentic audience and therefore a clear purpose for their writing (Moore & Karabenick, 1992). These promising studies led me to develop an intervention that would use an online community
as a space for peer revision and collaboration with the goal of increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing in a middle school classroom.

For the purposes of this investigation, online peer revision and collaboration was defined as having the following components: (a) an online space for students to post work and provide feedback; (b) the ability for students to track changes made to their work; (c) the ability for a student to request feedback from peers in writing at any stage of their writing; and (d) the ability for students to respond to feedback from their peers. These components were essential to the intervention and were not subject to modification during the intervention.

**This Manuscript**

Formative experiments begin not with a research question but with an intervention aimed at achieving a valued pedagogical goal. Reinking and Watkins (2000) developed six questions to aid researchers in designing and conducting a formative experiment:

1. What is the pedagogical goal of the formative experiment and what theory informs this goal?
2. What instructional intervention has the potential to achieve this goal?
3. As the intervention is implemented, what factors enhance or inhibit progress toward the goal?
4. How can the intervention be modified to better achieve the pedagogical goal?
5. Has the instructional environment been transformed in some way as a result of the intervention?

6. What were the unanticipated effects, positive or negative, produced by the intervention? (p. 388).

These questions provided the framework for this dissertation study and provide the organization for the remaining chapters. Chapter 2 is a review of the relevant literature I used to establish the pedagogical goal and the intervention, providing answers to Reinking and Watkins first two questions. Chapter 3 provides an overview of the study’s methods, including the context of the study. Questions 3 and 4 are addressed in Chapter 4, which addresses the (a) context of the study, (b) implementation of the online community as a tool for peer revision, (c) factors that enhanced or inhibited the intervention and modifications that were made, and (d) evidence of progress toward the pedagogical goal. Questions 5 and 6 are addressed in Chapter 5, examining how the instructional environment was transformed and the unanticipated effects of the intervention. Finally, implications for future research and classroom practice are discussed, as well as the limitations of this study.
Definition of Terms

Key terms used in this study are defined below:

**Communities of practice:** These knowledge communities are where we learn. People invest their time and energy in a joint enterprise, mutually engaging one another and developing a shared repertoire (Henderson & Bradley, 2008).

**Discourse:** Described by Gee (1989) as “Ways of being in the world, they are forms of life which integrate words, acts, values, beliefs, attitudes, and social identities as well as gestures, glances, body positions, and clothes” (p. 5). Also defined as an “identity kit” (p. 6) that seems to come complete with a costume and instructions on how conduct oneself in ways others will recognize. This definition of Discourse differs from discourse, which is commonly defined as a verbal exchange or conversation.

**Expository text:** Expository texts are explanatory. Narrative text uses story to inform and persuade, while the expository text uses facts and details, opinions and examples to do the same. It has been suggested that expository texts have distinct organizational patterns, such as sequence or compare and contrast, that help readers organize the themes of the text as they are reading (Kobayashi, 2002).

**Formative experiment:** A method of research aimed at developing, testing, and refining pedagogical theory in the crucible of practice. Formative experiments pay particular attention to the following: (a) what factors enhance or inhibit an intervention’s effectiveness in achieving a valued pedagogical goal (i.e., positive change) and (b) how might the intervention, in light of those inhibiting or enhancing factors, be implemented more effectively (Reinking and Bradley, 2008).
**Intervention**: Some activity or process that aims to address an often problematic or challenging area of instruction or positively transform instruction (Reinking & Bradley, 2008).

**Legitimate peripheral participation**: A term used to describe ways of belonging to a community of practice, describing the level of involvement a learner has in the community (Driscoll, 2005).

**Ning**: An online platform, created to allow people to develop their own online community where they can share documents, digital media, and ideas in a closed space. Nings are available only by subscription and new members must be approved to participate in the online space. A Ning shares many of the features of social networks, including the ability to friend members of your closed network and be members of multiple Nings or networks. Because Nings are established with a particular purpose and users on a Ning have shared interests and values, they meet the definition of an online community (see Online Community below).

**Online community**: An online environment in which “… the primary focus is on the user’s commitment to a core set of interests, values, and communication practices” (Howard, 2010, p. 15). Members in a community “…agree to cooperate toward achieving the goals in particular ways, through a shared set of means” (p. 16).

**Peer revision**: The process through which students review one another’s writing and offer feedback. Oftentimes, this occurs throughout the writing process. Students may respond to one another’s work orally or in writing, allowing for a piece to be shared with a real audience (Bruffee, 1973; Elbow, 1973, 1981; Moffett, 1968). Styslinger (2008)
describes the process as one in which students collaborate and make helpful comments about one another’s papers somewhat equally. Peer revision is also sometimes referred to as peer response, peer conferencing, peer editing, and peer review.

**Prominent Feature:** An element of a student’s written work that is judged to stand out by a trained, competent reader (Morse, Swain, & Graves, 2007).

**Prominent Feature Analysis:** A process in which trained and competent readers analyze student writing to identify some element or aspect that is judged to “stand out” in the prose. Only features that are considered prominent are noted (Morse, Swain, & Graves, 2007).

**Revision:** Often described as an ongoing recursive process in which the writer revisits his or her written work, rewriting with the goal of improving the piece of writing (Murray, 2004).

**Social network:** “…[W]eb-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (boyd & Ellison, 2007, p. 211).

**Writing workshop:** A format of writing instruction that advocates more student choice, authentic purposes for writing, extensive writing time, and sharing of a teacher’s and students’ writing. It typically follows a format of a brief mini-lesson focused on one aspect of writing, time to write, and time to share what has been written with peers (Fletcher & Portaluppi, 2001).
CHAPTER 2

REVIEW OF THE LITERATURE

This chapter reviews literature that supports the answers to the following questions posed by Reinking and Watkins (2000) to guide formative experiments:

1. What is the pedagogical goal of the formative experiment and what theory informs this goal?

2. What instructional intervention has the potential to achieve this goal?

The pedagogical goal for this formative experiment was as follows: in a middle school English language arts classroom, increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing through online peer revision and collaboration. A review of the literature indicates that (a) learning to write is a social and interactive process, (b) peer revision teaches students to read and write with a critical eye and may help students internalize the qualities of effective writing, and (c) online communities offers adolescents spaces to develop their own Discourse communities.

Theoretical Orientation

Socio-cultural Learning Theory

Socio-cultural learning theory provides the underpinnings for this intervention. Vygotsky’s (1978) socio-cultural theory asserts that learning depends upon people’s interactions with one another; learning is a social act and culture provides the tools that help learners develop understandings of the world around them. A cultural historical theoretical view of learning is sometimes used to capture the complexities of classroom
environments (Guiterrez & Stone, 2000). This theoretical perspective embraces the notion that learning is a transactional process (Dewey & Bentley, 1949) mediated by cultural tools, including spoken and written language, as people participate in routine activities in communities of practice (Dyson, 2000; Guiterrez & Stone, 2000; Lave & Wenger, 1991).

**Situated cognition.** Situated cognition asserts learning is social and learners make meaning from their interactions with one another, whether those interactions are through talk, text, or another medium. Wenger (1998) describes four basic premises of situated cognition which are (a) learners are social beings and this is central to learning, (b) knowledge is a matter of competence with respect to valued enterprises, (c) knowing is a matter of participating in the pursuit of valued enterprises, and (d) meaning is what learning produces. Legitimate peripheral participation is the process through which learners participate in communities of practitioners (Lave & Wenger, 1991).

**Communities of practice.** Communities of practice are knowledge communities in which people invest their time and energy in a joint enterprise, mutually engaging one another and developing a shared repertoire (Henderson & Bradley, 2008). “[T]he mastery of knowledge and skill requires newcomers to move toward full participation in the socio-cultural practices of a community” (Lave & Wenger, 1991, p. 29). Although communities of practice may vary, they share the following features: (a) a social structure that assumes responsibility for the development and sharing of knowledge (Wenger, McDermott, & Snyder, 2002); (b) practice is the knowledge the entire community develops, shares, and maintains; (c) communities of practice are generative, as members
participate as a way of learning the culture of practice as well as making it their own; (d) relationships and meaning are negotiated between members and renegotiated as new people enter the community; and (e) relationships are what build knowledge and understandings in the community of practice. Gee (2005) describes Lave and Wenger’s (1991) community of practice as one in which learners “…pick up practices through joint action with more advanced peers, and advance their abilities to engage and work with others in carrying out such practices” (p. 77). Learners draw on their own Discourses (i.e. home, community, academic) and as members participate in the community, a new, shared Discourse emerges (Gee, 2005).

**The Pedagogical Goal**

The pedagogical goal for this formative experiment, increasing the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing in a middle school classroom, is informed by both writing theory and research in the area of writing. Students’ continue to struggle with expository writing (Salahu-Din, Persky, & Miller, 2008) and despite calls for more time spent on writing in classrooms (Graham & Perin, 2007; Cutler & Graham, 2008), studies suggest students are not writing for a variety of purposes, not are they writing longer responses (Kiuhara, Graham, & Hawken, 2009). Writing is a valued skill in the 21st century and the need to write collaboratively with peers has become more important in our participatory culture (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2009). Peer revision is a form of collaborative learning (Bruffee, 1985) and has been shown to be an effective tool
for improving student writing (Gere, 1987; Gere & Abbott, 1985; Gere & Stevens, 1985; Simmons, 2003).

**Theoretical Bases of Peer Revision**

**Writing Theory**

Much of writing theory is based on socio-cultural theories of learning. Vygotsky (1978) has informed much of the research on writing, particularly in the way culture mediates writing and understanding. Meaningful interactions within the social world lead to literacy developments (Vygotsky). Learning to write is not a series of discrete steps which lead to intellectual growth, but instead is a process deeply entwined in the social and emotional growth of learners as well (Bomer & Laman, 2004). Socio-cultural literacy researchers emphasize writing as a constructive practice influenced by social, linguistic, and cultural contexts (Britton, 1975; Freedman, Dyson, Flower, & Chafe, 1987; Graves, 1978; Moll & Greenburg, 1990). Research suggests that written texts serve as relational mediators between students (Bomer & Laman, 2004; McCarthey & Garcia, 2005).

Theories of self-efficacy (Bandura, 1997) and situated cognition (Lave and Wenger, 1991) have also influenced the structure of writing instruction in classrooms. Writing classrooms may be viewed as communities of practice in which learning occurs through participation with various experts within the writing community. More knowledgeable community members help others learn, acculturating new members into the community as well as scaffolding the learning of other members of the community (Rogoff, 1990). This study capitalizes on these ideas, as students post and respond to one
another’s work, adopting expert roles and using written text as the medium for discussion.

Peer writing pedagogies emerged from the socio-cultural writing theories, asking learners to work together while writing for authentic audiences, including peers, and publication (Atwell, 1987; Calkins, 1986; Elbow, 1973; Graves, 1983; and Murray, 1978). Elbow (1973) and Murray (1978) described an ideal writing classroom as one in which students work together using peer revision strategies to further develop as writers. In *Writing without Teachers*, Elbow (1973) advocated for groups of seven to twelve people, meeting weekly to read one another’s writing and discussing what they are experiencing and gleaning from the writing. He described the reader’s role as reactor, offering the author relevant feedback, including pointing out areas of the text that were exceptionally clear or resonated with the reader and parts of the text that were weak. Bruffee’s (1985) approach to peer response emphasizes the process of negotiation between the writer and reviewer, in which both the writer and critic have specific roles. Collaboration and social learning move to the forefront of peer revision in Bruffee’s descriptions of the roles of writers and reviewers. These ideas have been further tested and developed in K-12 classrooms, with three approaches to peer interaction becoming commonly used in classrooms: peer tutoring, cooperative learning, and peer collaboration (Damon & Phelps, 1989; Christianakis, 2010). Peer revision may be enacted in classrooms using one or all of these approaches as the basis for peer interaction.

Writing process theory (Flower & Hayes, 1981) also incorporates revision as a critical component in writing. Flower and Hayes (1981) described the cognitive
processes that inform the writers’ decision-making in their writing using two lenses: the thinking processes of a writer and the goal of a writer. Unlike previous stage models of writing which were linear (Britton, 1975; Rohman, 1965), Flower and Hayes offered a recursive model for writing in which writers constantly revise and edit as they are composing. The environment, the writer’s long-term memory, and the writing processes of planning, translating, and reviewing comprise the model. The environment includes everything around the writer, including the text as it is being created. Long-term memory holds the writer’s knowledge about the topic, the audience, and various writing plans. Each writer, it is theorized, has an internal monitor that determines when writers move between processes. Flower and Hayes suggested this monitor is developed over time and with practice. These writing processes are described as hierarchical, with embedded sub-processes. For example, a writer may hear a prompt, come up with an idea (plan), write a sentence (translate), read the sentence and question it (review), come up with a way to improve the sentence (plan), write a revised sentence (translate), and read it again (review). These processes and embedded sub-processes are directed by the writer’s goal. Writers create elaborate networks of goals as they compose, working toward the final goal of the composition. Writers may re-visit goals and change them during the composing process. This theory offers a view into the cognitive processes of writing that allows for the recursive nature of composition that so many writers experience.

The recognition of culture and negotiated meaning among groups are foundational to writing theories. Writing is “…a mode of participation in the worlds of peer group, school, and society” (Prior, 2006, p. 61). Moll and Greenburg (1990) introduced the
concept of “funds of knowledge,” which students draw on when performing specific literate practices. Gutierrez (2008) described students’ creation of hybrid spaces, drawing on their own funds of knowledge and developing unique Discourses for their own student-created community in their discussions and writing. These theories have informed a more inclusive view of writing, in which culture can be considered and alternate Discourses can be recognized as valid.

**Discourse in Online Spaces**

The development of Discourses among learners in online spaces has been studied in several contexts: among pre-service teachers (Clarke, 2009), between elementary school students and graduate students (Britsch, 2005), and among doctoral students (Gunawardena, Hermans, Sanchez, Richmond, Bohley, & Tuttle, 2009). These studies suggest an online community may be viewed as a community of practice. A study of communities of practice in Web 2.0 environments by Gunawardena et al. (2009), as well as a study by Clarke (2009) of an online community of practice with preservice teachers, reveal common features that may help to legitimize the idea of an online community of practice. These studies noted that meaning is negotiated in online, social networking environments. Individuals bring their own knowledge and experiences to the community. These studies suggest that Web 2.0 tools can “…mediate between the knowledge of the individual and the contribution to knowledge building within the community” (Gunawardena et al., p. 9). Second, a common history develops, which suggests these online spaces are generative. For example, in Clarke’s study, preservice teachers developed a set of community beliefs and used various rhetorical strategies in their
exchanges with one another to legitimize their beliefs (p. 2338). Finally, each community of practice developed its own Discourse (Gee, 2004; Moje et al., 2004). In these online spaces, learners came with their own Discourses from language, home, peers, and institutions. and these played a role in developing a hybrid Discourse. 

Gunawardena et al. noted that, “[a]s a Community Of Practice, we developed our own way of using language to determine meaning” (p. 14). The potential for online environments to develop into communities of practice is evident through the common elements in these studies.

Howard (2010) argued that online communities focus on “…a user’s commitment to a core set of interests, values, and communication practices (p. 15). Individuals commit to the group as a whole first, before establishing relationships with individual members. Online communities may also give people a chance to try on new identities and develop content collaboratively, as well as challenge existing notions of power. Black and Steinkuehler (2009) found that for adolescents, online spaces could mask or remove the markers of youth, allowing young people to become experts and adopt more “adult” roles in the community. Gee described the shared Discourses that emerge from communities of practice as “identity kits” (Gee, 2001) and Alvermann (2001) noted that Gee’s concept allows for “multiple identity formations within different Discourses” (p. 679). This feature of online communities allows adolescents to experiment not only with who they are, but also to develop a separate identity in the context of the online community. Alvermann (2001) asserted that our literacy identities are often formed by labels we are given. This intervention explores the potential of
online communities to enable students to develop alternative identities in an online space as writers, potentially developing more positive views of themselves as writers.

**Peer Revision**

As writing process theory gained hold in classrooms, teacher feedback to student writing shifted away from simply giving editing feedback to responding to the development of ideas in student drafts (Hillocks, 1986). Dewey (1916) and Vygotsky (1978) both discuss the importance of talk in learning, bringing varied viewpoints into the classroom. Leading writing theorists also recognize the importance of social interaction in the writing classroom. Elbow (1973) called for the creation of teacherless writing groups; Murray (1982) recommended teachers spend time teaching students to respond constructively to one another; Bruffee (1984) suggested getting students to talk through the task of writing as an essential form of collaborative learning. Peer revision requires students to put themselves in inherently social situations, reading and remarking on one another’s work.

Peer revision allows students to work collaboratively and make meaning together. Elbow (1973) drew an analogy between writing and cooking, emphasizing the importance of input from others to fully develop ideas. He described the process of writing as a series of interactions between people, ideas, and language. Elbow described the importance of discussing writing with another person, identifying weak areas in the writing and examining the work from another perspective. However, he also cautioned that groups of people can result in non-cooking, where there may be conflicting ideas but there is no productive interaction between group members (p. 57). Learning how to
interact in a productive way is a critical part of the peer revision process. Bruffee suggested writers proceed through a series of stages of revision, moving from sharing writing with a single critic to sharing with a third person who responds to both the writer and the peer reviewer, offering critiques for each person involved in the review process. Bruffee (1985) encourages writers to “[r]eevaluate the essay in light of the peer criticism” and to also “…reevaluate the peer criticism” (p. 151). Ultimately Bruffee argued the writer chooses which feedback to pay attention to, but social negotiation is an inherent part of the revision process.

The goal of peer revision is two-fold; revision should help students become effective collaborators as well as achieve self-regulation in the revision of their own writing. Although self-regulation is a goal for learners, it can be challenging to achieve, particularly with writing tasks. Modeling and feedback can help to relieve some of the overuse of self-regulation early on in the writing process (Reed, Schallert, Beth, & Woodruff, 2004). By using self-regulation effectively, readers or writers can teach themselves how to engage in an activity meaningfully (Reed et al., 2004). Instructional activities, such as the one investigated in this dissertation study, in which students receive peer feedback on their work at any point in the process, may reduce hyper self-regulation among students (sometimes called “writer’s block”), while encouraging meaningful collaboration among students.

**The Instructional Intervention**

The intervention for this investigation was the use of an online community in an ELA classroom to foster revision and collaboration. This intervention draws upon
Vygtoskian perspectives on literacy, as well as writing theory and understandings of new literacies. Research in peer revision over the past three decades have included studies focused on second language learners, diverse populations including at-risk high school students, adolescents, and college students. Some of these studies used digital technologies as a tool for revision with promising results. The empirical studies that follow led to the development of an intervention that would use an online community as a space for peer revision and collaboration with the goal of increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing in a middle school classroom.

**Pedagogical Applications of Peer Revision**

**Peer Revision and Second Language (L2) Students**

Peer revision has been studied for nearly thirty years, and studies have included children in kindergarten through college. Research during the past twenty years has focused on the use of peer revision with second language learners and may be an effective technique to improve L2 development among learners (DeGuerrero & Villamil, 1994; Suzuki, 2009; Nelson & Murphy, 1993; Tuzi, 2004; Villamil & DeGuerrero, 1998). DeGuerrero and Villamil (1994) analyzed forty audio recordings of college-level L2 students engaged in peer revision, identifying their talk as on-task, off-task, or about-task (discussing procedures to complete the task at hand). Students in the study were on-task in discussion 84% of the time. Writers tended to self-regulate and begin making revisions to their papers as they read the paper aloud to a peer. The authors identified the social relationships between the reader and writer as asymmetrical, with the writer
tending to defer to the reader in leading the discussion. However, it was also noted that this dynamic was collaborative rather than authoritarian, resulting in negotiation between the reader and the writer before revision occurred. The authors described the social relationships as “…social situations that recapitulate Vygotsky’s zone of proximal development” (p. 491). Throughout the revision process, students interacted with one another, as well as the teacher, and self-revised.

Villamil and DeGuerrero (1998) further examined the impact of peer revision on the final drafts of writers; in a college-level L2 classroom, writers incorporated 74% of the changes made during peer revision into their final drafts, highlighting the impact of peer revision. Suzuki (2009) found that Japanese students in an English language class underestimated the quality of their revisions when compared to suggestions made by teachers, but peer revision may improve both self-confidence and decision-making by student writers.

Berg (1999) studied the effects of training peer respondents in peer response on the types of revisions made and writing quality. The results indicated that that trained peer response by trained students positively affected ESL students' revision types and improved the quality of writing. Nelson and Murphy (1993) also found L2 students in an intermediate college-level ESOL writing class benefitted from peer revision. The authors noted that L2 learners made changes suggested by peers in peer response groups, but only when those suggestions were made in ways the writer felt peers were cooperating with him or her, rather than criticizing his or her work. Nelson and Murphy suggest teachers should model appropriate responses to enhance the effectiveness of peer response groups.
Tuzi (2004) also studied L2 learners in a college classroom, but moved from face-to-face interactions to electronic, asynchronous responses via email. Although students in the study tended to offer more feedback during oral exchanges, the e-mail feedback resulted in more structural changes to the writing, including the addition of content. Lai (2010) studied the preferences of L2 students in Taiwan, finding they preferred to have their writing evaluated by a peer over an automated computer program and made more changes to their writing with peer input.

These studies, which indicated the value of collaboration in the development of self-regulation in writers (DeGuerrero and Villamil, 1994), the value of peer feedback to writers (Villamil and DeGuerrero, 1998), and improved confidence in writers (Suzuki, 2009), suggest that peer revision may lead to not only improvement in writing, but also an improved attitude toward writing particularly among second-language learners. This research also revealed the importance of training students in to offer feedback (Berg, 1999; Nelson and Murphy, 1993), which directly informed the development of the intervention. Finally, Tuzi’s (2004) and Lai’s (2010) promising results in the use of e-mail feedback with peers bolstered the idea of using an online community as a space for peer revision.

**Peer Revision and Diverse Populations**

Peer revision has possibilities for teaching writing to diverse populations (Carmichael & Alden, 2006; Kindzierski & Noble, 2010; Wynn, Cadet, & Pendleton, 2000). For culturally diverse college students, Wynn, Cadet, and Pendleton suggest collaborative writing approaches, including peer editing, peer tutoring, and collaborative
writing are culturally responsive approaches to instruction. However, research also suggests that some cultural norms make it difficult for successful peer revision to take place in classrooms. Carson and Nelson (1996) examined Chinese students interactions in a peer response writing groups, as well as those of Spanish speakers. The authors found that Chinese students were willing to forgo critical comments and accepted peer criticism of their own writing readily in an effort to maintain group harmony, a value the students all cited as important. In contrast the Spanish speakers, although concerned about the impact of negative comments in their peers’ feelings, were willing to voice critical comments in order to help their peers improve their essays.

Carmichael and Alden (2006) suggest online revision using simple revision tools found in common software programs such as Microsoft Word may be an effective technique for students with learning disabilities and attention deficit/ hyperactivity disorders. More recently, Kindzierski and Leavitt-Noble (2010) studied the effects of peer revision on elementary school students with behavioral disorders in a self-contained classroom. Three pairs of students were recorded as they engaged in revision and discussion. Findings from this study suggest that interactions during peer revisions were positive, and students alternated roles as the more capable peer in the dyad. Students reported they felt more confident and capable as writers and enjoyed working together. Given the diversity found in many classrooms today, these studies show promise in using peer revision as a tool to improve the quality of student writing.
Peer Revision and Student Writers

Revision studies with younger writers have focused on their ability to revise their own work through self-regulation (Torrance, Fidalgo, & Garcia, 2007; Myhill & Jones, 2007) or have studied revision within the context of the writing workshop approach (Jasmine & Weiner, 2007). These studies have focused on first graders (Jasmine & Weiner), sixth grade L2 students (Torrance, Fidalgo, & Garcia) and high school students (Myhill & Jones).

Students who engage in forms of peer revision make substantive improvements to their texts when compared with students working alone (Nystrand, 1986), although one study suggests student revisions do not necessarily result in improvement in the quality of writing (Van Gelderen, 1997). McGroarty and Zhu (1997) examined the effects of training college students to participate in peer revision (through one instructor-led lesson) on both the revision process and writing quality. The authors found that writing quality did not vary greatly between classes, although the comments made during peer revision in an experimental class tended to be more specific and constructive, offering writers substantive suggestions. Trained students also had a more positive view of peer revision. Holt (1992) noted that students who made written comments on one another’s texts make more substantive comments.

Research also suggests that when students comment on one another’s texts, they engage in longer, more meaningful interactions (Freedman, 1987; Gere & Stevens, 1985). Freedman examined peer response groups in two ninth-grade English classrooms, following 60 students for 17 weeks and found the groups helped students respond to their
own work. However, she also noted that students avoided the role of teacher, largely ignoring the peer revision worksheet the teacher had distributed and only discussed substantive writing issues when the writer initiated the conversation. These findings suggest the context of the classroom may affect how students work together in response groups and the focus of their conversations.

More recent research suggests students need explicit guidance to self-assess their writing and use feedback effectively (Matsumura, Patthey-Chavez, & Valdes, 2002 as cited in Beach & Friedrich, 2006). Hall (2009) suggested that peer response, as a tool, should be explicitly taught to students in composition classes to avoid students trying to please the teacher through their comments to one another. Simmons (2003) suggested this requires a long-term commitment by teachers to model and scaffold feedback strategies. This intervention may reduce the time needed to teach students the skills they need for peer revision, as students feel more invested and engaged in an online community. Peer revision has the possibility to improve the quality of student writing, the goal for this intervention.

Researchers have conducted studies to better understand peer revision from the student’s point of view, concluding that students need a better understanding of peer revision as collaborative learning (Brammer & Rees, 2007) and more specific instruction on how to provide meaningful feedback (Moran & Greenburg, 2008). Students in these studies had mixed feelings regarding peer revision. High school students in Moran and Greenburg’s study cited peer revision as a primary method in helping them to find and add new strategies to their own writing practices, whereas Styslinger’s (1998) high
school students and Brammer and Rees’ (2007) college students expressed concerns about the feedback given to them by their peers. This intervention explored revision with early adolescents and offers some insights into how helpful middle school students find peer feedback, as well as how they employ peer feedback when revising their own writing.

Studies of adolescents and peer revision indicate several areas for further analysis. One promising study focusing on tenth-grade students use of peer revision and editing suggests that peer revision may be a more effective feedback mechanism than teacher revision in improving the quality of student writing (Karegianes, Pascarella, & Pflaum, 1980). Forty-nine at-risk tenth grade English language arts students at an inner-city high school participated in structured peer revision and editing over the course of ten weeks. On average, the students reading level, using the Gates-McGinitie Reading Tests, scored a 7.23, approximately three-grade levels below average (p. 204). At the end of the ten weeks, students independently wrote to a prompted essay. Students who participated in peer revision outscored students who received teacher edits throughout the ten-week period, suggesting these students internalized the revision process and were able to self-regulate to a degree in their own writing. Further studies of the effects of peer revision in what may be viewed as challenging educational environments are needed.

Other studies contend gender impacts peer revision (Sommers & Lawrence, 1992; Styslinger, 2008; Tomlinson, 2009), with communication styles changing in both nature and content based on the gender of the dyad or group. Sommer and Lawrence found in both teacher-directed and student-directed peer response groups in a college
composition classroom, women asked more questions and made more suggestions than their male peers. However female students spoke less often in the student-directed groups.

Studies of elementary classrooms also illuminate areas that merit further research. A study of elementary school children in a diverse, urban classroom suggests that peer response groups and partnerships may unfairly favor students with high peer status (Christianakis, 2010). However, working with friends in small groups may push students to higher levels of cooperation and reflection, resulting in improved peer talk around writing (Jones & Pellegrini, 1996).

**Revision and Technology**

Technology may be a promising tool to facilitate effective peer revision. Crank’s (2002) study of asynchronous peer response and face-to-face peer response in a college classroom suggests the use of asynchronous electronic peer response (e-mail) improved the quality of peer feedback. Crank found the use of email among students to offer peer response promoted a written exchange in which students were forced to articulate and explain their reactions to one another’s work, gave students time to think carefully about their responses, and made student reactions more student-centered. Honeycutt (2001) examined the effects of synchronous and asynchronous communication on peer revision in four college-level classrooms. Students either used email or an online chat environment to discuss one another’s papers. Students using email made more explicit references to the document being discussed, focusing on content, indicating email supported a deeper processing of the documents. However, synchronous discussion
supported socially-oriented behaviors, including negotiation and exploration. Honeycutt suggests that synchronous response may best be used early on in the writing process and asynchronous responses may better serve writing that is moving toward the final stage.

There is evidence to suggest computers may improve the quality of student writing; in a meta-analysis of research on the effects of computers and writing, Goldberg, Russell and Cook (2003) found that students who used a computer wrote more and the writing was of a higher quality; students also made more changes in their writing, engaged in more collaboration, used a recursive writing process, and were more motivated to write. However, other studies suggest that the relationship between computers, writing, and achievement is less clear than might be suggested in this meta-analysis. An examination of several studies by Kim and Kamil (2004) suggests that successfully using technology in writing instruction is further affected by the students’ writing skills, the quality of instructional support, and grade level. It seems multiple interactions with technology and structured guidance are needed to help adolescents use digital environments successfully.

Students can also be provided with more socially meaningful experiences when digital literacy is incorporated into a classroom, for example through email exchanges and blogs with others outside of the school (Rhodes & Robnolt, 2009). The result of such experiences can be more authentic writing experiences for students, which may lead to improved student writing (Hillocks, 1986). A study with fifth-grade students (Moore & Karabenick, 1992) found the quality of students’ written communication on elements such as clarity and support for ideas increased when they were using computers. The
researchers suggest that giving students an audience and therefore a clear purpose for their writing motivated them to write more to better communicate their ideas. Writing theorists contend that peer revision not only gives students an audience, but also allows them to engage in collaborative learning (DiPardo & Freedman, 1988).

Strasma (2009) advocated using an online platform in composition courses for peer revision and developed a process called spotlighting, in which each member of the class will have one piece of writing put in the “spotlight;” the entire class will read and respond to the text through an online discussion board. For other writing assignments throughout the semester, students are encouraged to set up ad-hoc peer revision groups to obtain feedback. Students are asked to rate the usefulness of one another’s feedback and this becomes a consideration in the grading process. Student feedback for these practices has been positive, with students reporting they receive valuable feedback from peers and that their own writing is improved through the process, although no studies on the process have been conducted.

Caution needs to be exercised when integrating technology into classrooms. Co-opting students interests outside of school for academic purposes may not be an effective approach to engaging student writers or expanding student literacies. As Reed, Schallert, Beth, and Woodruff (2004) suggest, computer-based technologies can support student-centered, socio-constructivist learning environments, but it is not enough to simply use them; technology rich environments must be thoughtfully designed to help students become independent researchers and writers. However, this is not to say schools cannot capitalize on the knowledge students bring into the classroom. Alvermann (2009) noted
that adolescents may find their own reasons for becoming literate - “reasons that go beyond reading and writing to acquire academic knowledge” – but it is important for teachers to build upon the literate practices students already have to develop their subject matter learning (p. 15). The intervention in the present formative experiment may help develop an instructional context in which the power of an audience found in the online environment is also coupled with the audience that naturally emerges from the peer revision process.

Summary

College composition has long incorporated peer revision as a valued classroom practice, as the theoretical arguments for peer revision grew from these contexts (Moffet, 1968; Elbow, 1973; Murray, 1982) and many studies are situated in the context of freshman composition courses (Brammer & Rees, 2007; Carmichael and Alden, 2006; Crank, 2002; Eades, 2002; Strasma, 2009; Tomlinson, 2009). There are fewer studies examining revision in high school classrooms (Karegianes, Pascarella, & Pflaum, 1980; Moran & Greenburg, 2008; Simmons, 2003; Styslinger 1998; Styslinger, 2008) and virtually none focusing exclusively on peer revision in middle school classrooms.

DiPardo and Freedman (1988) called for further studies of peer revision, particularly examining how peer revision functions in the larger instructional context. Today, that instructional context often includes computers and the Internet. Although several studies of the use of computers in peer revision have been conducted, email or online threaded discussion groups have been the primary vehicles for exchange of ideas and studies have largely taken place in college classrooms (Carmichael & Aldon, 2006;
Crank, 2002; Strasma, 2009) or with English language learners (Tuzi, 2004). There is a paucity of research focused on peer revision in middle schools and no studies have explored peer revision at the middle level using an online space for collaboration. The present intervention will offer a refinement to the existing literature on peer revision, examining how an online environment impacts peer revision and collaboration with middle school students.
METHOD

The purpose of this study was to determine how online peer revision and collaboration can be implemented in a middle school English language arts classroom to increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository text. Reinking and Watkins’ (2000) framework for formative experiments served as a guide for the present study, as did Reinking and Bradley’s (2008) text, outlining the history, purpose, and methods typically used in formative experiments. The following questions, outlined in Reinking and Watkins’ framework, were addressed in this study:

1. What is the pedagogical goal of the formative experiment and what theory informs this goal?
2. What instructional intervention has the potential to achieve this goal?
3. As the intervention is implemented, what factors enhance or inhibit progress toward the goal?
4. How can the intervention be modified to better achieve the pedagogical goal?
5. Has the instructional environment been transformed in some way as a result of the intervention?
6. What were the unanticipated effects, positive or negative, produced by the intervention? (p. 388).
Formative Experiments

Formative experiments are one of several approaches to research referred to collectively with overarching terms such as design-based research or design experiments (Barab & Squire, 2004; Brown, 1992; Design-Based Research Collective, 2003; Hoadley, 2004; van den Akker, Gravemeijer, McKenney, & Nieveen, 2007). Previous formative experiments have investigated a wide range of topics, including the following: (a) literacy engagement among Latino/a students (Ivey & Broaddus, 2007; Jimenez, 1997), (b) implementation of literacy initiatives (Fisher, Frey, & Lapp, 2009), (c) vocabulary instruction (Bauman, Ware, & Edwards, 2007), (d) enhancing independent reading through multi-media book reviews (Reinking and Watkins, 2000); (e) literacy instruction in summer school (Duffy, 2001), (f) barriers to reading comprehension (Massey, 2007), (g) access to books for low-income students (Neuman, 1999), (h) improving comprehension through strategy instruction (De Corte, Verschaffel, & Van De Ven, 2001), and (i) teaching social studies to middle school students with disabilities (Gersten, Baker, Smith-Johnson, Dimino, & Peterson, 2006). When looked on together as a body of work, these articles highlight the strengths of formative experiments, particularly the way in which multiple, interactive variables may be taken into account as a means of understanding complex environments, like classrooms, rather than trying to control for these variables statistically. Classrooms, unlike laboratories, are constantly changing due to the exigencies of schooling. Accepting that classrooms are complex environments, with many variables that are outside the control of the researcher, allows for more authentic assessment of whether an educational intervention may be effective in a
particular situation. These investigations also adhere to established methods in carrying out formative experiments and demonstrate the effectiveness of formative experiments in literacy research, as they have been published in highly regarded journals.

In a formative experiment, the investigator sets a pedagogical goal and designs an intervention that may help achieve that goal. Kelly (2003) classified formative experiments as use-inspired research, as there is both a desire for theoretical understanding and the usefulness of the research is considered. In education, formative experiments are often seen as a means to bridge the gap between theory and practice. At the heart of this approach is a valued pedagogical goal, set by the researcher, which drives the research. Rather than focusing on a research question or questions, the goal becomes the desired outcome, using a researcher-designed intervention that is grounded in both global and local theories. As the intervention is implemented, data is collected by the researcher and data analysis begins immediately. Data is analyzed to assess progress toward the pedagogical goal. Factors that enhance or inhibit the effectiveness of the intervention are noted by the researcher and as these factors are identified, the intervention may be modified to make it more effective (Neuman, 1990; Reinking & Bradley, 2008). This pragmatic approach is useful in providing authentic understandings of how interventions can be implemented realistically in classrooms, where it is not possible to control for every possible variable, yet where teachers need to achieve meaningful learning goals with students.

There are several distinctions between formative experiments and other more traditional research methods. Unlike experimental or quasi-experimental designs,
formative experiments do not rely on fidelity of treatment. Because classrooms might best be viewed ecologically, as complex systems with multiple interacting variables constantly at play, it may be nearly impossible to study a single variable independently (Brown, 1992). Rather than trying to control for this variation, formative experiments embrace both the classroom dynamics and the teacher’s responses to them, acknowledging that teacher response is part of the context of the research (Reinking & Bradley, 2008). In conventional experiments, a teacher may be viewed as a nuisance variable (Reinking & Bradley, 2008), which may cause tensions between the researchers and practitioners. Teachers and researchers may also have conflicting agendas, which may interfere with collaborative efforts between the researcher and teacher, undermining the research (Snyder, 1992). Rather than pitting researchers and teachers against one another as they plan instructional time, formative experiments pair teachers and researchers, calling for them to work together to achieve an agreed upon, valued pedagogical goal through an instructional intervention that can be adapted as enhancing or inhibiting factors reveal themselves in the course of the study. This flexibility allows an intervention to change significantly during the course of a study, based on ongoing data analysis (Reinking & Bradley, 2008).

Formative experiments also are distinct from other methods of research in the way in which they draw on theory as a guide for research. Formative experiments focus on local theories; Cobb, Confrey, diSessa, Lehrer, and Schauble (2003) described the relationship between theory and practice as one that is intricately bound, as formative experiments aim to develop local theories (theories that consider the influences of
specific contexts and circumstances), versus overarching theories and explanations. Rather than testing abstract arguments, formative experiments use theory only to the extent that it guides specific instructional practices in achieving explicit goals.

Formative experiments are consistent with a pragmatic epistemology (Dillon, O’Brien, & Heilman, 2000; Reinking & Bradley, 2008). Pragmatism leaves the question of conceptions of reality alone, looking instead at consequences or desired outcomes. Pragmatists eschew the idea of being able to “pin down causal entities” (Cherryholmes, 1992, p. 15). Reinking and Bradley (2008) noted that formative experiments focus on developing knowledge that will allow one to move from a “…less satisfactory condition to a subsequent more satisfactory condition” (p. 37). Unlike other forms of research, formative experiments enable researchers to select the most appropriate methods for data collection and analysis based on the goal, rather than offering pre-defined methods of collection and analysis. Many formative experiments use mixed-methods (Reinking & Bradley, 2008), allowing a researcher to draw from qualitative and quantitative data (Creswell, 2003).

Formative experiments have similarities to action research or teacher research (Arhar, Holly, & Kasten, 2001) as both approaches put authentic instructional contexts at the heart of conducting research. Both approaches are pragmatic and use valued pedagogical goals as a starting point for research. Action research is characterized by an ethical commitment to professional practice and democratic principles (Arhar, Holly, & Kasten), as is a formative experiment. However, there are differences between action research and formative or design experiments. Teachers assume the role of researcher in
action research (Meyers & Rust, 2003), but their involvement in a formative or design experiment is typically one of valued informant (Reinking & Bradley, 2008). Action research is intended to be emancipatory; teacher researchers examine practices with a critical stance, in an effort to understand and change the injustices or limitations that may be imposed by social position, race, gender, or class (Arhar, Holly, & Kasten). Formative experiments lack this ideological emphasis and although formative experiments may reveal issues of power and lead to change, this is done more incidentally (Reinking & Bradley). The goal of formative or design experiments is to create models based on theory that can be implemented in authentic contexts. According to van den Akker, Gravemeijer, McKenney, & Nieveen (2007), design experiments have three motives: increase the relevance of research for educational policy and practice, develop empirically grounded theories, and increase the robustness of design practice (p. 3). Action research does not aim to produce theories; rather, the motives of action research are to improve the quality of life for others through an ethical commitment, to collaborate with those affected by the actions taken, and to make the research public (Arhar, Holly, & Kasten). Formative experiments are a relative newcomer to the field of educational research, but have emerged from diverse research traditions and interests, including action or teacher research.

A formative experiment was well suited for this study by the nature of English language arts (ELA) classrooms. In ELA classrooms that employ a workshop approach to writing instruction, instruction inherently varies based on the needs of the students. Despite that middle-school teachers may teach multiple sections of the same course,
instruction varies greatly from class to class and from student to student, making it difficult and pedagogically unsound to implement identical instruction within and across classroom environments. To attempt to control these variables would undermine writing theory, which informs the workshop approach to instruction. Snyder (1992) warned researchers should also be cognizant of designs that constrain the teacher in the classroom and a need for fidelity may constrain teaching.

In this study, which focuses on an aspect of writing theory that is driven by students, fidelity to a treatment was implausible due to the number of variables involved in instruction. This study was also driven by a valued pedagogical goal: increasing the amount of revision in students’ writing and improving the quality of their writing. To accomplish this goal, an intervention was designed using online environments for peer revision and collaboration, based on the theoretical models of peer revision as a means to help students develop as self-regulated writers and improve student writing products. The current study was also pragmatic as it attempts to develop and understand an intervention that would improve revision in a middle school classroom and focus on the factors that enhance or inhibit peer revision and collaboration in an online space.

**Stance**

I heeded the advice of Smagorinsky and Jordahl (1991) and rather than seeking equal involvement from the teacher, I sought “…negotiated and mutually agreed upon involvement where strengths and available time commitments to processes are honored” (p. 486, emphasis in original). I was careful to set boundaries on my role within the classroom; I was available to students when they were working if they had questions or
concerns, but I was not the teacher and could not make “teacher” decisions (like who could go to the nurse, bathroom, etc.). Students clearly saw me as part of the classroom community, but recognized that I was in their classroom for a specific reason. I was a participant-observer (Creswell, 2007) throughout the study.

The Instructional Intervention

Essential Components

For the purposes of this investigation, online peer revision and collaboration was defined as having the following components: (a) an online space for students to post work and provide feedback; (b) the ability for students to track changes made to their work; (c) the ability for a student to request feedback from peers in writing at any stage of their writing; and (d) the ability for students to respond to feedback from their peers. These components were essential to the intervention and were not subject to modification during the intervention.

The intervention phase of the study took place over 13 weeks between mid-January 2011 and concluding in mid-April 2011 (as detailed in the Procedures section that follows). Students participated in peer revision in class at least once each week, both as a reader and a writer, and the drafts they responded to were at a variety of points in the writing process, based on both writing theory and research which suggest students should be given time to write and receive feedback throughout the writing process (Atwell, 1987; Calkins, 1986; Fletcher & Portaluppi, 2001). This phase was occurred in two stages, based on research on successful peer revision in classrooms (Crank, 2002; Karegianes, Pascarella, & Pflaum, 1980; Simmons, 2003; Strasma, 2009). Ongoing
instruction in responding to peer writing took place throughout the intervention, as suggested by research on peer revision (Moran & Greenburg, 2008; Simmons, 2003). This instruction was provided through mini-lessons and modeling, based on progress toward the goal. Ongoing data analysis took place throughout, informing the intervention.

The first stage of this phase included direct instruction on responding to peer writing, with practice responding in face-to-face groups. Research suggests students need time and training to become effective responders (Moran & Greenburg, 2008; Simmons, 2003) and the face-to-face response time was initially included to facilitate that training. This first stage was completed in approximately one week, a modification from the original plan which called for three weeks of students responding to one another in face-to-face groups. This modification was made based on field notes and observations by the researcher, in consultation with the teacher, after both the researcher and the teacher independently observed students making little progress in face-to-face groups, and is described subsequently in Chapter 4. Stage two included the implementation of digital technologies in the writing process, including the use of tracked changes and comment features in word processing software and students posting work to an online forum and responding online to one another. Existing research suggests tracking changes may be an effective technique for revision in classrooms (Carmichael & Alden, 2006) and peer response through digital communications may lead to more revision by writers (Tuzi, 2004) as well as more thoughtful feedback by reviewers (Crank, 2002). This stage lasted 12 weeks.
Selecting a Platform for the Online Community

After exploring a number of online platforms, I selected Ning as the platform that would best meet the needs for this study. Although Ning calls itself a social network, it better fits the definition of an online community as it is a closed network established by individuals for a particular purpose. A number of factors went into this decision.

**Purpose.** For this intervention, it was clear that our online community had a purpose, sharing and helping one another with our writing. Unlike true social networks, members in our closed community agreed to work together to help one another become better writers through peer feedback. This fits Howard’s (2010) description of an online community as a space in which members, “agree to cooperate toward achieving the goals in particular ways, through a shared set of means” (p. 16).

**Appeal.** Appeal is an important aspect of any intervention in a formative experiment. I wanted to select a platform that would appeal to students and be something they could learn to use fairly easily. The Ning was similar to Facebook in its structure, and allowed users to upload documents, videos, and pictures. It was also a closed community, meaning only users who were part of the invited group could see the site, contact one another, and share on the site. The Ning had features that appeal to adolescents: built-in email, the ability to friend users in your network, status updates, the ability to upload pictures to and maintain a user profile, and the ability to give other users gifts.

The intervention also needed to appeal to teachers. Because Nings are closed networks, many school districts see them as a “safe” option for students and allow
teachers to use these networks in their classrooms for instructional purposes. This was important, as formative experiments are intended to be replicated in different contexts. The school district allowed teachers to use Nings in classrooms. At the time of this study, Nings were inexpensive and easy to set up; teachers could purchase a one-year subscription for less than $20 for up to 150 users and could apply for scholarships through ning.com to offset even that minimal cost.

**Potential to create an online community.** I believed the Ning had features that might support remuneration, influence, belonging, and significance among students, the four elements Howard (2010) cites as key to developing successful online communities. Typically, social networking sites, like Facebook, have individual users at the center of the network, rather than a common purpose (Howard, 2010). Unlike other social networking sites, Nings were designed to support communities of users joined around a common purpose.

According to Howard, remuneration begins with understanding what your users want and providing them with a satisfying experience. He reminded designers of online communities and social networks that, “…the most important remuneration you have to offer is the experience [emphasis in original] of socially constructed meaning about topics and events your users want to understand” (p. 57). I hoped students would feel that they wanted, and needed, to understand how they could become better writers and wanted, and needed, one another’s feedback to achieve this goal. However, I was also determined to choose a platform that would engage reluctant students. According to recent statistics, many adolescents are active Facebook users (Lenhart, Arafah, Smith, &
Macgill, 2008). Features on the Ning that mimic some of the features in Facebook (the ability to add and change profile pictures, give gifts, post comments to someone’s wall, friend other users on the Ning, and communicate privately with others) suggested students would be interested in using the Ning, even for non-academic purposes, and might see it as an enticing space, different from the usual spaces they were able to inhabit during the school day. If students were willing to interact with others on the Ning, I was fairly certain we could begin to get them to interact with others in ways that contributed to the online community.

Influence, according to Howard (2010), allows members of an online community to feel they can control or at least shape the policies, procedures, topics and standards of the community (p. 82). To meet the need for influence of the students in the study, I asked students to create rules for the community. The timing for rule creation was related to the intervention, and emerged when a student began to use the status feature of the Ning in ways that were not appropriate for a school environment (see the Data Moves Matrix, Appendix A). Ms. Piper led a brainstorming session for fifteen to twenty minutes as the start of a class, about two week into using the Ning, asking the students to create the boundaries and policies for the online community. Students debated some rules among themselves, including when text language and slang would and would not be appropriate, and each class section came up with their own set of rules to follow while using the Ning (see Appendix B for the list of rules created). I hoped this would contribute to their feeling of ownership and secure buy in into the community. The Ning also gave the students room to play, with features that were not necessary for the
academic use for which the Ning was created, but allowed students to interact with one another in positive playful ways, such as giving gifts and friending one another.

Establishing a sense of belonging was also facilitated by the Ning. After observing the school and classroom environment in December of 2010, I began thinking about ways I could tie the online community to the existing school community in ways students might recognize. In my field notes, I had noted signs around the school and in the classroom reminding students to “Show their PRIDE.” In response to this data, I named the Ning for this study “The Den” with the motto “Showing our PRIDE through writing” to capitalize on the schoolwide mantra of students showing PRIDE: Prepared to Learn, Respectful, Interacting Positively, Dressed for Success, and Engaged. Although students may not all have thought much of PRIDE, it was a visible marker throughout the school and students were reminded daily to show their PRIDE. This common experience served as the foundation for the name of the website. I also chose a site design that used patterns and colors that reflected current urban fashions I observed were popular at the school. By giving the site a “cool” look, I hoped students would see it as a place they wanted to spend time. Nings also provide a sense of exclusivity to users, with a ritual for joining. To be part of the community, each student had to respond to an invitation in their email and complete the profile questions. As the site administrator, I approved each application to join.

Only Ms. Piper’s classes had access to the Ning and my field notes indicate students were eager to sign up and be part of the Ning. Students began to use the Ning to talk to each other not just in class, but outside of class as well. This asynchronous access,
and the fact the network was available in school, encouraged students to sign up quickly for the Ning and begin to use it for not only the required assignments, but to talk with one another as well throughout the day. Field notes and student interview data indicate students used the Ning for their own purposes, as well as school work.

The Ning platform allowed students to build their own online community, with rules and standards of behavior they set themselves. At the start of the intervention, Ms. Piper explained to the students that we would be using the Ning to share our writing and to help one another. This established a clear purpose for the community. Students embraced the idea of posting their work and asking one another for help. The ease with which this transition took place speaks to the sense of community that already had been established in Ms. Piper’s room, in which students felt comfortable sharing their writing with one another.

**Function.** Perhaps as important as appeal was function. The Ning, as an online community, also needed to support the peer revision process. Because Nings allow documents to be attached and uploaded, students were able to write their pieces in Microsoft Word and upload them to the social network seamlessly. It also allowed users to include messages about the uploaded documents, which meant students could tell one another why they were uploading a piece and be specific in their requests for feedback or assistance from one another. Downloading a document from the Ning was straightforward: the user clicked on the document and a dialogue box appears with simple instructions. Uploading was straightforward as well. Most importantly, the Ning did not convert the original document uploaded to another format; if a document is uploaded in
Microsoft Word, it remained a Microsoft Word document. This was critical, as students could use the revision toolbar within Word to track changes and use the comment feature to make suggestions. These technical features made the Ning a good choice for peer revision.

After some consultation and discussion, Ms. Piper agreed the Ning was a logical choice for the online community for this intervention. Ms. Piper had used a Ning in her class in the past for other purposes and was familiar with the platform. We then discussed upcoming units and how expository writing might fit into her existing plans.

Context

School

Wilson Middle School (pseudonym) was one of several middle schools in a large Southeastern school district. Although the school was located on the outskirts of an urban area surrounded by trees, it primarily served an urban population. Students rode buses from several area subsidized housing projects to reach the school. The school district’s website reported that Wilson has 604 students in grades 6 through 8. At the time of this study, 21% of the students had limited English proficiency, 20% were identified as special needs students, 5% were identified as gifted students, and 93% were eligible for free or reduced lunch. The school was racially and ethnically diverse as well, with a student body that was 55% African-American, 25% Hispanic, 20% White, and less than 1% Asian and American Indian. Although no official data is available, Wilson had a fairly high transience rate among students, with students moving in and out of the school between several area middle schools. Based on the number of students who moved in
and out of Ms. Piper’s class between December and May, including students sent to an alternative school program for some period of time, I conservatively estimated 80% of the students who started the school year at Wilson finished the year at Wilson.

The school received a “Below Average” absolute rating on its most recent state report card and a “Below Average” improvement rating, achieving 25 out of 29 objectives toward adequate yearly progress (AYP), but failing to make AYP. At the time of this study, the school was in “restructure,” which meant it was currently following a restructuring plan after failing to make AYP for four consecutive years. Students were given a choice to attend other middle schools in the area that made AYP, which resulted in some students leaving the school and a decline in enrollments. The year prior to this study, 56.7% of students in grades 6 through 8 scored in the lowest category, below basic, on the end-of-year state writing test. The instructional coach for the school informed me that the students in the seventh grade who were participants in this study had among the lowest writing scores in the state on the writing test given at the end of sixth grade, with just over 60% not meeting the required standard for basic proficiency.

The middle school was organized using teams, with two teams per grade. Each team consisted of an English language arts teacher, a social studies teacher, a mathematics teacher, and a science teacher. Teams met several times each week during one of the two 45 minute planning periods teachers had each day. The first planning period was the time used for grade level meetings, grade-level subject area meetings, or meetings called by administrators. The second planning period was used for team meetings, teacher planning, or meetings with parents. The administration at Wilson
required that grade-level teachers for a given subject follow the same pacing guide and plan lessons together. They were expected to use the same materials and, for the most part, teach the same content lessons at the same time. Although it was understood that two teachers might not use identical methods to teach the same content, it was expected students would complete the same summative assessments. The two seventh grade ELA teachers planned their weekly lessons together and took turns developing and submitting the official lesson plans required by the school.

This was a challenging environment for this study, but a previous study suggested peer revision may be effective in similar populations. For example, Karegianes, Pascarella, and Pflaum (1980) examined the effects of peer feedback on the writing proficiency of low-achieving tenth grade students in an urban high school and found that writing proficiency of students who had peer feedback was significantly higher than those who had teacher feedback. The site was also selected because it was likely to be a supportive environment for this type of writing instruction and intervention, with one-to-one laptops, on-site technical support, an instructional coach who was formally a state English language arts specialist, and several teachers who completed coursework in both writing workshop and using technology in the classroom through a local university. Additionally, the site was selected for access, as it was located conveniently to the university and I developed positive professional relationships with several members of the faculty and administrators at the school, which facilitated access to classrooms.
Participants

Teacher. Ms. Piper was a sixth year teacher, who spent her entire teaching career at Wilson Middle School. During her years at Wilson, she taught journalism and creative writing for one year and taught seventh grade English language arts for the other five years. Ms. Piper had completed a master’s degree and also achieved National Board Certification. She was well-versed in writing and reading workshop, having completed coursework focused on writing, and was also a teacher-consultant with the local site of the National Writing Project. She was (and remains) dedicated to both her students and her profession and was always searching for ways to enhance her classroom instruction, specifically ways to engage and challenge her students as readers and writers. Ms. Piper was considered a veteran at the school, with six continuous years of service, and was the chair of the literacy committee, team leader, and volunteered as the girl’s soccer coach. Ms. Piper recognized she had areas of weakness in the classroom, and freely admitted classroom management was a challenge for her as a beginning teacher and continued to be a source of struggle from time to time.

Ms. Piper and I had never worked together in a school, but we had known each other in a professional context for approximately seven years. Ms. Piper expressed an interest in improving writing and using peer revision more effectively in her classroom. She shared that many of her students struggled with revision altogether and she found it difficult to get them to reconsider their texts. Ms. Piper also shared a success from last year, when a reluctant writer began using the “track changes” feature in word when revising his text. According to Ms. Piper, his revisions increased substantially when he
could see the changes he was making to his text. This caused her to wonder about the possibilities for using laptops to enhance revision among her students in other ways. Ms. Piper’s interest in peer revision, as well as our ongoing professional relationship, led me to select her classroom as the site for this study. Ms. Piper was in her sixth year of teaching, all at the same school. In addition to teaching seventh-grade English language arts, she also taught journalism at the school in previous years.

Ms. Piper and I discussed some of the challenges of revision and a possible framework to use when teaching students to become effective peer respondents. We considered several possible frameworks for encouraging extended discussion of texts with her seventh graders, including well-known frameworks such as Praise, Question, Polish and Bless, Press, and Address. We discussed the possibilities for online communities to foster adolescents’ academic literacies (Black & Steinkuehler, 2009), as well as some promising research using Microsoft Word’s track changes feature as a tool for student revision (Carmichael & Alden, 2006). We also examined several options for building an online community, including a Google site and a Ning.

Initial observations of this classroom revealed that students used laptops each day, for both reading and writing. Students were accustomed to composing on the computer, as well as saving their work to common spaces. Despite the level of poverty at the school, many students had access to the Internet at home. Students spent 60 minutes each day in their English language arts class, and had an additional 30 minutes daily devoted to sustained silent reading. They also had 30 additional minutes of English language arts each week with their teacher as part of an advisory/tutorial program. The teacher
allowed students to come in to work both before and after school if they needed extra

time or assistance.

Ms. Piper planned weekly with her grade-level partner, Mr. Thompson, although
they rarely followed these plans entirely (see Appendix C for a sample lesson plan).
Rather, they modified and adjusted the plans based on student needs. The instructional
coach was aware of these modifications and was content to have the teachers make these
changes, as long as students ultimately completed similar summative assessments, as well
as common benchmark assessments.

Students. Participants in the study were selected based on their placement in Ms.
Piper’s classroom. All students who participated received and returned IRB-approved
permission forms, signed by their parent(s) or guardian(s). A total of 36 students took
part in the study; 21 in an English Studies section and 15 in an English Strategies section.
The classes were tracked by ability, as determined by both scores from the Measures of
Academic Progress test (MAP) administered in the spring of the previous year and/or
teacher placement. 1 specifies the racial composition of the two sections. All students
received free or reduced lunch.

Table 3.1

Participant Demographics

<table>
<thead>
<tr>
<th>English Strategies Section</th>
<th>African-American</th>
<th>Caucasian</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>5</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>3</td>
<td>---</td>
</tr>
<tr>
<td>ELL</td>
<td>---</td>
<td>---</td>
<td>3</td>
</tr>
<tr>
<td>Special Education</td>
<td>2</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>English Studies Section</td>
<td>African-American</td>
<td>Caucasian</td>
<td>Hispanic</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>----------</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Female</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>ELL</td>
<td>---</td>
<td>---</td>
<td>8</td>
</tr>
<tr>
<td>Special Education</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Nine focal students were selected for in-depth observation and data collection and are subsequently described in the Data Collection and Analysis section. These students are described in Table 3.4 as they were at the start of the intervention, during baseline data collection. All students participated in the intervention and were included in the data collection.

**Data Collection and Analysis**

Formative experiments require systematic collection and analysis of data, and qualitative data is necessary, as it helps the researcher examine potentially relevant variables and factors that may be difficult to manage using only quantitative data (Reinking & Bradley, 2008). However, the goal of formative experiments is not the same as qualitative research, which involves collecting data and developing thick, rich descriptions (Creswell, 2007). Rather, in establishing a baseline and measuring progress toward the pedagogical goal, qualitative data may prove useful in examining what enhances and inhibits progress toward the goal (Reinking & Bradley, 2008). The current study involved the collection and analysis of both qualitative and quantitative data in a mixed-methods approach (Creswell, 2003). Figure 3.1 illustrates the collection of qualitative and quantitative data in this study.
Figure 3.1. Data collection: Embedded concurrent mixed-methods.

For this study, quantitative data were used primarily to assess the effectiveness of the intervention in improving the quality of student writing. Qualitative data were used to determine if student revision increased over the course of the intervention, better understand enhancing and inhibiting factors, determine needed modifications in light of these factors, understand the instructional context, and identify unanticipated effects.

Table 3.2 matches each data source with its role in the intervention.

Table 3.2

<table>
<thead>
<tr>
<th>Goal</th>
<th>Quantitative Data Source</th>
<th>Qualitative Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase the amount of revision that occurs over multiple drafts of students’ writing</td>
<td>Writing Dispositions Survey, Scored Writing Samples</td>
<td>1. Classroom artifacts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Electronic communications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Focal student think-alouds</td>
</tr>
</tbody>
</table>
| Improve the quality of student expository writing | 1. Scored writing samples (Analytic scoring) | 1. Classroom artifacts  
2. Electronic communications  
3. Observation and field notes  
4. Writing samples |
|---|---|---|
| What factors enhance or inhibit the effectiveness, efficiency, and appeal of using an online environment for peer revision and collaboration? | 1. Writing Dispositions Survey (WDS) | 1. Classroom artifacts  
2. Electronic communications  
3. Focal student interviews and informal discussions  
4. Observation and field notes  
5. Teacher interviews and informal discussions |
| How might an online environment be modified in light of these factors? | 1. Writing Dispositions Survey (WDS) | 1. Classroom artifacts  
2. Electronic communications  
3. Focal student interviews and informal discussions  
4. Focal student think alouds  
5. Observation and field notes  
6. Teacher interviews and informal discussions |
| How does the instructional environment change when an online environment is used for peer revision of writing? | 1. Writing Dispositions Survey (WDS) | 1. Classroom artifacts  
2. Electronic communications  
3. Focal student interviews and informal discussions  
4. Observation and |
What are the unanticipated effects that an online environment focused on peer revision and collaboration produces?

1. Scored writing samples
2. Writing Dispositions Survey (WDS)

1. Classroom artifacts
2. Electronic communications
3. Focal student interviews and informal discussions
4. Focal student think alouds
5. Observation and field notes
6. Teacher interviews and informal discussions

Quantitative Data Analysis

All quantitative data was examined using a pre-post model, with baseline data gathered before the intervention and post-intervention data gathered again at the end of the intervention. Two types of quantitative data were gathered, which are described in the subsequent sections: writing samples and the Writing Dispositions Survey (Piazza & Siebert, 2008).

**Writing samples.** Expository writing samples were collected three times from students, before the intervention, mid-way through the intervention, and after the intervention, for the purpose of analytic scoring. Students completed two pieces of writing, involving multiple drafts, during the study. The first piece of writing developed prior to the intervention served as the baseline for the study. The second piece of writing served as a measure of progress toward the goal of improving students’ writing. The
third and final piece of writing completed during the intervention served as the post-sample for data analysis. These samples were also evaluated using qualitative data analysis (see section Qualitative Data Analysis section below).

Analytic scoring. Analytic writing assessment involves isolating particular characteristics of writing for analytical scoring. Hamp-Lyons (1995) suggested analytic scoring reflects the complexity of writing more accurately than holistic scoring. This type of scoring is particularly appropriate for understanding what students do well in a given situation and what they may need further work on. Rather than a single number, analytic scoring offers a number for each characteristic, helping students and instructors see what students might improve upon. Analytic writing assessment relies on the identification of characteristics that influence a reader’s judgment about the quality of a piece of writing (Spandel & Stiggins, 1981). Because these characteristics can be defined on a case-by-case basis based on the writing assignment, it is possible for analytic writing assessment to consider the context of the writing, reflecting socio-cultural instructional theories, as well as offer an examination of writing performance by students to achieve different goals that writing process theory would suggest would be important in better understanding a writer’s composition process.

Three trained scorers scored the final drafts of the three writing samples collected during the study using the National Writing Project’s Analytic Writing Continuum. The Analytic Writing Continuum examines writing samples using six specific attributes, or traits: content, structure, stance, sentence fluency, diction, and conventions. Each piece also received a holistic score, which scorers assigned independently of the individual
attribute scores. In each category, writing can receive a score ranging from 1 to 6. Table 3.3 shows a summary of the Analytic Writing Continuum and Appendix D provides further details. The independent scorers were local teachers from three different middle schools in two school districts. They were all trained by the National Writing Project and all samples were scored twice. Inter-rater reliability, defined as having identical scores or scores within one single point of one another, was 95%. I did not participate in the scoring of the writing samples.

Table 3.3

Analytic Writing Continuum Attribute Descriptions

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Clear and consistent focus; well-developed ideas and content; ideas are purposeful, specific, and creative</td>
</tr>
<tr>
<td>Structure</td>
<td>Organization enhances central idea; piece flows and uses smooth transitions</td>
</tr>
<tr>
<td>Stance</td>
<td>Demonstrates awareness of audience; piece is consistent in tone and style</td>
</tr>
<tr>
<td>Sentence Fluency</td>
<td>Phrasing is effective; piece has rhythm and cadence; sentences flow into one another</td>
</tr>
<tr>
<td>Diction</td>
<td>Consistently vivid and precise word choice; powerful and effective imagery; piece has creative and accurate vocabulary</td>
</tr>
<tr>
<td>Conventions</td>
<td>Correct spelling and usage; punctuation, capitalization and paragraphing; attention is paid to conventions</td>
</tr>
</tbody>
</table>

Writing Dispositions Survey. One element that is an important part of any intervention is its appeal to teachers and students. For this intervention to be successful, students have to be willing to both write and offer peer feedback to one another. Students
are more likely to pursue activities that they enjoy. To gauge how students felt about writing prior to the intervention, I administered a Writing Dispositions Survey (WDS). Results of this pre-intervention survey helped me better understand how students felt about themselves as writers and also informed the selection of focal students.

The WDS was administered again after the intervention, offering insights into changes in student attitudes toward writing before and after the intervention to assess if the intervention itself had an impact on student’s attitudes about writing. This survey, developed by Piazza and Siebert (2008), is specifically designed to measure upper-elementary and middle school students’ attitudes toward writing, specifically gauging confidence, persistence, and passion. The survey is short, with 11 items, and asks student to rate a variety of statements about writing on a Likert scale (see Appendix E). The survey was offered in a pre-post fashion.

Data analysis. Consistent with a mixed-methods approach to data analysis, pre- and post-intervention comparisons were conducted not to establish causal relationships, but to complement the qualitative data collected and lend further insights into student learning. Using paired t-tests, I analyzed scores on both the WDS and the student writing samples before and after the intervention as just one possible indicator of student growth in writing.

I also chose to employ a Repeated Measures Analysis of Variance test to compare student growth in writing between the two sections selected for the study. This enabled me to see if the change in writing scores varied significantly between students who had previously been identified as below grade-level and those identified as on grade-level.
Qualitative Data Analysis

Qualitative data were collected throughout the study and was examined using sequential data analysis (Miles & Huberman, 1994). Figure 3.2 illustrates the iterative process used in sequential data analysis, which allows researchers to develop a sequenced plan of data collection and analyze data throughout the collection process, making the technique a logical choice for this formative experiment.

Figure 3.2. Miles & Huberman’s (1994) sequential data analysis.

Internet use survey. Students completed an Internet use survey (Appendix F) before the intervention, offering information about how students use the Internet both in and out of school. This offered insights into students’ online habits and was used to help interpret data gathered during the intervention.

The Internet use survey is an abbreviated version of a survey developed for the Teaching Internet Comprehension to Adolescents (TICA) project with funding from an Institute of Education Sciences grant (Carter-Hutchison, 2009). I analyzed the data from the surveys using qualitative methods. I used the patterns of Internet use that emerged from these initial Internet use surveys to inform my selection of focal students. Initially,
I had planned to ask students to take the Internet use survey at the conclusion of the study, but due to school scheduling restrictions and the length of the survey, which took students nearly 45 minutes to complete during the first administration, I was unable to have students complete the survey a second time. After the intervention concluded, I revisited and triangulated data from the initial Internet use survey regarding frequency of Internet use, with evidence from electronic communications and student interviews, assessing possible changes in Internet use among students. This provided data to offer insights into any correlations between Internet use outside of school and student engagement and peer feedback online for school.

**Whole-class observations and field notes.** Prior to the intervention I spent eight full days with the teacher in her classroom. Field notes were recorded, aimed at creating a thick description of the classroom involved in the intervention, as well as the school climate. Information such as typical schedules, routines, and practices was gathered. Observations were transcribed as soon as possible after each visit and reflective notes on possible themes and emerging codes were added during analysis (Miles & Huberman, 1994).

My role in the class was clearly a participant-observer (Creswell, 2007). Although I only taught one mini-lesson (introducing students to TAG, a form of peer response), I regularly helped all the students in the class when they needed clarification on assignments or a teacher to conference with during the writing process. I embraced this role, actively moving around the room during writing times to observe focal students, but also to serve as a helper for the teacher. Before taking on this role, I asked the
classroom teacher, Ms. Piper (all names used hereafter are pseudonyms), to tell me what she wanted my role in the classroom to be; she asked if I could work with students who needed assistance. This reflects Reinking and Bradley’s (2008) assertion that teachers appreciate researchers participation in the classroom if it contributes to a positive professional relationship between the teacher and researcher (p. 79). This is also a limitation of this study, as it is difficult to separate my participation from the intervention (see Chapter 5, Limitation section). Ms. Piper was clearly the teacher in charge, and when students would ask questions such as “Can I go to the bathroom?” I deferred to Ms. Piper, as that was her decision. In week six, one student asked me why I didn’t come to school each day. When I explained that I was there only two days a week because I was at the university the other days, she asked when I would be finishing and noted she hoped I would teach there next year. Comments like this led me to believe I was not the primary instructor in the minds of the students, but rather was viewed as an assistant to Ms. Piper.

**Informal discussions with the teacher.** Each week, Ms. Piper and I sat down during her planning period and discussed her impressions of how things were going with the intervention, as well as student progress and concerns. We would then discuss possible future instructional strategies that might enhance the intervention. We also exchanged emails from time to time, which allowed our conversations to continue. These discussions highlighted factors affecting the intervention that might have gone unnoticed, as well as served as member checks (Creswell, 2007) as I would present my impressions to Ms. Piper and she would present her views, which led to a more comprehensive
understanding of what was occurring in the microcosm of the classroom. This professional dialogue contributed to the decisions made as the intervention was implemented. For example, Ms. Piper emailed me on February 16, a day I was not scheduled to be in the classroom, and noted, “I see such motivation and a real sense of audience (I think from the combination of realizing these speeches will be performed and the Ning posting). I think that kids are excited to get feedback about something they are really going to have to perform.” As someone who had not spent an entire year in the classroom, I might not have noticed the students new sense of audience or assumed it was typical. In observations the following week, I attended more closely to what students were writing and the notion that writing for a purpose might feel new to them. These conversations were invaluable and I captured our decision making in a matrix, Appendix A, created to document current classroom instruction, effects seen on focal students, and modifications or instructional moves relating to the intervention. As the intervention progressed, Ms. Piper and I made justifiable changes based on the data collected. These “instructional moves” created micro-cycles of data collection and analysis that enabled me to better understand the possible effects of the intervention (Reinking & Bradley, 2008).

**Focal-student observations and field notes.** I selected nine students to serve as focal students for the study (four students from Strategies section and five students from the Studies section) for close analysis during the 13 weeks of the intervention. Students were tracked by ability each year, according to a combination of Measures of Academic Progress (MAP) scores, a state-mandated assessment administered twice each academic
year, scores from the grade-level statewide end-of-year exam (Palmetto Achievement of State Standards test), and grades earned. The classes selected for the study included one English Strategies section, targeting students reading below grade-level, and one English Studies section, targeting students reading on or near grade-level.

Selection of focal students was informed by baseline data, including the Writing Dispositions Survey, Internet Use Survey, field notes and observations from the month of December 2010, and teacher input. When selecting focal students, I chose students who demonstrated both positive and negative attitudes toward writing, as well as students who different levels of experience using the Internet at home and at school. Students were chosen who were less engaged with school, as well as students who seemed to enjoy school based on field notes and my conversations with the teacher. In selecting students, I attempted to capture the diversity of attitudes and experiences represented in the classroom. Table 3.4 describes the nine focal students as they were during the collection of baseline data.

Table 3.4

Focal Student Descriptions

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Class</th>
<th>Writing Affect</th>
<th>Other Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>James</td>
<td>Male</td>
<td>African-American</td>
<td>Strategies</td>
<td>Disliked “I’m not a writer” (1/26).</td>
<td>Often off-tasks enjoys socializing, can complete tasks quickly, does the minimum amount required</td>
</tr>
<tr>
<td>Brad</td>
<td>Male</td>
<td>Caucasian</td>
<td>Strategies</td>
<td>Disliked “Writing is easy…I just don’t”</td>
<td>Receptive to writing, struggles with accepting</td>
</tr>
<tr>
<td>Name</td>
<td>Gender</td>
<td>Race/Ancestry</td>
<td>Strategies</td>
<td>Liked</td>
<td>See/Herself as</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>---------------</td>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Dee</td>
<td>Female</td>
<td>Caucasian</td>
<td>Strategies</td>
<td>“It depends on what we're doing and all that. What it is” (1/26).</td>
<td>Positive attitude</td>
</tr>
<tr>
<td>Roman</td>
<td>Male</td>
<td>Hispanic</td>
<td>Strategies</td>
<td>When asked what, if anything, he liked about English class, he responded, “Writing” (1/26).</td>
<td>Positive attitude</td>
</tr>
<tr>
<td>Marisol</td>
<td>Female</td>
<td>Hispanic</td>
<td>Studies</td>
<td>“I write it down and then it turns into a story and then it turns out good” (1/26).</td>
<td>Sees herself as a writer, apprehensive about sharing writing until its finished, strong writer</td>
</tr>
<tr>
<td>Noelia</td>
<td>Female</td>
<td>Hispanic</td>
<td>Studies</td>
<td>“I like to write” (1/26).</td>
<td>Positive and diligent student, receptive to suggestions</td>
</tr>
<tr>
<td>Troy</td>
<td>Male</td>
<td>African-American</td>
<td>Studies</td>
<td>“I really like it” (1/26).</td>
<td>Diligent student, does not want others to know he is a good student, rarely shares writing</td>
</tr>
<tr>
<td>Deandra</td>
<td>Female</td>
<td>African-American</td>
<td>Studies</td>
<td>“Writing helps you express yourself” (1/26).</td>
<td>Sees herself as a writer, apprehensive about sharing writing until its finished, often off-task in class, writes quickly and well</td>
</tr>
</tbody>
</table>
For each focal student, I recorded observations with each visit (twice weekly), paying particular attention to the student conferring and collaborating with peers during the peer revision portion of class, as well as writing and revising his or her own pieces during class. I took field notes throughout the intervention. These field notes were analyzed weekly using open coding, allowing emergent themes and patterns to develop (Miles & Huberman, 1994). I also looked for disconfirming evidence during the next observation for each theme identified to assess whether these were representative (Miles & Huberman, 1994) and trustworthy (Lincoln & Guba, 1985).

These observations, with student writing samples (see below), also informed the progress and direction of the intervention. Each week, I asked what factors may be inhibiting progress toward the goal (increased revision and improved student writing) and what factors may be enhancing it. As the intervention progressed, Ms. Piper and I used these data to make justifiable changes, revealed through the microcycles of data analysis. Focal student observations also helped gauge the degree to which the environment was transformed by the intervention, using retrospective analysis (Gravemeijer & Cobb, 2006).
**Teacher interviews.** Semi-structured interviews with Ms. Piper took place before (phase three), during (at phase four), and after (phase five) the intervention. The interview questions focused on several areas: instructional practices, relationships with students, relationships among students, classroom environment and routines, assessment of student progress in writing, possible areas of focus for improving writing, and assessment of the intervention (what went well, what did not, what needs to be re-examined, etc.). Interview questions are found in Appendix G. I recorded and transcribed these interviews. I used open-coding, again looking for emergent themes and patterns (Miles & Huberman, 1994). I triangulated these data with data from focal student observations and writing samples and used the data to inform instructional moves to enhance the intervention. Interviews were also analyzed using retrospective analysis (Gravemeijer & Cobb, 2006) to evaluate the extent to which the environment was transformed as a result of the intervention.

**Focal student interviews.** Semi-structured interviews with focal students took place before (phase three), during (at phase four), and after (phase five) the intervention. Interview questions are found in Appendix H. I analyzed the interviews immediately after they were conducted, using open coding and looking for emergent themes and patterns (Miles & Huberman, 1994). I used the data from the pre-intervention interviews to assess how familiar students were with revision and writing and gauge their attitudes toward writing. Interviews were also conducted mid-way through the intervention, exploring the appeal and perceived value of the intervention, as well as asking questions that tapped into students knowledge of revision and writing. Mid intervention interview
data were used to inform further modifications to the intervention, as well as reveal unanticipated effects of the intervention. Post intervention interviews focused again on revision, attitudes toward writing, and the appeal of the intervention. Post intervention interview data were used during retrospective analysis to inform conclusions about the degree to which the environment was transformed by the intervention, as well as factors that enhanced or inhibited the intervention and identify unanticipated effects.

Focal student think-alouds. Three selected focal students participated in a think-aloud protocol (Ericcson & Simon, 1993). Think-aloud protocols have been used in psychology and cognitive science research, specifically examining reading and writing processes, often with second language learners (Yoshida, 2008). This occurred two-thirds of the way through the intervention, at week 10. I used the data from the think-alouds to provide a measure of progress for reaching the goal of increasing revision and improving student writing. Previous research indicates students who become adept peer revision may also become more adept writers (Karegianes, Pascarella, & Pflaum, 1980), suggesting students internalize the revision process and are able to self-regulate to some degree in their own writing. Specifically, the think-alouds helped me address the following questions: (a) what revision strategies has this student internalized? (b) what suggestions does this student value? (c) what mini-lessons might help this student begin to further revise his or her own writing? Understanding what revision strategies students had internalized provided guidance on what to emphasize in mini-lessons during the latter part of the intervention.
The think-aloud had two parts and each think-aloud lasted approximately 60 minutes. In the first part of the think aloud, a draft of the student’s work, with feedback from a peer, was examined alongside that same piece of writing as a later draft. The student and I used the two drafts together, putting them side-by-side on the computer screen. For each suggestion made by a peer in the earlier draft, we read that same section in a later draft. The student then explained why he or she accepted or rejected the peer’s suggestion and how he or she arrived at the final version. We did this line by line, for a minimum of three paragraphs. This was recorded using Jing, free software that enables the recording of changes being made to a document with an audio file. This enabled me to capture both the students’ thinking and his or her actions easily. For example, Troy looked at feedback he received from Gabriela. Gabriela had offered Troy some suggestions in an early, incomplete version of his speech. In this speech, he is writing about Michael Jordan, but he is writing from a first person point of view, adopting Michael Jordan’s persona. Figure 3.3 illustrates her suggestions.
Figure 3.3. Gabriela’s suggestions for Troy.

Gabriela, an English language learner, went into Troy’s piece and used track changes to make her suggestions. She offered no feedback in which she asked for more details, but spent time clarifying language that she found confusing. Troy looked at her suggestions and adopted many of them, but not in their original form. For example, Gabriela’s version of the second paragraph said:

“I always wanted to do everything I could to stay on top.” By the way, I am Michael Jordan“Jump Man”. You wouldn’t believe the things I have been
through in my life time. The press was a huge thing to deal with being a rookie in the pros as great as me. The most things I couldn’t believe was the hatred of other players on the court. They would say anything to make me seem like a bad dude. Like one player said I didn’t speak to him on the court and then they said I tried to embarrass my team mates. But I never really liked to be a flashy guy. Just to keep it simple and neat. Going through all of that I want you to know you can do whatever you believe in, just like me.

Troy examined these suggestions, and settled on the following for this paragraph in his final version:

“I always wanted to do everything I could to stay on top.” By the way, I am Michael Jordan aka “Jump Man”. You wouldn’t believe the things I have been through in my life time. The press was a huge thing to deal with being a rookie in the pros as great as me. The one thing I couldn’t believe were the hatred of other players on the court. They would say anything to make me seem like a bad dude. Like one player said I didn’t speak to him on the court and then they said I tried to embarrass my team mates. But I never really liked to be a flashy guy. I just wanted to keep it simple and neat. Going through all of that I want you to know you can do whatever you believe in, just like me.

Troy explained his changes to me, line by line, in our think-aloud session on March 24, 2010. He talked about how he arrived at his final version:
Because I thought about what I wrote, and I had kind of messed up on some things. But going back and seeing what she said, it helped me see things. She went back and kind of fixed things.

When I asked him to explain how he decided to alter Gabriela’s suggestions slightly, rather than taking them verbatim, he said, “When I had read the whole thing two times, I figured out it didn’t really make sense to myself.” The first part of this think-aloud offered insights into what peers valued in suggestions, based on the suggestions taken, and how students decided what suggestions to take and which suggestions they might ignore.

The second part of the think-aloud protocol asked students to read a piece of text the student had never seen before, or cold text, written by a “peer” and respond to it. I wrote the text, using the student’s speech assignment as the basis for my piece. The text was written in first-person, from the point of view of a heroic person. In writing the text myself, I was able to construct a piece of text that lacked the types of obvious errors that I had observed these middle school students were able to correct quickly and were also features they described in pre-intervention interviews as errors they typically looked for when revising their work (spelling and capitalization, for example). I composed a text with a few minor grammatical errors, but one that made some broad statements and lacked specificity or details. I wanted to see if students had moved beyond their initial definitions of what it meant to revise a piece of writing, as stated in their pre-intervention interviews an this piece of text allowed me to observe their progress as they offered feedback. I asked the students to read and respond to the text, just as they would
typically do in class, but in this case, say what they were thinking as they made comments. I modeled how the think-aloud should work for each student, using a different piece of text. Again, the entire process was captured using software that allowed a recording of an audio track while a video of what is happening on the screen was created. During the think-aloud protocol, I sat beside each selected focal student and for each action the student took, I asked the student to explain his or her thought process. If a student took an action and did not explain why, I specifically asked why the student chose to do what he or she did. This second part of the think-aloud protocol offered insights into which revision strategies had been internalized, as well as what mini-lessons might further help this student grow as a writer.

Initial data analysis involved open coding, to identify emergent themes and patterns in student thinking during the peer revision process (Miles and Huberman, 1994). I examined this data in more detail during retrospective analysis (Gravemeijer & Cobb, 2006).

Writing samples. At the beginning of January, Ms. Piper provided the student’s most recent writing samples (research papers completed in December of 2010). These writing samples were used to establish baseline data for student writing. I analyzed the data in two ways: using analytic scoring (Hamp-Lyons, 1995; Spandel & Stiggins, 1981) (see Quantitative Analysis section above) and using text feature analysis (Spandel & Stiggins, 1981). The analytic scoring results served as a source of quantitative data for this study, while the text feature analysis served as a source of qualitative data. Through Prominent Feature Analysis (PFA), text feature analyses of baseline writing data was
used to develop mini-lessons to help students focus on various areas for revision, a use for PFA called for by Swain, Graves, and Morse (2010), but not yet explored in the literature. To date, PFA has been used only been explored as a scoring tool by independent scorers outside of the classroom as a way to offer teachers more feedback on student writing. Prominent Feature Analysis is explained in detail in the section on text feature analysis that follows.

Throughout the intervention, I collected student artifacts for both classes, including multiple drafts of compositions. Students completed two pieces of writing, involving multiple drafts, during the proposed study. In addition to having the final drafts of these papers scored using the Analytic Writing Continuum, Ms. Piper and I also analyzed the final drafts of these writing samples using text-feature analysis, as described in the subsequent section.

**Text feature analysis.** Spandel and Stiggins (1981) described writing assessment as more than scoring writing; it is also finding ways to better describe and understand student writing. Text feature analysis offers rich insights into the characteristics of writing. Drawing on the understanding that writing is a form of meaning-making, prominent feature analysis (PFA) uses codes to describe and analyze written work to better understand what a writer does well and areas that may need further development (Swain, Graves, & Morse, 2010). Swain, Graves, and Morse identified 22 positive features and 10 negative features in the prompt writing papers of 464 seventh-graders from three rural schools in the Southeast United States (Appendix I). PFA does not attempt to attend to all the structures in the paper. Rather, a group of readers tries to
describe what features are prominent, or stand out, in the paper. Although these features were useful in describing the papers studied, the authors note that ideally teachers would continue to refine this features list, adding or removing features as they are found in the writing they examine.

Swain, Graves, and Morse noted that prominent feature analysis could be a powerful tool for classroom teachers to analyze their students strengths and weaknesses, particularly in conjunction with holistically scored papers. Papers are given an overall score in prominent feature analysis, with one point given to a paper for each positive feature that emerges from the paper and one point take away for each negative feature. However, these scores alone seem to be less useful than the detailed feedback this scoring can offer, particularly to inform instruction. In this intervention, we used PFA to both inform instruction as well as describe samples submitted by students. After participating in a scoring retreat at Mississippi State University led by Swain and Graves, I was able to proficiently score papers using PFA, as well as teach others to identify prominent features in student texts. For this study, I taught the classroom teacher to use PFA and we used this technique to analyze all student samples collected in the study.

In analyzing the first samples (pre-intervention), Ms. Piper and I began the process by familiarizing ourselves with the list of Prominent Features identified by Swain, Morse, and Graves (Morse, Swain, and Graves, Morse, 2007, Appendix I). We then began reading and scoring papers. Ms. Piper and I exchanged papers after each paper was scored once, without sharing our scoring sheets, and re-scored the paper. This enabled us to analyze and score each paper twice. Ms. Piper and I examined each paper
and after each paper had been scored twice, we stopped and compared our list of prominent features in the paper. If the list did not agree, we discussed possible reasons for the differences; we found examples in the text and discussed whether features were prominent, reaching consensus on each paper before moving on. Analysis and scoring continued this way for all papers. We also noted features we felt were prominent which were not captured on the list. We refined Swain, Graves, and Morse’s original list (see Appendix J), creating sub-categories for faulty usage (AAVE, ELL, Other), as well as adding shift in verb tense, which was a common error in papers scored. To the positive features, we added use of appositives and dialogue, two features we noticed in a number of papers that contributed to their overall success. We scored 36 papers in this way.

I created a database and listed each student, by alphanumeric code. I recorded each student’s raw PFA score and created a column for each prominent feature, marking each feature present by students. I totaled each column to find the most prominent positive and negative features across all students. These data were used to plan mini-lessons for students as we moved forward with the intervention.

For each set of writing samples (pre-intervention, mid-intervention, and post-intervention), we used the same process. I recorded the prominent features of the papers by student in a spreadsheet and this helped us to reveal patterns of textual features for each student as well as for all students. This data helped inform both judgments about the quality of student writing and possible improvement in student writing, but also offered insights into unanticipated effects that were used to modify the intervention. Potential mini-lessons identified included: use of vivid verbs, effective transitions,
incorporating sensory language, and addressing faulty punctuation, including periods, commas, and dialogue.

Furthermore, all drafts of student writing during the intervention were collected and examined for both comments made by peers as well as changes between drafts. Students used the track changes feature to comment and offer suggestions on one another’s papers. These drafts allowed us to examine both the suggestions made by offering insights into student’s understanding of revision and collaboration, and also the changes made by the author thus helping us to measure whether revision increased over the course of the study and examine possible factors that might enhance or inhibit the effectiveness of the intervention.

**Electronic communications.** I also collected all electronic communications between students throughout the intervention. As the use of an online community was an essential component of the intervention, these communications were a rich data source. Each week I examined these communication, noting the following: (a) the focus of the comments students were making to one another, (b) the level of on-task and off-task conversation occurring and the degree to which students were using academic language, (c) whether students were posting outside of school, and (d) other student uses for the online community. I paid particular attention to posts by focal students, but did not collect these exclusively.

The focus of the comments students made to one another varied, from comments that focused on surface features in a document to comments focused on organization and content. For example, Marisol made the following comment on surface features in
Gabriela’s third draft of a speech: “i luv your speech. I’m touched lol! no but 4 real! just
some spelling is wrong,” (Marisol, Electronic Communication, March 4, 2011). Roy
commented on the organization of Jack’s paper, noting, “I think these two sentences
should be in the first paragraph” (Electronic Communication, April 5, 2011). Other
comments focused specifically on content found in the paper, or content the reader felt
was missing. For example, on Kimberly’s essay on the importance of being thrifty,
Roman asked Kimberly, “Why is it important to save money?” (Electronic
Communication, April 6, 2011). Each week I coded comments, resulting in the
classification of four types of comments: surface comments (focused on spelling,
grammar, or other surface features), content comments (focused on the content of the
writing), organization (focused on the organization of the piece), and opinions (comments
couched as an opinion or expressing the responder’s emotions, e.g. “I love this!”). I also
looked at these comments for use of academic language. For example, Deandra
commented, “I like how you use alliteration” (Electronic Communication, March 4,
2011) and Brad wrote, “I like how you are foreshadowing what is going to be said”
(Electronic Communication, March 25, 2011). This not only made students’ thinking
visible to me as they were offering feedback to peers, but also illustrated students’
understandings writer’s craft. A key component of the intervention, these electronic
communications demonstrated the degree to which students were engaging in academic
discussion on the Ning, focused on writing.

I also examined electronic communications for off-topic or off-task conversation
between students. On-task behavior was any activity focused on writing, revision, and
peer feedback. Off-task behaviors were those that were focused on something other than writing. For example, students were given time at the start of the intervention to find and upload a profile picture to the Ning. Throughout the intervention, I noted students looking in Google images for a new photo to post as their profile picture and adding new profile pictures in class. Although this was an activity that would eventually be posted to the Ning, it was off-topic, as it was not the focus of the work in class on that day. Electronic communications between students also revealed that students were using the Ning to communicate with each other on topics outside of their writing. For example, one students posted a blog titled “Chillin’”, students emailed one another with emails with the subject line, “S’up?” and a student started a discussion titled, “What up kudi?” Students were friending one another and sending each other gifts as well, as evidenced on each student’s member page. Students also had occasional heated debates with one another, veering off the topic of the discussion. For example, Michael and Marisol had an exchange that included the following, sparked by a comment made about Gabriela’s writing:

How you gonna criticize her spelling and make spelling errors just look at your comment chica (Michael, Electronic communication, March 4, 2011).

wutev thats just me!!!! and yhu the one that spelled that c word wrong i think!! LOL! (Marisol, Electronic communication, March 4, 2011).
What you think is wrong LOL!!!! JAJA. I don't really see how that was funny  
(Michael, Electronic communication, March 5, 2011).

The exchange continues through March 7, with eleven comments between the two, when Gabriela finally ends the exchange with this comment, “yo yall not even talking bout my speech.... yall jst arguing like 5 year olds......lil kids these days” (Electronic communication, March 8, 2011). I looked to see if students, in these off-topic posts, were using the Ning for purposes other than writing.

Finally, I examined the dates and times of posts, changes in screen names, changes in profile pictures, blog posts, gift giving, and friending, noting when students were on the Ning both outside of their language arts class and outside of school.

Data analysis. To facilitate sequential data analysis (Mile & Huberman, 1994) throughout the intervention, I uploaded all data to NVivo, software that allows the researcher to code and re-code data from a variety of sources, including video and audio files. I examined data weekly and used sequential data analysis as a tool for making decisions about modifications to the intervention. I also found patterns and recurring themes that later helped me to develop answers to the following questions from Reinking and Watkins (2000) framework for conducting formative experiments:

(a) what factors enhance or inhibit progress toward the goal, (b) how can the intervention be modified to better achieve the pedagogical goal, (c) has the instructional environment been transformed in some way as a result of the intervention, and (d) what were the unanticipated effects, positive or negative, produced by the intervention? (p. 388)
I noticed several recurring themes that seemed to affect writing, specifically student revision and collaboration, as the intervention progressed: (a) resistance to writing/academics, (b) student relationships, (c) mandates/requirements, (d) structure/organization, (e) student attitude, and (f) technological considerations. These categories helped me begin to focus my observations, but also led me to develop new categories and delete categories as the study progressed. For example, resistance to writing collapsed into student attitude and mandates/requirements collapsed into an additional category of structural/organizational factors, which applied to classroom organization and whole school organization. Four broad themes emerged that captured the factors that enhanced or inhibited the intervention: structural/organizational factors, student factors, teacher factors, and technological factors. Chapter 4 explores these themes in detail.

At the conclusion of the study, I triangulated observational and interview data with student writing, electronic communications, and student think-alouds, examining what revision actually took place. I coded all data using open-coding, looking for emerging patterns and themes. These themes were examined and re-organized into broader categories. Data were then re-coded, using a priori codes developed during the coding of field notes, interview transcripts, and think-aloud protocols as part of a retrospective analysis (Gravemeijer & Cobb, 2006), specifically aiming to understand in what ways, if any, the environment was transformed.
**Procedures**

The procedures for this study occurred across five phases: setting up the study and intervention, classroom observations prior to the intervention, collecting baseline data, implementing the intervention with on-going data collection, and gathering post-intervention data.

**Phase One: Setting Up the Study**

The teacher and school for this study were recruited during the summer of 2010 and permission from the principal and instructional coach to conduct research was granted in the fall of 2010. During this time, I met with the teacher and instructional coach separately, discussing the possible intervention and briefing them on formative experiments and answering any questions. After receiving approval from the principal, the teacher and I worked out a tentative timeline for the intervention, as well as discussed possible units of study that would enable students to practice expository writing and allow the teacher to continue to follow the standards outlined in her pacing guide. After receiving approval from the Institutional Review Board (IRB), the teacher distributed and collected parental consent forms.

**Phase Two: Collecting Pre-Intervention Data**

For four weeks, I observed Ms. Piper’s classes two days per week for six hours per day. Having worked in a nearby school that pulled students from the same local community, I was somewhat familiar with the community the school serves, the strengths of the community, and the services available to the community. This allowed me to better understand the context of the classroom, the students, and the routines of the class
(see whole-class observations in Data Collection and Analysis). The purpose of phase two was to generate a thick description of the instructional environment. I began observing the class the first week of December, continued until the holiday break, and returned after the break during January for several more observations.

At this point in the year, students had completed several writing pieces and were familiar with the routines and procedures of the class. Ms. Piper used a workshop approach to structure her writing time in class. Students typically focused on writing two days per week, and focused on reading three days per week. A typical writing workshop includes a ten to fifteen minute mini-lesson, focused on a particular aspect of writing based on student needs (Fletcher & Portaluppi, 2001). After the lesson, students are given extended time to write, usually on a topic of their choosing. Choice is an essential element of writing workshop (Atwell, 1998; Calkins, 1994). Teachers may narrow the choice, asking them to write in a particular genre, but students ultimately are still given choice in the topics they explore for their writing. During the extended writing time, students may be at different points in the writing process and may be working on different pieces of writing. Students are encouraged to discuss their writing with one another and help one another, either formally through a defined peer revision process or through informal conversations. The teacher also conferences with individual students, and these conferences focus on helping students improve their writing not through correction, but through building on the work the student has done. Workshops usually end with students sharing their writing with one another. This sharing time may be whole
class, in which students read a section of their work and other students offer feedback, or may be small groups (Fletcher & Portaluppi, 2001).

Ms. Piper’s class followed this typical format. Each class period, students started with bell work, reviewing material they had discussed the day before or anticipating the material that would be introduced that day. The school followed a Learning Focused Model, so teachers were required to post standards each day and pose a question, referred to as the essential question, each day for students to use as a focal point for learning. Typically, the bell work involved writing down the essential question for the day in a notebook and a short writing assignment of some sort designed to get students thinking about the question. For example, one question posed during a research unit was, “Why do I need to cite my sources?” Students copied the question and were asked to answer it. After a few minutes, Ms. Piper asked for volunteers to share their answers. Students immediately began to volunteer what they had written, taking turns and jotting down what other students said. After several minutes of discussion, Ms. Piper moved on to a mini-lesson. Typically, these were short, focused lessons, lasting from about ten minutes. Students were then asked to use the lesson as they worked on their writing.

At this point, students would pull their writing up on the computer and begin to work independently. Ms. Piper circulated around the classroom, using roaming conferences to make sure she saw each students’ work. If students were stuck, they would often turn to their neighbor and ask for help. If the student beside them was unable to offer assistance, they would ask for Ms. Piper. On several occasions, I saw students solve their own problems before turning to the teacher. Students were
encouraged to share with one another out loud, and because they were encouraged to verbalize their ideas and questions, the classroom was rarely silent. My field notes indicate that 80% to 90% of students were on task in class at any given time, as determined by my own observations as I circulated around the room, watching and listening to students. Students worked at different paces in all the classes, with some students writing quickly and others taking an entire period to generate five sentences. This diversity reflected the diversity of ability in both classes, despite efforts to track students by ability.

**Phase Three: Gathering Baseline Data**

In mid-January 2011, I gathered baseline data. This included student writing samples completed in December of 2010, the Internet use survey, the Writing Dispositions Survey, a teacher interview, and focal student interviews, as described in the Data Collection section of this chapter. I administered the Writing Dispositions Survey and the Internet use survey myself and conducted all interviews. Ms. Piper helped me gather the baseline writing samples, particularly for students who did not hand in a writing sample in December. For these students (n=2), we went back to another piece of writing they had worked on over time, in one case a piece of writing handed in at the beginning of November and in the other case a piece handed in at the start of January, as the most recent sample for baseline data. She also administered the Writing Dispositions Survey to students who were absent the day it was given.
Phase Four: Implementing the Intervention and Ongoing Data Collection

The intervention phase of the study took place between the third week of January 2011 and mid-April 2011. During this time, I spent two full days in Ms. Piper’s classroom each week (12 weeks, 6 hours per day, 2 days per week), for a total of 144 hours. Writing took place in Ms. Piper’s classroom on the two days per week I was present, for the most part, with an occasional extra writing day added to her week. Although my original intent was to spend time in her classroom on Thursdays and Fridays, to add consistency for students, the scheduling of testing and other school functions resulted in a more flexible arrangement. I was in the classroom two days per week, but on occasion those days varied from the planned Thursday, Friday routine. A focus on reading also sometimes took place on days I was present due to unforeseen interruptions or changes to instructional time during the week.

Ms. Piper had a pacing guide she was obligated to follow and planned collaboratively with the other seventh grade English language arts teacher at the school. A focus on non-fiction in the pacing guide, which is emphasized in the state’s standardized tests, allowed Ms. Piper to integrate expository writing into her plans. Before each unit started, Ms. Piper and I discussed her plans and how she would integrate writing, including time for revision, into the unit. Within the first unit planned for the intervention, a research unit on heroes, she provided students multiple opportunities to post work throughout the project, which lasted eight weeks. Ms. Piper and I discussed logical points for students to post work and offer one another feedback and Ms. Piper planned and structured her class accordingly.
Ms. Piper and I spent time talking about her plans each week, discussing what logical next steps might be for students based on what happened that week. I served as a sounding board and resource for Ms. Piper, but the planning and instruction were her own.

The intervention focused on having students share their writing throughout the writing process and offer suggestions for revision to one another, during class time. The focus of the writing was expository text and students were given a genre in which to write, but were offered free choice in their topics. For example, the first unit focused on research and students were to research heroes. Before the unit started, Ms. Piper asked the students to write their own definition of a hero. The following class, they shared these definitions. Ms. Piper then taught a mini-lesson on peer revision, using a Tell, Ask, Give (TAG) framework to help students structure their responses to one another. Students were asked to their definition of a hero and play TAG with another student at their table; tell the writer something you really liked about their piece, ask the writer to tell you more about an aspect you found unclear or were curious about in the piece, and give the writers a specific suggestion to improve the piece. Students then refined their definitions and these individual definitions guided their personal choice of a hero. Each student was ultimately asked to write a speech, explaining why her hero was someone to look up to and what you could learn from her hero. Choice was built into this assignment, from the way students defined a hero, to the hero chosen, to the lessons learned, to the way they structured their speeches.
The intervention took place in two distinct stages (as described in the previous section, The Instructional Intervention). In the first stage, students were introduced to the idea of peer revision, using TAG (Tell, Ask, Give) as a structure for offering responses to one another. Field notes describe what happened when students in the English Studies section (those on-grade level) began to discuss their work face-to-face, with partners.

Students struggled with who to pair themselves with to share their work. Girls tended to pair with girls, boys with boys. The result was small single gender groups. One confident writer, Deandra, moved around the room, working with students in multiple groups. Many students said little to one another about the writing, beyond reading their own definitions aloud. Noelia, Denise, and Claire TAGged each other’s work, but really wanted to share with Ms. Piper, more than each other. Some students were judgmental about the feedback given to them.

Brian asked, “What if we don’t want to change it?”

Although this stage of the intervention was intended to last three weeks, after the first week, based on data from classroom observations and the amount of revision students made, Ms. Piper and I decided to move into stage two, using the Ning for revision, immediately.

Stage two involved implementing technology as an integral part of the writing process. We first had all students log into the Ning and establish their profiles. Ms. Piper and I developed a short set of questions for the profile, focused on students as writers. Figure 3.4 shows a typical profile.
Figure 3.4. Student profile on the Ning

Once students had successfully logged in and established their online identities, including uploading a photo to represent themselves, Ms. Piper taught students how to use the track changes and comment features and asked students to save their draft at the end of each day with a new number (for example, draft1, draft2, etc.). Students were already accustomed to composing using word processing software (Microsoft Word), so these were new tools in familiar software. Students were encouraged to turn on track changes as they started working on their draft each day, allowing them to see the progress they were making in their writing and making the changes visible to Ms. Piper and myself as well. Ms. Piper showed students how to use the comment feature to critique one another’s work and reminded students to be tactful in their interactions with one another.
Throughout the intervention, students were encouraged to post work in progress. For example, Ms. Piper asked students to take notes for their research using a found poem technique, in which the reader jots down relevant information as a line in a poem, helping the reader remember what he or she has read and reducing accidental plagiarism. Students posted these found poems and other students asked them questions, allowing students to go back and find more information before moving on to writing their speeches. To encourage students to post the first time, they were told their posts, no matter how far along their writing was, would count as a daily grade. This incentive worked to encourage students to post the first time. After that first post, students were willing to do so without an incentive. Ms. Piper did set mini-deadlines for students to keep them moving through the research and writing process, asking them to have tasks completed by a date. For example, she announced at the start of class on February 10, students needed to have three sources, with notes in their found poem for each one, by the end of class. This kept students moving forward when the project at hand was long and required time management skills.

The intervention was designed to encourage students to write and revise their work, improving both the quality of their writing and the amount of revision made to a piece of writing. To that end, Ms. Piper taught mini-lessons designed to meet the needs of her students, based on the Prominent Feature Analysis from the baseline writing samples. She also stressed the importance of posting work on the Ning and offering peers feedback. She offered students dedicated class time to both post to the Ning and offer one another feedback.
During the intervention phase, Ms. Piper and I spent a 45-minute planning period together, as well as spent lunch duty together, two days per week. This enabled us to have dedicated time to discuss how the intervention was going, as well as talk about what we were seeing, particularly what she was seeing on the days I was not in the classroom, and discuss possible modifications to the intervention to enhance its effectiveness. Ms. Piper and I also emailed each other during the week to discuss ongoing data collection, lesson plans, and other day-to-day details. These emails became a valuable resource during data analysis, particularly as I was thinking about factors that enhanced or inhibited the intervention.

**Phase Five: Collecting Post-Intervention Data**

The final phase of gathering post-intervention data began in mid-April. Originally, we had planned for a fifteen-week intervention, continuing until May 1. However, a week of snow days, testing, and a late spring break interfered with these plans. State tests begin the second week in May, and Ms. Piper needed the last week in April (when students returned from spring break) as well as the first week in May to focus on the upcoming test. The last week of the intervention, I collected student writing samples.

Following spring break (in late April), I returned to the classroom and administered the Writing Dispositions Survey, and interviewed the nine focal students. I also interviewed Ms. Piper, completing my data collection April 29.
Summary

Over the course of twenty-weeks, with a thirteen-week intervention, I sought to understand the effects of peer revision in a middle grades classroom through a formative experiment. Specifically, I investigated using an online community as a space for peer revision. Qualitative and quantitative data were collected in five phases to better understand the factors that enhance or inhibit the effectiveness of peer revision. These data were used as a basis for modifications to enhance the effectiveness of the intervention in an effort to increase the amount of revision by middle school students that takes place and improve the quality of their writing.
CHAPTER 4

RESULTS

Ms. Piper’s response to the question, “What has most surprised you so far about this intervention?” during our interview on March 11, 2010 illustrates some of the changes students demonstrated when an online community was used for peer revision.

I’m most surprised by how well they’ve done. I think they’ve stepped up with a lot of the technology better. There’s no kid who is like totally left behind and that’s a bit surprising. I’ve been surprised at the level of how much they care about their writing which has been kind of slow coming - like I don’t think they saw the big picture at the beginning but now I’m surprised that Jamario, for example, was almost in tears yesterday, because you know he couldn’t post, which is not like him, but now he cares and that’s good. I think I am surprised that they are enjoying commenting on one another’s pieces, like, they don’t seem to see that as work. They seem to see that as a really fun thing to do and I’m surprised by that. I really am surprised how quickly I feel like they’ve taken ownership, coming from a lot of them just really hating to write.

The goals of this intervention were to increase both the amount of revision taking place as well as improve the quality of student writing. The results shared in this chapter will illustrate both the successes of the intervention, as well as the challenges faced as we implemented this intervention in a seventh grade classroom. I will explore the context of the classroom more fully, as well as the factors that enhanced and inhibited the effectiveness of the intervention.
Overview

The purpose of this study was to increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing through online peer revision and collaboration in a middle school English language arts classroom. An integral part of this intervention was the use of an online community as an environment for peer revision and collaboration, which required one-to-one student access to computers in the classroom. However, one thing that became clear throughout the intervention was the context of the classroom, particularly the classroom community, played an important role in the intervention. To better understand what happened in the classroom, I will examine how various factors either advanced or hindered this intervention in achieving the pedagogical goal set out at the start of the investigation. In this chapter, I will address Reinking and Watkins’ (2000) third and fourth questions, as described in Chapter 1: (a) as the intervention is implemented, what factors enhance or inhibit progress toward the goal and (b) how can the intervention be modified to better achieve the pedagogical goal? I will also report data that reflects the extent to which the intervention advanced the pedagogical goal, increasing the amount of revision that occurs over multiple drafts of students’ writing and improving the quality of student expository writing.

The chapter begins with a description of the classroom environment in which this study took place, followed by a discussion of factors that enhanced or inhibited the intervention, including modifications that were made to the intervention. The chapter concludes with evidence of progress toward the pedagogical goal.
Student Baseline Data

At the start of the intervention, 21 students comprised Ms. Piper’s English Studies section and 15 students comprised Ms. Piper’s English Strategies section. The classes were tracked by ability, as determined by both scores from the Measures of Academic Progress test (MAP) administered in the spring of the previous year and/or teacher placement. All students received free or reduced lunch. Of these students, 20 in the English Studies section and 10 in the English Strategies section were full participants in the study, as only these 30 were present for the entire intervention. Six students left during the study, and six new students were added. Data was collected, however, for all students, as all returned permission slips.

Of the students in Ms. Piper’s classes, the students in the Strategies section had a lower level of achievement, as measured by the Northwest Evaluation Association’s Measures of Academic Progress (MAP) test, than the students in the Studies section. The MAP test was administered in August and again in March. The average MAP score for the spring administration of the reading test in the Studies section was 217 and the average MAP score for the reading test in the Strategies section was 203. Both of these scores were below the district average of 220 for seventh grade students tested in the spring.

Writing Achievement

In order to measure student’s writing achievement and the amount of revision typical on a piece of expository text, I asked Ms. Piper if she could develop an assignment that would take place over several weeks of instruction prior to the
intervention. Ms. Piper and her students were reading novels set during the Holocaust 
(*Seven Perfect Pebbles* or *The Boy in the Striped Pajamas*), as well as reading non-fiction 
that described the time period. For the writing assignment, students were asked to 
assume the identity of a child during the Holocaust (either a child in hiding or a child in a concentration camp) and write several journal entries, based on the events they were witnessing and integrating facts about the Holocaust into their writing. Students were encouraged to use information studied in social studies, as well as the articles they had read and their own research in their writing. In all cases, students had nearly a month to develop this piece of writing and were encouraged to work together to revise their pieces. Ms. Piper also offered students feedback throughout the writing process.

This piece of writing was scored by trained scorers using the National Writing Project’s Analytic Writing Continuum (AWC) (see Chapter 3, Quantitative Data Analysis). The AWC allows scorers to rate writing on a scale of one to six on six attributes, as well as assign each piece of writing a holistic score. Student scores on this pre-intervention piece of writing ranged from 1 to 4 across categories, on a possible scale of 1 to 6. Figure 4.1 shows the average student scores, by category, for the Strategies section and Figure 4.2 shows the average student scores, by category, for the Studies section. Figure 4.3 compares the average holistic score in the Strategies and Studies section. On average, students in the Studies section outscored students in the Strategies section in all categories. Students in both sections had the lowest scores, on average, in the category of structure.
Figure 4.1. Average student score, Strategies section, prior to the intervention.

Figure 4.2. Average student score, Studies section, prior to the intervention.
Figure 4.3. Average holistic score by section.

Scores were also tracked by student to form a better understanding of individual student growth using the Analytic Writing Continuum scale. Figure 4.4 through 4.9 illustrate individual student scores, by category, in the Strategies section, prior to the intervention. Figures 4.10 through 4.15 illustrate individual students scores, by category, in the Studies section.
Figure 4.4. Content scores for students in Strategies section.

Figure 4.5. Structure scores for students in Strategies section.
Figure 4.6. Stance scores for students in Strategies section.

Figure 4.7. Sentence fluency scores for students in Strategies section.
Figure 4.8. Diction scores for students in Strategies section.

Figure 4.9. Conventions scores for students in Strategies section.
Figure 4.10. Content scores for students in Studies section.

Figure 4.11. Structure scores for students in Studies section.
Figure 4.12. Stance scores for students in Studies section.

Figure 4.13. Sentence fluency scores for students in Studies section.
Figure 4.14. Diction scores for students in Studies section.

Figure 4.15. Conventions scores for students in Studies section.
Attitudes Toward Writing

Students were also given the Writing Dispositions Survey, an instrument developed by Piazza and Seibert (2008) specifically to measure upper elementary and middle grades students’ attitudes toward writing (see Appendix E). The survey focused on three areas as they relate to writing: confidence, persistence, and passion. For each area, a 1 indicates strong agreement, a 3 indicates a neutral stance, and a 5 indicates strong disagreement. All questions, with the exception of question 5, are positively worded. The values for the question worded in negative terms have been transposed to reflect 1 as a highly positive value. Using this scale, students across sections indicated having the least passion for writing, although scores fell largely into the neutral range of 3 (see Table 4.1). From Tables 4.2 and 4.3, it is evident that students in the Strategies section, prior to this intervention, had similar attitudes about writing to students in the Studies section, although students in the Strategies section showed more variation in their responses than the students in the Studies section.

Table 4.1

Mean and Standard Deviation for Students’ Scores on the Writing Dispositions Survey Prior to Intervention

<table>
<thead>
<tr>
<th>Area related to writing</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>2.814</td>
<td>1.306</td>
</tr>
<tr>
<td>Persistence</td>
<td>2.860</td>
<td>1.113</td>
</tr>
<tr>
<td>Passion</td>
<td>3.213</td>
<td>1.185</td>
</tr>
</tbody>
</table>
Table 4.2

Mean and Standard Deviation for Strategies Students’ Scores on the Writing Dispositions Survey Prior to Intervention

<table>
<thead>
<tr>
<th>Area related to writing</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>2.711</td>
<td>1.517</td>
</tr>
<tr>
<td>Persistance</td>
<td>2.900</td>
<td>1.137</td>
</tr>
<tr>
<td>Passion</td>
<td>3.217</td>
<td>1.292</td>
</tr>
</tbody>
</table>

Table 4.3

Mean and Standard Deviation for Studies Students’ Scores on the Writing Dispositions Survey Prior to Intervention

<table>
<thead>
<tr>
<th>Area related to writing</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>2.895</td>
<td>1.099</td>
</tr>
<tr>
<td>Persistance</td>
<td>2.829</td>
<td>0.802</td>
</tr>
<tr>
<td>Passion</td>
<td>3.211</td>
<td>1.123</td>
</tr>
</tbody>
</table>

In addition to the Writing Dispositions Survey, Ms. Piper was asked to describe students’ attitudes toward writing in her pre-intervention interview.

They really hated to write when I got this group, which is really unusual usually the kids hate to read when I get them, well they say that, they say I hate to read but this group didn’t hate to read but they said just verbal groans when every time we would write. Which really surprised me and the teachers last year would say they hate to write, they hate to write…I don’t think many of them consider themselves writers still (January 26, 2011).
Focal students were more positive in their feelings about writing during our pre-intervention interviews, although most described liking to write some things and not others, and two students confirmed that they disliked writing. For example, Marisol noted that she preferred particular genres of writing.

Marisol: Sometimes poems are not the best…but sometimes it’s like children story would turn out right. Like one time I wrote…what was that called? A fable? I think it was How a Snake Outsmarted a Hawk, something like that and then it turned out good.

Sarah: So you like to write fiction and you like to write poetry?

Marisol: Yeah.

Sarah: What do you not like to write?

Marisol: Like mini essays. What do I say? Like review we’ve been doing. Like book, review is okay but reviews are so…like you read something, you study it then you’ll have to write. I don’t like doing that.

Sarah: Okay. So let’s say I said to you, “Okay, we read this book. I’d like you to write an essay comparing this character to another character in a story…”

Marisol: Oh, I don’t like that. I don’t like that (January 26, 2011).

James confirmed he disliked writing during our interview prior to the intervention, although he equated writing with handwriting.

Sarah: Do you like to write?

James: I’m not a writer.

Sarah: Why?
James: Because I don’t have good handwriting.

Sarah: Okay, what about when you type on the computer?

James: I like it better.

Sarah: You like it better. So do you like to write if you use the computer?

James: No, I still don’t.

Sarah: What is it you don’t like about it?

James: Because whenever I get to write and my hands start hurting fast.

Sarah: Okay. If you’re typing, what do you not like about it?

James: You know. My hands are…I like typing. I just don’t want to type for a long time.

Sarah: Okay. So is there anything about writing that’s particularly hard?

James: I just don’t like it like it (January 26, 2011).

Brad also expressed reservations about writing, despite the fact he thought writing was easy.

Sarah: So, writing is easy for you?

Brad: Yeah.

Sarah: You just can do it.

Brad: I just don't like to do it.

Sarah: So, why don't you like to write?

Brad: Because if I write essays and stuff it's hard for me to think about how I'm going to start an essay and like how I'm going to end it and stuff like that (January 26, 2011).
These attitudes expressed by focal students further illuminate the neutral stance that emerged as the average student attitude toward writing in the Writing Dispositions Survey.

**The Classroom**

Ms. Piper’s room was light, bright, and filled with books and magazines. Books lined every available surface in the room. Two large bookshelves sat to the right of the door, and two smaller (four foot) bookshelves sat on the far side of the room, under the large windows. Built in bookshelves, filled with books, were mounted above the long countertop at the back of the room. Books were shelved neatly, with labels indicating the genre on shelves to assist students. Stuffed animals sat atop the bookshelves, as well as bins filled with costumes (including hats, wigs, and tiaras) for student use when instruction called for dramatic interpretation.

A table was to the left of the door, with baskets filled with papers students had handed in, or papers to be handed out to students. Four large crates sat in the floor beside the table, under the white board, filled with student journals. As students entered, the appropriate crate was retrieved and put on the table by the door and students grab their journals on the way to their seats. This table was often messy by the middle of the week, as lost student items accumulated in the lost and found box under the table, students placed found papers on the table, and books that needed to be shelved piled up on the table rather than finding their way to the return bin at the back of the room. Ms. Piper would usually spend part of a morning or planning period clearing the clutter only to have it return the following day.
Students sat at tables, rather than desks, typically seated two or three to a table. Brightly colored hand-painted stools lined the counter at the back, where some students also sat. Two traditional student desks were positioned at the front of the room, near the LCD projector, and one student desk was pulled up by the white board at the front of the room. The teacher had a desk in the back corner of the room, next to the wall of windows. The desk was covered with books, baskets of papers, pencils, and other materials for instruction, as well as her printer. Ms. Piper’s coat and bookbag(s) were in her chair each day. In the 5 months I spent with Ms. Piper, I never saw her sit in her chair at her desk.

An interactive whiteboard was mounted at the front of the room, in the center of the white board, and was the focus of any teacher-led instruction. On the far left of the white board was a bulletin board, filled with academic vocabulary students had studied (e.g., metaphor, personification, characterization). On the far right of the white board, there was a word wall for Latin and Greek roots (e.g. theo, logos, mater, pater). As students learned new vocabulary, the boards were updated. Next to the interactive whiteboard, Ms. Piper posted the “Essential Question for the Day,” a question to help students focus on what they should be learning during the class. She also posted a focal state standard and indicator and the agenda for the day, as required by the district. These are considered essential elements for Learning Focused schools in this district and all middle and high schools follow the Learning Focused guidelines and strategies.

Student work hung from the walls, as well as brightly colored posters. Each student had one piece of work on the wall at all times, somewhere around the room. I
noted that students in Ms. Piper’s class were aware of their writing in my field notes on December 6, 2010. “Reynaldo went to the back wall to see if one of his writing pieces was still on the wall. He saw it and said to me, ‘Come here, Miss. Come see my writing!’”

A typical day began at 8:30 am, with the entire school reading silently for 30 minutes in their homerooms. At 9 am, Ms. Piper had a 45-minute planning period, followed by her first section of English language arts, one of three sections of English Strategies, which lasted approximately 60 minutes. This was followed by a second section of Strategies and then Advisory, a 30-minute class period designed to allow students to receive extra help in each subject area, if needed, as well as a time for students to explore careers and options for college, or make up work they might have missed due to absences. Students were in single-gender groups for advisory and rotated between their teachers, going to science, social studies, English, or math each day as determined by the rotation schedule. Lunch followed advisory and lasted 30 minutes, with all teachers escorting students to lunch and sitting with their classes at the lunch table. Ms. Piper’s second 45-minute planning period followed lunch. This was the planning period kept free for parent meetings and, when not in a meeting with a parent, Ms. Piper often spent this time completing record-keeping or administrative tasks required by the school, such as compiling lists of students who met their assigned goal on the Measures of Academic Progress exam, read a certain number of books to date, or earned an A in her class for the prior marking period. This planning time was followed by two 60-minute classes, one section of Studies and another section of Strategies. After
the bell rang to signal the end of the day, students were dismissed to the buses or to bus holding which was held in the gym.

Typically, each class period followed a similar pattern. Students were greeted at the door with a smile from Ms. Piper, a strategy that allowed her to gauge the moods of students as they entered the room. Students were reminded to pick up their journals and take their seats. Often, the students would sit down without their journals and Ms. Piper, while explaining the bell work which was also on the board, would quickly distribute the remaining journals for students to write in. My notes from December indicate students struggled to get settled and get started each day. For example, on December 7, 2010 I noted, “Students struggled to get settled in all the classes today and silent reading is a tortuous process to watch. For bell work, the students were asked to write seven sentences as a quickwrite, using academic vocabulary to describe their self-selected reading books. Most students struggled to write even two sentences.” Bell work also focused on reviewing Latin and Greek roots, and Ms. Piper used TPR (Total Physical Response) to encourage students to remember the meanings for the words, asking students to make up motions for each word and playing games with the motions throughout the week. During this time, students were moving around as they made motions to reflect the meaning of the roots they were reviewing.

After bell work, Ms. Piper quickly reviewed the Essential Question and the agenda for the day, which were also posted on the board. On days when the focus was writing, students participated in a brief mini-lesson, usually 10 to 15 minutes, focused on some aspect of writing (organization, peer revision, transitions, etc.) and were then asked
to continue to work on their writing and employ the strategy or idea shared that day. For example, Ms. Piper discussed peer revision on March 4, 2011, as students were finishing up their second piece of writing. Students developed a reference list of comments they thought would be helpful. They were then asked to go online and offer suggestions to their peers.

Immediately following the mini-lesson, students logged onto the computers and began working on their writing. Students were often at different stages throughout the process, although Ms. Piper implemented mini-deadlines along the way to ensure students moved forward as they completed these longer writing pieces. As students wrote, Ms. Piper circulated around the room, reading over students shoulders and asking them, “How’s it going?” She sometimes sat at a table with students who had specific questions or needed more assistance. Her interview on January 26, 2011 explains her conferencing technique:

Sarah: So when you do your workshop, do you figure out who you are going to conference with beforehand?

Ms. Piper: I wish I did, I wish I knew who I was going to conference with, but I found that if I didn’t talk to everybody every day they, they would lose it, or if they had a question and they needed me, they would just stop working. So I think I try to get to most everybody, every day.

Sarah: So it's more read over their shoulder and then talk.

Ms. Piper: Make a couple suggestions and move on....
Often students wrote for the remainder of the period, anywhere from thirty to forty minutes. When there was five minutes left of class, Ms. Piper would ask students to share a few sentences of their work with their neighbors, or sometimes the whole class. During the intervention, this was the time Ms. Piper also reminded students to post what they had written to the Ning, regardless of how much was written. A warning bell rang with two minutes left in each class, and students used this signal to begin packing up, returning journals to the bin and gathering their belongings.

Factors Enhancing or Inhibiting the Effectiveness of the Intervention

This section focuses on the data addressing Reinking and Watkins’ (2000) question: as the intervention is implemented, what factors enhance or inhibit progress toward the goal? Throughout the study, I employed sequential data analysis (Miles & Huberman, 1994), I followed an iterative process, in which I collected data following a sequenced plan and analyzed the data throughout the collection process. I used both inductive and deductive forms of analysis (Creswell, 2007), coding the data both broadly for events that enhanced or inhibited the intervention, as well as coding the data for recurring themes. After the intervention, retrospective analysis (Gravemeijer & Cobb, 2006) was used to examine the degree to which the instructional environment was transformed (see Chapter 5). Several factors clearly emerged that inhibited and enhanced the intervention. Factors that enhanced or inhibited the intervention could be broadly categorized as structural/organizational factors, student factors, teacher factors, and technological factors. Within each of these broad categories are a number of sub-
categories that reflect more specific factors in the intervention. These are shared in detail in the sections that follow.

**Structural / Organizational Factors**

Structural features of the school and classroom environment both contributed to the success of using an online community to facilitate peer revision and improve student writing and detracted from the intervention. I will first examine factors that enhanced the intervention, and then share details regarding structural and organizational factors that inhibited the intervention.

**Structural/organization factors that enhanced the intervention.** The physical structure of the classroom and school building, as well as the organization of the instructional time in the classroom, both served to enhance the intervention.

*Physical structure.* As noted in the description of the context of the classroom, Ms. Piper’s classroom featured tables, where two to four students sat. The room, as described in my field notes on December 7, 2010, is spacious and allows for collaboration. “Students are able to sit at the tables together with plenty of space between them. Throughout the class period, Ms. Piper asked students to share or discuss with their table groups.” Field notes throughout the intervention phase of the study reflected how accustomed students were to table groupings. If students found themselves alone at a table, they routinely asked to move to a table with others. At times, the table groupings led to challenges. On February 10, 2011, I noted:

James did almost no work in class today. The students were insanely distracted. I talked to Ms. Piper about James, who seems to be setting up the two boys he sits
with to distract the rest of the class and walking away from the chaos he creates. Ms. Piper spoke with him today after lunch and told him she thought he was causing issues with other students in class. To avoid working, he seems to stir up trouble with Mario and Damion and then smiles and walks away. He can work very quickly, so at the last minute he’ll work for five minutes and say he is done.

It may be time to split this group into separate tables.

More often, the tables enhanced the collaboration and learning in the classroom, particularly as students helped one another revise their writing. Field notes from January 21, 2011 noted, “Students again paired themselves in single gender groups although most did stick with people at their table.” I also noted on March 3, 2011, “Deandra, Troy, Rochelle, and Tanya are all at a table together and today I noticed they were sharing sections of what they have written with one another and offering suggestions for one another’s work.” The following day, my notes reflect more face-to-face collaboration, facilitated by sitting in table groups:

Marisol is working away. She was stuck with one paragraph. And I saw Gabriela turn to her and tell her to tell her what she wants to say. Marisol does. Gabriela then said, “You just write that down. You just have to do the work of writing that down.” Clearly working through difficult spots together. Good partners (Field notes, March 4, 2011)

The convenience of physical proximity provided students with the ability to work together and turn to one another for advice.
The physical structure of the school also facilitated the intervention. The school had wireless routers and laptops were able to connect to the Internet wirelessly. This meant students could bring the laptops to their seats or wherever they were working in the classroom. This freedom, as well as Ms. Piper’s workshop philosophy, meant students who wanted to move during writing times were welcome to do so. For some students, composing was an arduous task and they preferred to sit by themselves in a corner of the room or facing a wall while writing. For example, Brad consistently wrote best when he was alone. My field notes from February 24, 2011 reflect Brad’s struggle with writing around other students.

Brad sat by himself today in a corner during class. He missed school all of last week and is struggling to catch up. He read an article on Dabo (started it). Another teacher (technology teacher?) sent it to him. He pulled a great quote to start his intro with and posted it to the Ning. He then wrote an intro for his speech during his related arts time – the technology teacher let him come to Ms. Piper’s planning and he sat in the corner, facing the wall, and wrote the entire time. He told me he will try to work on it some more and post to the Ning if he goes to his grandmother’s house today after school.

The physical environment supported Brad’s need to be alone while he was writing, as well as other student’s needs to talk about their work as they composed.

*Explicit time for writing and revision.* From the start of the intervention, Ms. Piper set aside two class periods each week, if possible, for writing in her classroom. On these days, students worked exclusively on pieces of writing that were the focus of their
efforts for several weeks. These days were set up as writing workshops, with time for a mini-lesson and then time set aside for writing exclusively. A look at the lesson plan from January 28, 2011 illustrates a typical writing day.

Essential Question: How do I document a source?

Standards:

7-5.1 Create informational pieces (for example, book, movie, or product reviews and news reports) that use language appropriate for a specific audience.
7-6.3 Use a standardized system of documentation (including a list of sources with full publication information and the use of in-text citations) to properly credit the work of others.

Activating strategy: Students check emailed proposals for verification of approval

Teaching strategies: Model: Documenting sources
Document first source
Write found poem on source

Summarizing strategy: Pair/share found poem

Assessments: Documented source
Found poem

During my observations during the first few weeks of the intervention, I noticed a number of students were not using class time effectively. My field notes illustrate this issue. For example, on February 4, 2011 I noted, “No one was ready to share their work in class. The class struggled to write and take notes. There was a lack of focus.” I also
noted, “Juan worked well when an adult was near him. Otherwise, he seemed to stare at the computer screen.”

After observing students struggle with time management for a few weeks, I suggested a modification to the intervention to Ms. Piper. We discussed modifying the writing time to include a time for students to post whatever they had completed that day, and time for students to then look at one another’s pieces and offer feedback. We thought it would be important to have students post each week and also have time to offer feedback to one another each week, within 24 hours of posting their pieces. Subsequent lesson plans included, each week or every other week, time for students to post and revise. Plans from February 28 and March 1, 2011 reflect this change:

Essential Question:  How will I revise and finish the body of my speech?

Standards:

7-6.5 Use appropriate organizational strategies to prepare written works, oral and auditory presentations, and visual presentations.

7-6.2 Use direct quotations, paraphrasing, or summaries to incorporate into written, oral, auditory, or visual works the information gathered from a variety of research sources.

7-6.6 Select appropriate graphics, in print or electronic form, to support written works, oral presentations, and visual presentations.

7-5.1 Create informational pieces (for example, book, movie, or product reviews and news reports) that use language appropriate for a specific audience.
7-4.5 **Revise** writing to improve clarity, **tone, voice**, content, and the development of ideas.

7-6.8 **Design** and **carry out** research projects by selecting a topic, **constructing** inquiry questions, **accessing** resources, and **selecting** and **organizing** information.

**Activating Strategy:** Model revision process with body of teacher speech

**Teaching Strategies:** Review speech progress and see revisions suggested

Writer’s workshop

**Assessment:** Post to Ning

**Essential Question:** How will I conclude my speech?

**Standards:** See February 28

**Activating Strategy:** Class reading of famous speech endings

**Teaching Strategies:** TAG a speech together from the class

Make a list of concluding strategies as a class

Writing workshop – Revise and add conclusion

**Assessment:** Post to Ning

*Interim goals within assignments.* In addition to asking students to post, Ms. Piper instituted interim goals or mini-deadlines for students, asking students to accomplish a certain amount of writing by a particular date and post their work, no matter how far along it was in the process. Students were told this work would be given a daily grade for being complete. Looking at the number of posts on the Ning, it is clear the dates when deadlines were given, because the number of posts are higher for that day and
the following day, when students were asked to offer one another feedback. Time was always given in class to post, with Ms. Piper announcing when there were five minutes left in class and asking students to finish their thoughts and post their work to the Ning. The following day, time would be given to offer peer feedback as well. For example, the first deadline given to students was February 20, in which students were asked to post their found poems. Roughly half of the students in both section of Ms. Piper’s English language arts classes posted this first time (n=16). The next deadline was February 23, 2011 and students were asked to post the introduction to their piece (or as much as they had written at this time) by this date. This time, all of her students posted (n=36) and by February 25, most had replies to their posts. Not all students were in the same place in their writing; some were still posting their found poems, others were posting their introductions, and some were posting entire speeches, but they were posting. Figure 4.16 provides an example of the posts.
Students in the Strategies section started the semester demonstrating less engagement with the academic activities of the class than students in the Studies section. However, students became more engaged in the classroom and with their writing as the number of posts on the Ning increased. Field notes reflected this change. On February 10, 2011 I made the following note about the Strategies section, focusing particularly on James, one of the students in the class most resistant to participating in academics:

“Almost no work was done in this class today. The students were insanely distracted.”

On February 14, I noted, “The students who usually don’t work seem to engage with the idea of the Ning, but more for photos, chat., etc., not academics. James, for example, worked a bit today, but also keeps posting nonsense discussions (Chillin’, for example) to
the Ning.” By February 24, I observed students were demonstrably more focused.

“Overall, class worked well. Lots of writing was done. James was like a new student today. Worked well for most of class and made up for lost time. Posted to Ning.” This level of focus seemed to continue as students used the Ning. I noted on March 31, “Only 12 students are in this section today. James started class a bit distracted, but by the mid-point of class, he was writing and revisiting his work. When Ms. Piper gave her mini-lesson on transition words and why we use them, Roman, Brad, James, and Dee all participated, offering suggestions. After the lesson, James revisited what he had written so far and embedded transition words in his piece.” On April 14, one of the final days of the intervention, I noted, “Kids worked diligently today. James revisited his essay and finished it, writing most of it in this class period.” April 15 was the deadline for the essays students were working on, but it was also the last day of school before a late spring break; for middle school students, staying focused on academics before a vacation may be challenging. The mini-deadlines seemed to keep students involved and engaged with their writing.

Structural/organization factors that inhibited the intervention. There were also structural factors that inhibited the intervention. These factors were pressures that came from school, district, and state-wide mandates, requiring teachers to structure their classroom and teaching in particular ways, restricting their professional judgment or simply limiting instructional time in the classroom.

Common planning and assessments. Teachers in the school were required to follow a common pacing guide for all content areas. This pacing guide outlined the state
standards to be taught each marking period. Teachers were able to decide what order, within each marking period, to teach the standards, but they were tied to the standards for that marking period. Ms. Piper felt this restricted her teaching, particularly at the start of the year. In her pre-intervention interview on January 26, 2011, she discussed some of the limitations imposed by both the pacing guide and common planning.

Well this year I have been trying to, because there is no writing test and I am supposed to be focused a lot on the standards, I am trying to incorporate reading a lot more into writing workshops, and that’s been kind of interesting, so a lot of our writing has to do with what we are reading. So in those writing workshop we usually start with a lot of brainstorming, maybe days of it. Thinking, talking, different ways to think about what we are writing and then draft and we usually spend several days drafting, and then we work on revising, which is the least effective because I feel like when we co-plan it's not a priority because there is no writing test.

Teachers were also required to give common assessments, which meant not only common assignments and due dates, but the same quizzes and tests. Reading quizzes, using cold text, were required once a week by the school. At the start of the intervention, quizzes were set for Fridays, but Ms. Piper and the other 7th grade English language arts teacher, Mr. Thompson, agreed to move the quizzes to Mondays so she could use Thursday and Friday for writing workshop. Teachers constructed the quizzes themselves and shared their quizzes with one another.
Testing. Testing mandated by the school, school district, and state also impacted the intervention. Students were required to complete both benchmark tests and standardized tests throughout the intervention. Between January 26 and March 22, 2011 students took a benchmark reading test, a benchmark writing test, and the MAP test for reading and language arts, all during their English language arts class time.

Students took an untimed benchmark reading test on January 25, 2011, which for most students lasted two days, with students finishing on January 26. When students finished, they read their self-selected reading book until their peers had all completed the test. MAP testing took place on March 17 and 18, 2011 during class. Students completed a writing benchmark test on March 22, 2011. This amounts to five full instructional days, or a full week, of testing outside of the assessments given by the classroom teacher over the course of eight and a half weeks of instruction. This does not account for any time used to prepare students for these tests. After spring break, all instruction in the school was geared toward reviewing for the PASS (Palmetto Assessment of State Standards) test, which was administered the week of May 9 – 13, 2011.

Because reading was a priority for the grade level and the school, time lost to testing tended to come out of the days scheduled for writing workshop. Although Ms. Piper was committed to writing in her classroom, she was also beholden to the requirements for her grade level which clearly emphasized reading. Throughout the semester, and through the whole school year according to Ms. Piper, there was an emphasis on preparing students for the end-of-year test. Each week, students were
required to take a quiz in which they read a cold piece of text and answered multiple choice, PASS-like questions about the text, based on the state standards. These quizzes took anywhere for 20 to 30 minutes to administer. After the quiz ended, Ms. Piper would collect the student answers and whenever possible, before the end of the period, review the quiz with them to help them understand which answer was correct and why. On some days, the entire class period was used administering and reviewing the quizzes. During an informal conversation with me on April 29, 2011, Ms. Piper described these quizzes as limiting her instructional time with students; she felt the time they spent on these quizzes each week would be better spent on instruction, with less frequent quizzes to assess progress.

Standardized tests were emphasized as an essential tool in assessing student learning. To motivate students to see the importance of these tests, incentives were used to reward student improvement. Students who reached their goals on the MAP test in either reading or mathematics had grilled hamburgers cooked by an assistant principal for lunch on April 7, 2011. Students ate side-by-side in the lunch room, with some students receiving the special meal and others eating the normal lunch served. Incentives were also given to students who met their goal on the MAP test; names of students who met their MAP goals were drawn out of a hat. One students was awarded an iPod touch and another won a mountain bike for reaching his goal. Teachers were asked by district personnel to post “data walls” in the hallway at the end of March, showing student growth on the MAP tests administered in the fall and spring. The Math teacher posted her results, but Ms. Piper ignored the request.
Ms. Piper had strong feelings about the effects of testing, which she expressed in an email to me on May 1, 2011.

In addition to days of class lost to testing, we use time to goal set, and explaining to students how tests will work. So much class time is lost, and I think the effect of that is that instruction is interrupted. Depth of teaching is lost and so is momentum. It is a challenge to motivate students to enjoy reading and writing, and to engage in learning tasks with authentic objectives, when I am stopping routinely to convince students of the importance of yet another test. I think our time would have been better spent engaged in learning; students would be more motivated and more prepared with less time spent testing.

Ms. Piper’s comments illustrate how testing consumed not only instructional time on the day of the test administration, but also throughout the year, as students had their typical routine modified to accommodate the tests being given.

Other influences on instructional time were unexpected days lost in school due to weather. Due to a heavy snowstorm, students did not attend school the week of January 10-14, 2011. To make up for these missed days, students attended school April 1 and 4 and the other missed days were forgiven by the state. Students also did not attend for scheduled school holidays, January 17 and February 22, 2011. Spring break was April 18 though April 22, 2011.

**Student Factors**

The qualitative data also suggest that student factors strongly correlate to the success of this intervention. As in any classroom, some students responded more
positively to this approach, and to peer revision and writing in general, than other students. Factors such as positive attitudes toward English language arts class enhanced the intervention, as did the social aspect of the intervention. However, themes of resistance and absenteeism played a major role as well in the effects of the intervention on individual students.

**Student factors that enhanced the intervention.**

*Positive attitude toward English language arts.* Students who had a positive attitude toward English language arts class, if not writing itself, at the start of the intervention were more engaged with both writing and revision throughout the process. For example, Deandra commented in her interview on January 26, 2011 that “Writing is just fun,” and told me that, “I use writing to express myself.” Dee, another focal student, also commented that she liked to write, adding the caveat “It depends on what we are doing, what it is.” Troy reported that his favorite subjects were English language arts and social studies in school, “Social studies because I like history and ELA because I like to read.” When asked how he felt about writing, Troy reported, “I don’t love it but I like it.” These students all expressed a positive attitude toward writing from the start and their engagement throughout the intervention remained high.

Students who demonstrated less enthusiasm about writing, but overall had a positive attitude toward English language arts at the start of the intervention were more engaged in the process of writing and revision. Roman, when asked what he liked about English language arts class at the start of the intervention explained he liked writing, “..but only true stories. I like to write my stories” (Pre-intervention interview, January
Juan also explained he liked writing but was certain of what he liked to write in his interview on January 26, 2011.

Sarah: What kind of writing do you like to do?
Juan: Just writing stories, that’s it.

Sarah: Just stories, so like what kind of stories like stories about your life, fictional stories, what kind of stories are your favorite?
Juan: About what we, what we are learning about.

Sarah: Okay, can you give me an example?
Juan: Like when I wrote the picture for the Nazi thing. When I had to write about a Jewish boy, my Jewish story that’s it.

Sarah: So you like to do that kind of thing, when you take something you have read and you write your own story. What do you dislike about language arts class?
Juan: Reading.

Sarah: What is it you don’t like about reading?
Juan: What I read about, I don’t like reading about fake stories or that’s made up.

Sarah: Oh, you like non-fiction; you like to read true things. So do you write at home at all or do you just write at school?
Juan: Just write at school.

Sarah: And of all the things you write, what do you like to write best?
Juan: I don’t know.
Sarah: Are you really good at writing stories, are you really good at writing poetry?

Juan: Writing stories.

Sarah: Do you like writing stories about yourself more or writing stories about your people like fictional stories?

Juan: About other people.

Sarah: What do you think is hardest kind of thing for you to write?

Juan: Poems, poems.

Sarah: Poems, why are poems hard?

Juan: I’m just not good at them.

Marisol was also explicit in what she enjoyed writing in her pre-intervention interview on January 26, 2011.

Sarah: What do you not like to write?

Marisol: Like mini essays. What do I say? Like reviews we’ve been doing. Like the book review is okay but reviews are so...like you read something, you study it then you’ll have to write. I don’t like doing that.

Sarah: Okay. So let’s say I said to you, “Okay, we read this book. I’d like you to write an essay comparing this character to another character in a story...”

Marisol: Oh, I don’t like that. I don’t like that.

Sarah: So an academic essay is not fun.

Marisol: No.
Sarah: Okay. What if I said to you, “I want you to pick a topic and I want you find out about it and then I want you to write a paper about the topic.”

Marisol: I like that.

Sarah: That’s okay. But if I said to you, “I want you to research oil spills.”

Marisol: It depends.

Sarah: Okay.

Marisol: If the topic you say is interesting.

Sarah: Right. So depending if you like the topic or not, depends on whether you what to research it and write about it?

Marisol: Yeah.

These students were generally engaged throughout the intervention. Field notes throughout the intervention indicated that on most days, these students were involved in some aspect of the writing process. For example, on March 4, 2011, my field notes included references to each of these students actively engaged in some aspect of writing throughout class. For students in the Studies section, I noted:

Marisol worked on Gabriela’s speech today, reading it and offering her feedback on the Ning. This took her most of class. From time to time, she’d turn to Gabriela and ask her a question, and then go back to her work.

Troy, Deandra, Tanya, and Noelia were all at a table together, working together on their speeches. Deandra performed her speech as part of the revision process, making changes as the other students stopped her ad made suggestions. Noelia
seemed distracted when she first started the class period, but sitting at the table with Deandra, Troy, and Tanya working hard helped her to start working as well.

Juan reviewed and commented on Michael’s piece and Michael did the same for Juan. Juan is now adding more information to his piece.

Dee, a student in the Strategies section, also was engaged with her work during this time period. On March 4, 2011, my field notes reflect Dee’s continued interest in writing.

Dee has written a good bit today. She also commented on Darren’s paper, but had to do this on paper rather than on the Ning, because Darren refuses to use the laptops. Dee didn’t seem to mind; she just made her comments on Darren’s paper using some post-its and gave it back to him. She then took comments from Linda and started revising her piece.

On the flip side, students who did not enjoy writing may have struggled more through both the writing and the intervention. Brad, a student in the Strategies section, is an excellent example of this struggle. In his pre-intervention interview on January 26, 2011, Brad conveyed a conflicted view of both writing and himself as a writer.

Sarah: Okay, and what is your favorite subject in school?

Brad: Probably ELA.

Sarah: Probably…?

Brad: ELA.

Sarah: ELA. Why do you like ELA?

Brad: Because you don't have to always…like…think so hard to do everything.
Sarah: What do you mean? Can you explain?

Brad: Like there's no complications in it like...you don't have to always think so hard to do anything. You just...it's writing. It's easy.

Sarah: So, writing for you is easy?

Brad: Yeah.

Sarah: You just can do it.

Brad: I just don't like to do it.

Sarah: So, why don't you like to write?

Brad: Because if I write essays and stuff it's hard for me to think about how I'm going to start an essay and like how I'm going to end it and stuff like that.

Sarah: What about when you write like a story about yourself?

Brad: That's pretty easy, but other stuff like writing...stuff about other people like...famous people or stuff.

Sarah: Like research paper kind of stuff is harder.

Brad: Yeah, it's hard.

Sarah: Alright. If you could say one thing you love about English Language Arts class what would it be?

Brad: The...typing up stories. That's fun to me like the Holocaust thing. It was fun.

Sarah: Okay, and if you could say one thing you just do not like in English Language Arts class what would it be?

Brad: Writing essays.
Sarah: Okay. So, writing like academic essays?

Brad: Yeah.

Sarah: Those are not fun for you?

Brad: No.

Sarah: Alright. Of all the things you write, what do you think you write best?

Brad: I don't really know.

Sarah: I guess probably what you like is what you do best? Do you think you write that best? Do you think the fictional stories and the ones about your life are your best work?

Brad: Yeah. Fictional, yeah, and the stuff about my life. It's easy because I know it and stuff like the essays, I really don't know so they're harder.

Although Brad says he finds writing to be easy and doesn’t require a great deal of thought, he also clearly struggles with writing in school and these struggles were visible in the classroom as well. My field notes reflect Brad’s difficulties with writing throughout the semester, but also reflect the power of his positive attitude about English language arts. Below are excerpts from my field notes that document his struggles as a writer, but also reflect a commitment to learning and his teacher, Ms. Piper.

Brad struggled to get started today. The class is taking notes for their research person and Brad couldn’t find much, even with assistance from Ms. Piper. He was clearly frustrated. By the end of class he had no notes and promised to work on it at home (February 3, 2011).
Brad is still frustrated by the lack of information he can find. He sat and essentially pouted for a portion of class. Finally he got to work and did write some notes and cited a source (February 4, 2011).

Brad is behind the other students in his research, but he did well getting online today and managed to post what he had to the Ning (February 15, 2011).

Brad read an article on Dabo Swinney, the subject of his research, provided to him by one of his related arts teachers and wrote one sentence of his introduction in class. He did pull a great quote to get started. He returned after lunch, with permission from his related arts teacher, and wrote an introduction for his speech and posted it to the Ning (February 24, 2011).

Brad worked on giving Corinda feedback during class today and returned during related arts again to continue to work on writing his piece (February 25, 2011).

Brad was absent all week (March 4, 2011).

Brad was wearing a new outfit today in school and it was a new look for him; shorts worn very low and a thick gold chain added to his usual ensemble. He seemed very upset and agitated at the start of class, pacing through the classroom and having a difficult time getting himself in a seat for the first few minutes of
class. When the stem review began, he started participating and settled into class. He was supposed to rehearse his speech today, but he didn’t do that. He mostly tried to chat with James and some of the other boys in class (March 10, 2011).

Brad struggled to get started today, but participated in the transition mini-lesson and read some of his piece, with transition words added, aloud (March 31, 2011).

Brad is behind, again, on his essay. He has an awesome idea, but he is worried it is too personal to post on the Ning. His topic is “I Believe in Making Mistakes” and he is really struggling to get started. It bothered him the entire class period that he felt he was behind the other students. He even tried to write a poem rather than an essay (April 6, 2011).

Brad is still stuck. He has a list of ideas, but couldn’t get started in class. He and Adam returned during related arts and worked on their pieces. Brad made some progress, but doesn’t have a lot of ideas to back up his assertion at this point (April 13, 2011).

Brad finished his essay. He posted it today and asked for suggestions from his peers. So far, his feedback has been informal, from Ms. Piper and myself, as we helped him when he came in to write yesterday during related arts (April 14, 2011).
Although Brad struggled throughout the writing process, his persistence and positive attitude about English language arts is clearly evident. He chose, on multiple occasions, to leave a related arts class in which he excelled (technical drawing) with the permission of the teacher to return to his ELA class and continue writing, and writing the type of pieces he least enjoyed. Brad remained engaged in the process, despite his struggles.

Social bonds/friendships. The intervention was also enhanced by the strong social bonds students felt toward their peers and the friendships they formed with their classmates. Students genuinely seemed to care for one another, as a whole, and this led to not only a civil discourse in the online environment, but in their interactions with one another in the classroom. Students were willing to help one another with their writing throughout the intervention and students were tactful in their responses to one another. For example, Gabriela and Marisol were part of a close knit group of friends in class together. Marisol offered Gabriela feedback on her writing but she was careful in her tone. She wrote, “Gabriela, Gabriela. You and your spelling. Fix this up girl. I luv [sic] your speech!!!!!!!!!!!” (Classroom artifact, March 4, 2011). There was a sense of community that developed in this classroom and friendships between students seemed to strengthen those social bonds. Perhaps because the teacher exhibited genuine concern for her students and urged them to be kind to one another (see the following section titled Teacher Factors), students were generally kind to one another in their academic interactions.
Students who had personal conflicts with one another still offered meaningful feedback and suggestions to one another. Although Ms. Piper and I had been concerned that students might refuse to work together, as they had in face-to-face groups prior to the intervention, the Ning seemed to eliminate that issue. For example, Jack and Roy did not get along and Jack had been vocal in the past in his refusal to work with Roy. On the last assignment, however, Roy and Jack were asked to help one another and did so without debate or comment. Roy, who struggled himself with writing, spent most of a class period reviewing Jack’s piece and offered numerous suggestions (see Figure 4.17). Jack reviewed Roy’s piece and offered suggestions as well (Figure 4.18). Any animosity between the students was not evident in their work and they seemed to be committed to improving one another’s writing.

Figure 4.17. Roy’s comments on Jack’s essay.
Students described the impact of social bonds on the feedback they offered peers as well. Brad felt as thought the feedback he received on the Ning was better than that he might get sitting face-to-face with one of his peers. In his mid-intervention interview, he discussed this briefly.

Sarah: What do you think about sharing using the Ning to share your work?

Brad: It’s cool.

Sarah: It’s cool?

Brad: Yeah, because people give you honest feedback and stuff like that.
Sarah: Did you think you get more honest feedback on there than you would if you would if you were talking to them face-to-face?

Brad: Yeah.

Sarah: You do?

Brad: Yeah,

Sarah: Why do you think that is?

Brad: I don’t know, but I know you do (March 11, 2011).

Dee also felt her peers were giving her valid, honest feedback when they were online.

Sarah: Alright, so, when you think about that [the peer revision process], was posting your feedback on the Ning helpful?

Dee: Yes

Sarah: Okay, so, what kinds of things made it helpful?

Dee: Just where they would…they’d be more honest and stuff and I think they would give you more helpful comments on the computer than in person (March 11, 2011).

Students also described their own role in the feedback process, explaining their role was to help their peers. Deandra’s description of the student’s role in the feedback process was grounded in the social cues that surround her daily.

Deandra: Oh, like, okay, you should think about what would make…like if you look at somebody else’s you say, “What would make this standout?” You know? Make people like, “Oh, I want to listen to this.” And so, you just say that and then like, “What would I like?” Because sometimes what you like is what other people
would like and then you say, “What would other people like too?” And then…so you think about how many friends you have and how they are and then you say, “Okay, what do they like most?” And so you just say, okay, then say to the person saying it, “Here is a way you can change it.” Like Rachel’s, like she liked how I started in the beginning so I said, “Well, you can do it too.” And then so like I said, “You should put more attitude in it because Coco, she’s not quiet. She has attitude.”

Sarah: And Rachel had attitude when she read it too. So that was a very concrete suggestion you gave her. So, as another student, your job is to give people real suggestions like “You can do this. Here’s an example.”

Deandra: Yeah (March 11, 2011).

Marisol explained her thoughts as to why she felt feedback on the Ning was often better than the feedback offered face-to-face, as well as her role in offering her peer’s feedback on their writing.

Sarah: What do you think is an advantage of using technology to give comments?

Marisol: You don't waste your breath and it’s like I don’t know…

Sarah: So, you say what you mean and that’s it?

Marisol: Yeah because like, sometimes you don’t have a question, and you don’t want to tell them to their face.

Sarah: Okay.
Marisol: For like those in the technology they know who you are and they know what you mean. You write what you mean and they know who you are so you obviously are going to write something that you’ve identified as a problem, so…

Sarah: Do you think it is easier to tell them in writing than it would be to say it in their face?

Marisol: Sometimes, sometimes yeah.

Sarah: It’s hard sometimes to tell somebody you can’t understand something because you don’t want to hurt their feelings.

Marisol: Yeah.

Sarah: So what do you think is the student’s job when we do peer revision? What is your job as a student?

Marisol: Look up words, try to use…I don’t know how, try to help them the best you can in like – trying to make sense.

Sarah: Okay, how about when you are giving people feedback, what is your job?

Marisol: To be honest.

Sarah: Okay.

Marisol: And not to lie to them, and try to be as polite as you can (March 11, 2011).

Marisol demonstrated her concern for others and desire to give honest feedback, but not hurt the writer’s feelings, in her think-aloud protocol on March 25, 2011. After she had carefully gone over the speech I gave her to make comments on, reading it twice and making comments throughout the document, she began to review her suggestions with
me verbally. This led me to ask if she preferred offering suggestions in person or online.

Sarah: When you comment on other people’s writing, do you prefer to type comments or do it face-to-face?

Marisol: I like sometimes face-to-face. Because like they might, if you write it, they might if they are mad at that point say it in a different attitude than you meant it. Like when I said...where’s it at...when I said, like “You mean that your big accomplishment was that with the cells some scientist took out of you” – like some people might read that as if I said it in a mean way. But it’s not meant that way.

Sarah: They might think you are being sarcastic, but you’re not.

Marisol: They might read it like that, sarcastic, but you don’t mean it like that. I like that when I write it, I can think about it, take some time before I write it and think about it before I write it, but once you’ve said it, you can’t take it back.

There’s advantages both ways. I wrote it and then I thought about it again, and then I thought, that sounds mean, so I went up and talked to you to make it clear.

This level of honesty also required a degree of trust and caring among students.

In his pre-intervention interview, James mentioned his reluctance to share his work with his peers if he did not know them well.

Sarah: What if I partnered you with somebody? What if I say to you...you’re sitting by this person, will you swap with each other?

James: Oh, yeah, I’ll swap with her.

Sarah: You’ll swap with them, but you don’t want to share with the whole class?
James: Well, I share with the whole class but...if I know everybody in class.

Sarah: Okay.

James: Because it’s like some of the class... I don’t know everybody in there yet (January 26, 2011).

James had been in the class since August, but still felt there were members of the class with he didn’t know. However, by his mid-intervention interview, James was clearly feeling more comfortable with both his classmates and sharing his writing.

Sarah: Okay, so, what about using the Ning to share your work. Did you like that, not like that?

James: Yeah, I like that.

Sarah: What things did you like about it?

James: How you can send like a friend request like Facebook. What I didn’t like about it when you had to go and post all that stuff for the blog, we had to go and browse it and save it on the forum. It took too long.

Sarah: So, you thought it was hard to post on the forum, it took awhile. Okay and then how often did you use it?

James: I probably used it every day.

Sarah: Okay and then what kind of activities did you do on it? You said you friended people with it, what other things did you do?

James: I put the speech in there three times. I probably sent a couple of messages to Mario....

Sarah: How would you change the way that we give feedback in class now?
James: I would say I won’t change it.

James posting work for his comment was a change from his pre-intervention stance on peer revision and seems to be tied to the community developed in the classroom.

**Student factors inhibiting the intervention.** Although positive attitudes and strong social bonds enhanced the effectiveness of the intervention in encouraging peer revision and engagement with writing, other student factors clearly inhibited classroom instruction in general and the intervention specifically.

**Resistance to schooling.** Despite the positive classroom environment that I observed, I also observed a number of students in each class who were resistant to not only writing, but school in general. In the more dramatic cases of resistance, these students were sent to an alternative school for exhibiting disruptive or dangerous behaviors throughout the school day on a regular basis. In the Strategies section, three students were sent to an alternative school during the course of the intervention and one had just returned from the alternative school immediately prior to this study.

Aside from these extreme examples of resistance, there were also daily examples of resistance to instruction within the classroom. In my observations in December, I saw a striking example of resistance to writing in Ms. Piper’s Studies section.

In the Studies class, there is a group of three boys who read like demons and won’t speak to anyone (or do anything else). While the rest of the class was finishing a quickwrite, these boys silently read, ignoring everything going on around them. They read the entire class, refusing to participate in any other activity. Ms. Piper told me that one of the boys (Michael) doesn’t speak at all,
and doesn’t write at all. The other two will write and participate occasionally, but often just ignore any direct questions and return to their books (Field notes, December 6, 2010).

Although these boys were resistant to schooling, I also observed Ms. Piper speaking to them directly, asking them questions, and trying to nudge them toward participation. By the time school let out in December, two of the three boys were writing in class. Michael continued to remain silent.

Resistance to schooling was sometimes less quiet than this example and involved disruptive behaviors. James, one of the focal students in the Strategies section, was a model of resistance to writing, and sometimes schooling in general, throughout the study. Although James was a proficient reader and did not seem to struggle with writing, my field notes reflect James’s lack of interest in English language arts. The following excerpts illustrate James’s resistance.

The second Strategies section today was tough; the students were out of sorts and most students got little accomplished. James sat with Mario and Damion and they laughed together the whole class period, even after Ms. Piper split them up (December 7, 2010).

Albert and Damion were very serious in offering one another feedback today on their hero definitions. They sat together and tried to use the TAG technique. James really didn’t want to work. James refused to work with Larry—there was some kind of personal conflict there. He paired himself with Albert and Damion
to make sure he got good feedback, but offered little feedback to his partners (January 21, 2011).

James really didn’t want to work. He finally gave up and started taking notes on his topic and his notes seemed thorough (February 4, 2011).

James did almost no work in class today. The students were insanely distracted. I talked to Ms. Piper about James, who seems to be setting up the two boys he sits with to distract the rest of the class and walking away from the chaos he creates. Ms. Piper spoke with him today after lunch and told him she thought he was causing issues with other students in class. To avoid working, he seems to stir up trouble with Mario and Damion and then smiles and walks away. He can work very quickly, so at the last minute he’ll work for five minutes and say he is done. It may be time to split this group into separate tables (February 11, 2011).

James worked beautifully today. He was engaged in writing and worked on his found poem (February 14, 2011).

James was like a new student today. Worked well for most of class and made up for lost time. Posted to Ning (February 24, 2011).

James worked with another student on revisions on the Ning, but he spent most of
the class sending emails to students in the class and working while he waiting for their responses (February 25, 2011).

James was absent (March 3 and 4, 2011).

James was sent out of class today to recovery, toward the start of the class, for refusing to participate and disrupting class. He returned in the last ten minutes, having written something in recovery, and posted to the Ning (March 10, 2011).

James started class a bit distracted, but by the mid-point of class, he was writing and revisiting his work. When Ms. Piper gave her mini-lesson on transition words and why we use them, Roman, Brad, James, and Dee all participated, offering suggestions. After the lesson, James revisited what he had written so far and embedded transition words in his piece (March 31, 2011).

James spent the start of class counting his T-Wood Cash to see if he had $100 to go to the reward party tomorrow. After establishing he had $75 and asking how he could get more in class today, he started his quiz. His essay had been focusing on something about drug dealers and I thought he was starting to get somewhere with it, but today he refused to work on it. He started an entirely new essay and wrote two paragraphs very quickly in class today (April 13, 2011).
James revisited his essay and finished it, writing most of it in this class period (April 14, 2011).

James’s quote about how he used the Ning in his mid-intervention interview reflected his resistance to academics.

Sarah: What things did you like about it?
James: How you can send like a friend request like Facebook. What I didn’t like about it when you had to go and post all that stuff for the blog, we had to go and browse it and save it on the forum. It took too long.
Sarah: So, you thought it was hard to post on the forum, it took awhile. Okay and then how often did you use it?
James: I probably used it every day.
Sarah: Okay and then what kind of activities did you do on it? You said you friended people with it, what other things did you do?
James: I put the speech in there three times. I probably sent a couple of messages to Mario….(March 11, 2011).

In fact, James sent many messages to other students when given the opportunity. Rather than using the Ning for academic purposes, he engaged with it primarily for personal and social reasons. Given James’s overall resistance to writing and schooling, this level of engagement was an improvement over his complete lack of engagement in December.

Ned provided another window into resistance to schooling, and writing in particular. Field notes indicate he was one of the three boys in December who would
only read and refused to write. My field notes also indicate that rather than write, Ned would sabotage the technology he could use for writing. I noted on February 25, 2011, “Ned is resistant to any writing. So far I’ve watched him say he doesn’t have a pencil, he lacks paper, or his computer is broken to get out of writing.” On March 3, 2011 I noted, “Ned refuses to work. He has computer issues everyday.” On March 4, 2011, my field notes reveal Ned as a saboteur.

Ned sat in a seat today that had a laptop on the desk. The laptop had worked the period before. He claimed it did not work and got another. After three laptops failed to work, I went over to investigate. I discovered that Ned was hitting a key that would send the laptops into some kind of repair mode. After figuring out what key to hit to move them into the regular start up mode, the laptops all seemed to work.

As the deadline for his speech arrived, Ned finally decided to write. On March 10, 2011, I noted, “Ned finally wrote today!” Ned’s resistance to writing lessened after this point and he worked diligently in class when it was time to write for the remainder of the intervention.

Although the examples provided thus far are of male students, female students were also resistant to reading and writing in the classroom. Their resistance tended to be less overt, and often took the form of remaining quiet and pretending to work. For example, Noelia, one of the focal students who enjoyed writing, had a week where she seemed distracted and did little work in class. Field notes from this time period (February 15 through February 24, 2011) indicate she was distracted and could not seem
to engage with her writing. For example, on February 24, I noted:

Noelia is really struggling still. Today she is distracted by the Ning. She spent most of the period friending people and giving gifts. I sat beside her for a few moments and asked her what was happening and she said she was confused. I re-explained what we were working on and she seemed to get started. I returned a bit later and she was back on the Ning, looking at people’s pictures they posted as their icons. I asked her again how it was going and she switched back over to her writing. She wrote a paragraph by the end of class today.

Noelia discussed this period of time in her mid-interview with me, when she talked about how she felt assignment had gone.

Noelia: At first I thought, like the speech, at first I thought I’m very, like, I was like happy to do it and then like at middle of it, I was like, kind of got tired or something, I don’t know what happened to me, I started slacking but now, like, that everyone finished and I read people’s speech out, like, I need to get back on track, so, that’s what I’m working at.

Sarah: Okay, so, you kind of, you got tired in the middle?

Noelia: No, not tired, maybe like, I was like, “I don’t wanna work,” I was like that (March 11, 2011).

Noelia’s resistance to writing, although less striking than some of the examples of the others in the classroom, was clearly evident to both an observer and to herself.

Although resistant students did occasionally disrupt the class, most often student resistance took the form of a refusal to engage with the work at hand. Students sat
silently, or quietly, in their seats and waited for class to end. Some students, like Ned and Noelia, were able to reengage and other students, like James, reengaged with writing for periods of time, fluctuating between becoming participants in their own learning and refusing to work. Ms. Piper expressed her frustration with student resistance in an informal conversation with me on March 3, 2011. We discussed the struggle she was feeling as a teacher, as she attempted to engage all of her students, and she commented, “Sometimes it seems like only half are really trying!”

Absenteeism. Student absenteeism also had inhibited the effectiveness of the intervention. Students who were regularly absent struggled to keep up with their peers and were often unable to make up any of the work they missed. Roman and Brad both had periods of extended absences, resulting in less time spent writing and revising. Over the course of the study, Brad missed two full weeks of school and had occasional absences as well. Roman missed a week and a half of school when he was injured outside of school. These absences disrupted both students learning. In his mid-intervention interview, Brad explains how he dealt with the time he lost in class for writing.

Sarah: I know you missed some school.

Brad: Yeah, I missed for a week.

Sarah: So, you had to really make up some lost time right?

Brad: Yes.

Sarah: So, what did you do to get through that?

Brad: Worked on it in class when we weren’t supposed to.
Sarah: Okay. Alright, and what did you -- so, how did you know when you are done with your speech?

Brad: I'm not through yet (March 11, 2011).

This interview took place after the deadline for the speeches, and Brad seemed to be struggling to finish. His absences also affected the feedback he received from others. When asked about the feedback he received from another student, he noted, “Well, see at the time I really I wasn’t that far into my speech so she just commented on it about what it was like. She didn’t actually give me many suggestions or anything.”

Field notes from this study also reflect some of the challenges that arose when students were absent. For example, on February 11, 2011 I noted “Deandra is behind on her speech, as she was absent Monday through Wednesday of this week and the students spent some time working on it earlier in the week.” On February 25, 2011, I wrote, “Absences are becoming a major issue for learning in this class [Strategies section]. Keisha just returned to school after being absent for two full weeks.” On March 3, 2011, my notes reflect what often happened when students returned from a long absence:

Roman is back after a long absence – over a week. He really didn’t do much work today. He was goofing around with Ronny for a good part of the class. He did post to the Ning so others could look at his speech.

Upon their return, students were often not only behind in their work, but were less engaged with their writing specifically and academics in general when they first returned. Each long absence seemed to be followed by a settling in period, where students had to readjust to the structures and pacing of the school day. For this study, this meant students
received less feedback from their peers on their writing, offered less feedback to peers, and had less time for both writing and revision.

**Teacher Factors**

Teacher factors played a large role in this intervention. The qualitative data from this study suggests that the teacher is a major force in successfully increasing student revision in their writing and the overall quality of student writing. The teacher factors enhancing this intervention fit into several major themes: commitment to writing, openness to new technologies, and reflective practices.

**Teacher factors that enhanced the intervention.**

*Commitment to writing.* The teacher’s commitment to writing was evident throughout this study. Ms. Piper employed a writing workshop approach to instruction in her classroom, although she expressed feeling constrained in her ability to focus on writing. She described the emphasis on reading and its impact on her instruction this way:

Well this year I have been trying to, because there is no writing test and I am supposed to be focused a lot on the standards, I am trying to incorporate reading a lot more into writing workshops and that’s been kind of interesting so a lot of our writing has to do with what we are reading. So in those writing workshop we usually start with a lot of brainstorming, maybe days of it. Thinking, talking, different ways to think about what we are writing and then draft and we usually spend several days drafting, and then we work on revising, which is the least
effective because I feel like when we co-plan it's not a priority because there is no writing test (Pre-intervention interview, January 26, 2011).

Although Ms. Piper was working in an environment in which writing was not considered a priority, she continued to have students write and was willing to take risks in order to have her students write over time. When I observed her class prior to the intervention, students were writing an expository piece they had been working on for several weeks, devoting two classes per week to writing. To accomplish this, Ms. Piper had to cut the amount of time devoted to sustained silent reading in English language arts class, but as students read for thirty minutes every morning, she felt this was an appropriate use of class time. To accomplish this, she and her grade-level English language arts partner both agreed to reduce their reading time and increase their writing time, as they planned together, as well as agreed upon the genre of the writing students would complete. Ms. Piper was willing to do this, because she valued writing. She described her hopes for the intervention in terms of her students.

I'm hoping that they’ll start to see themselves as writers, as somebody that has something to say to their peers and you know part of that reason they might like that since too is because we do so much of our writing around our reading and I don’t think that’s as personal or is, I don’t think that builds your identity as a writer. It's really school-ly, so maybe it will do that for them (Pre-intervention interview, January 26, 2011).

Ms. Piper also demonstrated her commitment to writing in the structure of her approach to writing instruction, in which she gave students the space and time to not only
write in class, but to revise in class as well. Throughout the intervention, she set aside
time in class for students to post, wherever they might be in the writing process, to respond to one another, and for students to revise their work. She also encouraged students to talk to one another as they wrote and ask each other questions. Prior to the intervention, she described learning in her classroom this way:

It depends on the day, I would say there is a lot going on a lot of different things, people at a lot of different places. You would see laptops; you would see kids with books, kids online. I think you would see kids talking to each other and to me and probably asking for help (Pre-intervention interview, January 26, 2011).

Ms. Piper also talked about how students worked together when they wrote:

I see a lot of my kids helping one another. I don’t think they see it as, I’m not sure they know that they are really helping but it’s a great thing. I see them as they go asking questions - how do you spell that, how do you space your dialogue- a lot of that kind of thing, technical things that are slowing them down. I think it helps them, they keep going, than they ask a question to their neighbor, then they keep writing.

This emphasis on social interaction aligns closely with socio-cultural learning theory, which views learning and meaning-making as a social act (Vygotsky, 1978) and informs writing theory, which emphasizes writing as a constructive practice influenced by social, linguistic, and cultural contexts (Britton, 1975; Freedman, Dyson, Flower, & Chafe, 1987; Graves, 1978; Moll & Greenburg, 1990). Employing a workshop approach to instruction facilitated the intervention, as students were able to work at their own pace
but also receive feedback from one another and the teacher throughout their writing processes, not only after they had completed a draft.

Ms. Piper was also felt strongly that students need to develop as writers to be successful not just as students, but in their lives outside of school as well. She saw writing as more than a skill. She described the importance of writing in response to an email I sent, in which I asked, “Why is it important for students to learn to write well?”

I think students need to learn to write well because writing is a skill they will use all their lives: from getting a job to emailing a boss. I want my students to have the skills they need to go to college, and being able to express thoughts in writing is one skill that separates those prepared from those who aren't. I feel like writing in various genres is enjoyable. Each new genre shows students another lens through which to view life. The variation in thought process creates flexible thinkers. Writing teaches my students to reflect on who they are and what they think about the world; through learning to write we learn to hash out our thoughts and express ourselves. I believe writing empowers my students to express themselves. I want them to be able to write formally so there is no audience that is intimidating. This skill opens doors. I want my students to know that their opinions, ideas, and experiences are valuable. Writing shows them that their voice is worthwhile. In middle schools, as students are developing their identities, writing helps them discover their unique voices, builds confidence, and helps students deal with obstacles they face (May 2, 2011).
This commitment to writing was evident in Ms. Piper’s willingness to assist students with their writing outside of class. Linda, a student in the Strategies section, came to Ms. Piper’s class every Friday afterschool for an hour to work with her on her novel. Linda, independent of school, had started a novel and was posting it regularly online on a site for teen writers. Prior to posting her pieces, she would bring them in and have Ms. Piper look at them and discuss the piece with her, asking for suggestions and making revisions. Ms. Piper worked with Linda nearly every week and looked forward to it. This was above and beyond the scope of her contractual obligations as a teacher and demonstrates her commitment to helping her students develop as writers.

Ms. Piper was available to students before school as well, and gave students a sticker for their ID badges, allowing them to come to her classroom anytime after 7:30 in the morning, any day of the week. She arrived early each day so she could greet and work with any students who chose to come to her classroom. She also used her second planning period, which was the period designated for teacher planning and administrative tasks, to work with students. Brad, for example, spent two planning periods, when I was present (February 25, 2011; April 6, 2011) with Ms. Piper, writing and periodically asking for feedback. Adam, another student in one of Ms. Piper’s Strategies sections, came during her planning period as well when he had very little written and was feeling stuck (April 6, 2011). Ms. Piper was able to use this time to work with these students individually for more extended periods of time than she could in class.

Finally, each piece that was posted on the Ning was read by Ms. Piper and received feedback from her. She did this for two reasons: to ensure each student received
feedback from someone and to model feedback for students. Over the course of the 13 week intervention, 376 posts were made to the site with pieces of writing attached. This does not include emails sent to Ms. Piper by students who either could not access the Ning for some reason that day or simply forgot to post their work. Ms. Piper responded to each student personally, with suggestions for improvement. Her suggestions were specific and modeled what she hoped students would do as well. Figure 4.19 shows a conversation between Ms. Piper and a student as the student is trying to put together her ideas before she begins writing. Figure 4.20 shows feedback offered to a student in the final stages of her writing. This data illustrates Ms. Piper’s willingness to spend time with her students engaged in writing and talking about writing and a commitment to writing in her classroom.
Figure 4.19. Conversation during the pre-writing stage between Ms. Piper and a student.
Openness to new technologies. Ms. Piper’s openness to new instructional practices, particularly those that incorporated digital technologies, was evident in her practices throughout the study. Prior to selecting Ms. Piper’s classroom as a site for the study, I spoke with her at some length about using the laptop computers in her room for writing and posting to an online environment. I learned that Ms. Piper had used blogs and Nings previously in her classroom for various purposes and she was currently the school web master. This information led me to believe she would be comfortable integrating technology into her classroom instruction. I also knew, from my own experiences working with Ms. Piper outside of her classroom, that she might be described as “tech savvy;” Ms. Piper was familiar with most basic software as well as proficient in using more complex multi-media authoring software, like MovieMaker and iMovie.
During the intervention, Ms. Piper exposed to me to some new online tools as well. In her advisory period, she was faced with a dilemma; some of the students in advisory needed extra help in math, science, English, or social studies and were effectively using this time to get the help they needed. However, there were also students who did not need extra assistance at that moment in time. Ms. Piper tried to engage the students who were not struggling in completing enrichment activities, but these students seemed to feel they were being given extra work. In December, she asked for and received permission to allow students in her advisory class to use Gamestar Mechanic, an online site that teaches students to build their own video games. Students who did not have outstanding assignments in any of their core classes were able to use this site. Set up as a game itself, students work through various levels, repairing broken video games to unlock new tools for building their own game. Players begin each level by reading their mission and then players embark on fixing the “broken” games, using critical thinking and analysis and learning the fundamentals of game design while playing. Ms. Piper reasoned this would be an engaging activity for students, something they could return to throughout the year and work on at home if they enjoyed it, while sharpening their analytical and critical thinking skills. The social studies teacher on her team also started using the site during his advisory time. Ms. Piper seemed confident her students would benefit from this experience, despite her limited experiences with the site, and was comfortable turning to her students as experts for this experience.
When asked about her concerns regarding the intervention, and specifically any problems she thought might arise using an online community for writing, Ms. Piper was concerned not about her own technology skills, but those of her students.

I think I may be concerned about the lowest ones, that they will have such…that the technology barrier might exist for a while and kind of slow them down or that they won’t get it enough to participate as quickly as we want. I think it’s gone well in the past using Nings for reading so I think it's going to go well overall (Pre-intervention interview, January 26, 2011).

In the same interview, she also expressed concern that in the past, her students had not had access to technology, despite the availability of laptops and wireless Internet in every classroom in the school. Ms. Piper noted, “I know there are more laptop issues, probably they didn’t get to use the laptops as much in the past, things like that, so there is a lot more to teach them.” Her positive approach to her students lack of experience (“there is a lot more to teach them”) permeated all her interactions with students who lacked experience with digital technologies.

Throughout the intervention, she expressed positive comments about the technology students were using and the results she was seeing in her classroom. In an email to me on February 16, she expressed enthusiasm for the Ning.

We enjoyed posting on the Ning today. I see such motivation and a real sense of audience (I think from the combination of realizing these speeches will be performed and the Ning posting). I think that kids are excited to get feedback about something they are really going to have to perform.
On February 25, 2011, Ms. Piper sent me the following email, responding to a request I had sent to her for the list of rules students had made for the Ning in their classes.

Thanks so much for your help today! I think this Ning is really helping the kids see themselves as writers. I wish I had a video of them making those rules today. I see them taking ownership. I just realized I forgot to email you the PowerPoint when I was at school. I'm sorry. I will send it Monday.

In our mid-intervention interview, Ms. Piper continued to embrace technology as a valuable tool for writing.

I think its gone really well. I think that the posting is great and its super beneficial to just have someplace where they can put it and see one another’s writing and keep up with it, know that someone’s reading it. It’s a great way to get give feedback. I think it took it a while, there was definitely a learning curve at the beginning that was slow but worth it I think. And I think even that learning, like learning how to put in a comment, teaches you that it’s worth it to put in the comment. Even while you’re using that technology, I think that was an okay way to spend our time. I know that they’re sometimes not totally on task on there but I feel like in order to have the community that has to happen at some point like you have to feel like you’re in the community, you know? So I haven’t felt like that’s been a big distraction, probably just a good thing that they leave each other little gifts and stuff (March 11, 2011).

This openness to using technology and willingness to spend time allowing students to learn to use the technology effectively enhanced the intervention, as students were given
the time to learn to use the tools given to them effectively and received support from both the teacher and their peers throughout the process.

_Reflective practice_. The data also suggest that Ms. Piper often examined her own practices with a critical lens and looked for ways to improve instruction for her students. This reflectivity enhanced the intervention, as it helped to uncover issues that arose and allowed us to make modifications as necessary throughout the intervention.

Ms. Piper clearly watched her students and noted gaps in their learning. For example, in her pre-intervention interview, she noted some of the issues students were having when they gave each other feedback on a piece of writing.

Sarah: Do your students give each other feedback on their writing?

Ms. Piper: As they write, I’ve seen them doing that.

Sarah: And do you think it’s effective?

Ms. Piper: Yeah I think they help each, I think that is effective, I think there is more they could do though, you know like going to the heart of what they are writing, I don’t see as much or did you think that was a good sentence, or an interesting sentence or could you combine these sentences, I haven’t heard lot of those conversations (January 26, 2011).

Ms. Piper was not satisfied with the cursory feedback students were offering one another, but was also unsure of where to go next to improve their feedback practices. Throughout the intervention, my field notes indicate she worked to adjust her instruction to meet her students’ needs. For example, Ms. Piper and I both noted that some students struggled
with pairings when they were working face-to-face. Excerpts from my field notes from January 21, 2011 reflect this struggle.

Some students struggled with whom to pair with – an issue between James and Larry led to them NOT pairing. Students self-grouped by ability level and gender to an extent; resistant to pairings with weaker students or less serious students; girls tended to pair with girls, and boys with boys.

Ms. Piper noted the same issues and at the end of the day, Ms. Piper suggested we might want to have students begin offering feedback to one another on the Ning sooner, to reduce some of these tensions. Ms. Piper’s suggestion led to a modification in our intervention, reducing the amount of time spent teaching students to offer feedback to one another face-to-face and spending that time teaching students to offer feedback to one another online.

At the mid-point of the intervention, she reflected on how things were going now that students were using the Ning to offer one another feedback.

Sarah: How would you describe your overall feelings about writing at this moment in time?

Ms. Piper: I think this I feel a lot better about it than I did the first time - the first time we had the interview - because I feel like they are taking over ownership of their writing, enjoying it more and hearing that they’re writers a lot more than they were before. I still see like long gaps and places where they need to go further. Places where in their writing that just doesn’t make sense. Places where
you know they’re not thinking about their audience at all, but that issue is a lot less of a problem than it was before.

Sarah: When you say you see them thinking like writers, what are you seeing them do?

Ms. Piper: Like conventions I see in their writing that they weren’t using before, thinking about how you put your words on paper. I see them having conversations about if a piece sounds right or finding more information to put into it. Devante said to me today, “I read this and I think I missed that.” Like he noticed that it didn’t make sense and said “I’m going to go change it.” And I was like, “Great idea!” He wasn’t doing that before. He was just putting things on paper, hoping for the best.

Sarah: So they have a sense that somebody is going to read this?

Ms. Piper: Yeah someone’s going to hear this and it’s mine and I want it to be good rather than I just want an okay grade, yeah.

Although Ms. Piper saw some improvement in student work, she continued to reflect on the assignments she was asking students to do, thinking about ways to restructure assignments in the future to better facilitate student learning.

I would change the first piece of writing they did, I just was trying too hard to include reading and mix it all together, and I think it just made it a bad assignment. And I like how we started adding more deadlines; I probably would have done that sooner. I probably, I’d do it all year if I could. I would like to see if they were able to go, not all the time, but on occasion, I wonder if at this point
if I could say you can write what you’d like to write, if having that structure on the Ning would make that work and make them really take ownership of being a writer, because I don’t think they could have done that in the beginning of the year, but I think they might be able to now, so I might do that (Post-intervention interview, April 28, 2011).

This constant reflection and asking questions about her practice and its connection to student learning added an additional analytical lens to the intervention (teacher lens, as well as researcher lens) and led to timely modifications throughout the intervention.

**Technological Factors**

As the intervention focused on the use of an online environment for peer revision and collaboration, it is not surprising that data suggest a number of factors related to the use of technology as both enhancing and inhibiting the intervention. Technological factors that enhanced the intervention included perceptions of playfulness and visibility of progress. However, the qualitative data suggest a lack of support and an emphasis on delivery of instruction also played a role in the intervention, perhaps inhibiting progress toward the goal of increased student revision and improvement in the quality of writing.
**Technological factors that enhanced the intervention.**

*Perceptions of playfulness.* Qualitative data suggest that technology, specifically the Ning, offered students an online space that felt more playful than the spaces they typically explored and occupied during school hours. Without exception, the focal students interviewed described their feelings about the Ning in positive terms. For example, Brad said, “It’s cool” (Mid-intervention interview, March 11, 2011) and Jose commented, “It was good, because you could post things and everybody could see it and…everybody could write something about it beneath your comment” (Post-intervention interview, April 28, 2011).

When pressed for what they liked about using the Ning, the majority of students made some reference to Facebook. The following excerpts from the mid-intervention interviews reflect this connection.

Sarah: What do you like best about it [the Ning]?

Brad: How it’s sort of like Facebook (March 11, 2011).

Sarah: What things did you like about it [the Ning]?

James: How you can send like a friend request like Facebook (March 11, 2011).

Sarah: All right. So, what did you think about using the Ning to share your work?

Marisol: Its fun, it’s like Facebook (March 11, 2011).
The feeling that this was a space where students could be more playful while at school is also reflected in students use of texting language in their electronic communications with one another on the Ning. Throughout the school day, students were told to use Standard American English in their communication with both teachers and one another. In the rules set by students, they specifically addressed using texting language on the Ning, sanctioning its use as a mode of communication. Students developed and recorded the class rules themselves, and the student recording the rules in the Strategies section chose to use the informality of texting language to make his point: “Yu cn use txt language 4 cmts” (February 25, 2011). The data suggest students followed this rule. Texting language is evident in their informal communications with one another on the Ning, but is largely absent from their more formal writing assignments. Figure 4.21 shows posts by students, featuring this informal language. The Ning offered them a space in which they blended their use of Standard American English with their own vernacular, including writing using texting language, slang, and for bilingual students, Spanish.
The playful tone of the Ning was also reflected in students’ choices of monikers for themselves in the online space and the pictures they chose as icons. Some students changed their names as they used the Ning, perhaps trying on new identities for themselves. Many students changed the picture on their icon multiple times. The following is a sampling of pseudonyms students used on the Ning: Tankhead, fallen_dark_$;angel, LaShawn, teryiki, CHINO, ~gummyboo~, starburst, thuget, blackhawkdow67, and Wakko. Figure 4.22 shows just a few of the pictures students chose to represent themselves on the Ning. These pictures ranged from religious figures to professional athletes to cartoon characters to recording artists. Other students chose to use pictures they had taken of themselves, usually using their cell phones, and upload those to the space. This constant shifting of identities sometimes posed a challenge to both the teacher and myself, as we tried to match students with the work on the Ning, but
did not seem to confuse students, who were able to find one another’s work when a peer asked them for help.

![Student-selected icons and nicknames on the Ning.](image)

*Figure 4.22. Student-selected icons and nicknames on the Ning.*

Field notes suggest students used the Ning as a way to communicate with one another, as well as for academic purposes. For example, on February 24, 2011, I noted:

Noelia is really struggling still. Today she is distracted by the Ning. She spent most of the period friending people and giving gifts. I sat beside her for a few
moments and asked her what was happening and she said she was confused. I reexplained what we were working on and she seemed to get started. I returned a bit later and she was back on the Ning, looking at people’s pictures they posted as their icons.

A modification that was made early on in the intervention was to turn off the Status Updates feature available on the Ning. Field notes from February 7, 2011 indicate that Alex, a student who was highly resistant to school in general, began posting inappropriate Status Updates, which appeared on the Home page of the Ning. Ms. Piper and I decide that we would turn the feature off, as it might prove too large a distraction for some students. However, Ms. Piper and I chose to leave the email feature available to students, allowing them to communicate with one another in a way that was not visible to everyone in the class. Although this gave students an opportunity to be off-task in class, we felt it was important to maintain the social aspect of the online space. Howard’s (2010) concept of remuneration informed this decision, as we wanted to provide students with a satisfying and engaging experience. There were days when this proved to be a distraction for particular students. For example, field notes from February 24, 2011 indicate James spent the bulk of the period sending emails to other students through the Ning, while he was working on his speech. Ms. Piper recognized this use of the Ning for non-academic purposes as well and discussed it during her mid-intervention interview.

I know that they’re sometimes not totally on task on there but I feel like in order to have the community that has to happen at some point like you have to feel like you’re in the community, you know. So I haven’t felt like that’s been a big
distraction probably just a good thing that they leave each other little gifts and stuff (March 11, 2011).

This awareness of student’s need for social interaction likely helped maintain the feeling that the Ning was a space that allowed for play, as well as for the academic work of the classroom.

**Visibility.** Technology afforded one of the most influential factors in the success of this intervention. The visibility of both student revisions, through the track changes feature on Microsoft Word, as well as through comments to one another using both the comment feature in Word and the Ning, made the work of both composition and revision visible to not only the teacher, but the students themselves. Data from interviews with students, interviews with the teacher, field notes, and think-alouds suggest that the visibility of work was an important factor in student revision.

To help students see the changes they were making to their texts, Ms. Piper taught them how to use the track change feature in Microsoft Word. The week of February 7, Ms. Piper demonstrated how to use track changes and comments in Microsoft Word and asked students to save multiple drafts as they revised their work. On February 15, 2011, my field notes indicate that track changes seemed to make a difference in the amount of writing and revision occurring in the Studies section. I noted,

Students are starting their second draft (adding more information from new sources) of their found poems. Juan has been working with the track changes on, adding new information from his notes and this is the first time I’ve seen that.
With track changes on, I saw more revision than I had seen in all their writing to date.

Although I was often present when students were writing, I was not there every time they worked on writing in class. Ms. Piper also noted that she was seeing more revision when students started using the track changes feature. In our mid-intervention interview on March 11, 2011, we discussed factors that she thought were leading to improvement in student writing.

Sarah: We talked about some of the mini-lessons. What other factors do you think led to these changes [in student writing]?

Ms. Piper: Track changes I think was awesome. The fact that it’s posted on the Ning and somebody’s going to read it and reading other people’s I think helped a lot because they would see well that looks not so good.

Later in the interview, Ms. Piper mentioned the track changes feature again.

Sarah: Are there students you have been particularly surprised by in their writing or responses?

Ms. Piper: Yes I think I’ve seen a lot of work out of some kids who I haven’t seen that kind of effort.

Sarah: Okay.

Ms. Piper: I see, I think that track changes thing, I love that. I just think there are kids who went back and put thought into their writing that I have not seen and I couldn’t figure how to make them go back and, you know, I’d say, “Well there’s
not really any periods. Where could we put those?” and then never see changes.

So I think from a lot of kids, Cesar definitely, like Alfonso today.
The visibility of track changes came up again in our post-interview. “Tracking the
changes I think was so motivating and helped them to see the ways their writing
changed” (April 28, 2011).

Students also appreciated the visibility afforded them by technology. Brad was a
student who struggled as a writer throughout the intervention. Prior to the intervention,
Brad talked about his writing process.

Brad: Sometimes I don't write drafts though like rough drafts. I don't write those
like…

Sarah: You just go straight to the final draft?

Brad: Yeah (January 26, 2011).

Later in the interview I asked him if he shared his writing with other people and he
responded, “Not a lot.” When I asked him what it meant to revise, he responded, “I think
it means like go back and see what you did wrong, what you misspelled and stuff like
that.” When I asked him to describe the types of suggestions he gave his peers about their
writing, he responded, “Like what they've misspelled and stuff.”

On March 25, 2011, Brad participated in a think-aloud protocol. He read the cold
text I gave him and made comments and suggestions using the track changes and
comment features in Microsoft Word (see Figure 4.23). After he finished making his
suggestions, Brad and I had the following conversation.

Brad: I think this is most the most comments I ever did! For real!
Sarah: Why do you think that is?
Brad: I think because that now that I can see how people have helped me, I can help other people in that way.
Sarah: So the next time we do this in class... do you think you'll end up doing this, giving this many comments, next time?
Brad: Yeah. Now that people has [sic] actually helped me in a way that actually helps, other than giving me like, “I like this such and such,” when they help me like, like I have you, then it helps me help other people. In that way.
Sarah: Sure, because you see what helps you, so you might be able to help them?
Brad: Exactly.

Figure 4.23. Brad’s comments and suggestions on a piece of cold text.
Other students talked about the value of being able to see the comments people made as well. Troy found it helpful to be able to go back and revisit comments when revising his writing.

Because like if I get a comment off the Ning that's like something that like I can remember to do, because it's on there, but if you're doing it face to face like you can forget to do it sometimes (Post-intervention interview, April 28, 2011).

Troy also recognized he learned from other students’ feedback.

Troy: Somebody writes me with feedback, that's something else I can tell somebody else, because their writing could be similar.

Sarah: So, it helped you see how you might give people feedback?

Troy: Yeah (Post-intervention interview, April 28, 2011).

Data suggest technology enabled students to make their thinking visible to one another and encouraged students to make changes to their writing, resulting in more revision. It also offered students models for peer feedback, which students found helpful during the peer revision process.

**Technological factors that inhibited the intervention.**

*Lack of support.* Although the school had a one-to-one laptop initiative, the laptops in Ms. Piper’s classroom were between four and five years old. As the intervention progressed and the use of laptops increased, the need for repairs increased. For example, around the middle of February, keys began coming off the laptops at an increasing rate. This was not due to misuse; the computers were simply aging. As computers needed repair, Ms. Piper sent them to a part-time technology staff member
from the school district. At the start of the semester, my field notes indicate that laptops sent in for repair were returned within about a one-week time frame (February 15, 2011). By the end of the intervention, laptops that were sent for repair were not returning. This was because the laptops were no longer under warrantee, so any laptop that required repair beyond reimaging or replacing a key was not repaired and was taken out of service. According to Ms. Piper, any repair that was deemed to be the result of student vandalism or an accident would also not be fixed unless it was an inexpensive repair, such as a broken key. For example, a student dropped a laptop on the way to his desk during the week of April 6. The screen broke and that laptop was not repaired.

At the start of the intervention, Ms. Piper had about 22 functional laptops in her room available to students. Because there were as many as 24 students in the Studies section, Ms. Piper was able to borrow laptops from a teacher across the hall when she needed them. By the end of April, there were approximately 15 functional laptops in Ms. Piper’s room. Because she needed to borrow so many laptops, she was unable to borrow them from a single teacher. On April 6, 2011, my field notes indicate that Ms. Piper was sending students to other spaces to work on their writing. One teacher on Ms. Piper’s hallway had laptops that were less than a year old, the reward for completing an extra course in the summer. Because these were among the newest laptops in the school, this teacher would not allow them to leave the room. However, Ms. Piper was able to send students to this room during her class to use the laptops. These students were able to sit in the class and write, but to accomplish this had to work independently and ignore any instruction that might be happening in the class at the time. Other students were sent to
the media center to use the computers there. Because Ms. Piper approached writing using a workshop model, this detracted from instruction; students who were not in the room were unable to conference with Ms. Piper. Ms. Piper also had fewer insights into the needs of all of her students when some of the students were not present during writing time. Ms. Piper was concerned about this development. In her final interview, she noted

Sarah: What were obstacles you faced using the Ning for revisions?
Ms. Piper: Those computers.
Sarah: Those computers?
Ms. Piper: Those computers breaking, having to send students other places to work (April 28, 2011).

Leaving students to work independently was far from ideal and inhibited Ms. Piper’s ability to scaffold and target instruction to improve student writing.

*Emphasis on delivery of instruction.* Data also suggest that technology was typically used in the school for delivery of instruction, rather than following a model of integrating technology to enhance instruction. At the beginning of the intervention, students were asked when they had access to computers in schools. All students interviewed indicated they had access to computers in two teachers’ classrooms: Ms. Piper’s classroom and Mr. Monroe’s social studies classroom. Ms. Piper described the way the laptops were typically used for instruction in her pre-intervention interview.

They use [the computer] to word process, we use PowerPoint a lot as an organizational tool, we email, use websites, we research in small chunks. We also
use them in testing. In a lot of classes I guess mostly they are online to test

(January 25, 2011).

This matched the projects students shared with me throughout the intervention as well, as recorded in my field notes. For example, on April 6, 2011, Ronny was writing about immigration policy in the United States. While I was talking to him about what he might write next, he told me he was going to refer to the Universal Declaration of Human Rights as evidence for why policy in the United States should change and pulled up a PowerPoint he had created in Social Studies to use as a reference. However, students did not refer to using the computers at all in science or math classrooms, except to take tests.

Administrative support for using the laptops was focused on test-taking. Due to budget constraints, benchmark tests in the school were delivered to students via Moodle. All quizzes and tests were also given online, with students often answering the questions on their own paper. As Ms. Piper indicated, for some classes this was the primary reason the laptops were used.

Teachers were encouraged to closely monitor student use of the laptops, particularly if there was a risk students might download music or visit an inappropriate web site. On December 7, 2010, I observed the assistant principal remove a student from Ms. Piper’s class, and the student was promptly suspended. When he returned the following week, I asked him if he had been ill as I was unaware of the suspension. He reported he had been suspended for downloading music and was off the computer for a month. During the intervention, a few other students also lost their computer privileges for periods of time. The week of March 24, 2011, Ms. Piper informed me she had been
called into the principal’s office to discuss the use of laptops in her room. A student she taught had downloaded music twice, allegedly during the time s/he was in her class. No one had informed Ms. Piper of the issue the first time the student downloaded music and she was only told after the second incident. She was never told which student downloaded music or when it actually happened. At this point, the principal asked her to stop using the laptops in her classroom for the remainder of the year. Ms. Piper argued for their use and explained the importance of using the computers for instruction in her classroom. After some debate, and with the support of her assistant principal, she was able to keep using the laptops, but all students from this point forward had to sit in a way that allowed her to monitor all the screens from the back of the room. The principal envisioned her sitting as a monitor, watching students screens as they received instruction from the computer, rather than the way Deandra, a student in Ms. Piper’s class, envisioned instruction in English class.

Sarah: What about the teacher’s job? What do you think their job is?

Deandra: I think their job should be just more to supervise and say, “Okay, that’s a really good idea. That’s a good idea,” because we’re kind of growing up now and so we should be able to…because we did this in every grade wherein they give us a topic to write about and so, like I think we should be more like, “Okay, you can decide” and then let the children decide and let the children kind of work on it together, and then teachers be like supervisors and then if a child has a question that they can’t answer on their own then there’s the teacher. The teacher
should be like a coach, coming to help you and give you advice when you need it.

(March 11, 2011).

This vision of a teacher as a monitor and computers as a way to deliver instruction inhibited the intervention, as students were denied access to the laptops as a form of punishment and Ms. Piper had to alter her classroom instruction to some degree to satisfy the requirements set forth by school administrators.

Evidence of Progress toward Pedagogical Goal

Prior to the intervention, I gathered quantitative and qualitative data as a baseline to determine if the intervention was advancing the pedagogical goal, increasing the amount of revision in students’ writing and improving the quality of their writing. During the intervention, I gathered qualitative data to ascertain progress toward the goal and after the intervention, I gathered both quantitative and qualitative data again to compare to the baseline data. Pre- and post- quantitative data were compared to complement the qualitative data in making inferences, not to establish a causal relationship between the intervention and the quantitative results as an experimental study. To gauge the increase in revision over time, I examined qualitative data (classroom artifacts, electronic communications, focal student think alouds, field notes, and writing samples).

Quantitative Data.

Analytic writing continuum scores. Pre- and post-intervention writing samples (n=30) were analyzed using a paired samples t-test. The results of the scored writing samples (Table 4.4) indicate statistically significant differences (alpha = .05) between the
pre- and post-writing samples overall, as determined by the holistic score, as well as across six attributes: content, structure, stance, sentence fluency, diction, and conventions. Figure 4.24 illustrates the pre- and post-intervention mean scores by attribute for all students in this study.

Table 4.4

*Pre- and Post-Intervention Means and Standard Deviations for Student Writing Samples*

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Pre-Mean (SD)</th>
<th>Post-Mean (SD)</th>
<th>Gain (SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic</td>
<td>2.65 (.948)</td>
<td>3.98 (.713)</td>
<td>1.333 (.874)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Content</td>
<td>2.683 (1.0296)</td>
<td>4.12 (.907)</td>
<td>1.4333 (.944)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Structure</td>
<td>2.45 (.834)</td>
<td>3.90 (.736)</td>
<td>1.450 (.959)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Stance</td>
<td>2.55 (.874)</td>
<td>4.23 (.728)</td>
<td>1.683 (.969)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sentence Fluency</td>
<td>2.50 (.891)</td>
<td>3.87 (.706)</td>
<td>1.367 (.937)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Diction</td>
<td>2.58 (.983)</td>
<td>3.80 (.651)</td>
<td>1.217 (.971)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Conventions</td>
<td>2.55 (1.028)</td>
<td>3.73 (.679)</td>
<td>1.183 (.951)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Figure 4.24. Mean attribute scores for student writing samples pre- and post-intervention.

When examined as individuals, twenty-eight out of 30 students showed overall growth between the pre-writing sample and the post-writing sample, represented by the holistic score, as illustrated in Figure 4.25. Two students received the same holistic score pre- and post-intervention.
This intervention occurred across two sections of the course and involved students who were deemed to be below-grade level (Strategies section) and on-grade level (Studies section) as determined by the school district, based on their performance on the nationally-normed Measures of Academic Progress test (MAP) and the end-of-year state test. The results of the pre- and post-intervention analysis by paired t-tests of scored writing samples by section (Tables 4.5 and 4.6) also indicate statistically significant differences between pre- and post-writing samples. Figures 4.26 and 4.27 show the pre- and post-intervention mean scores by attribute for students by sections (Strategies and Studies).
Table 4.5

*Pre- and Post-Intervention Means and Standard Deviations for Student Writing Samples in the Strategies Section*

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Pre-Mean (SD)</th>
<th>Post-Mean (SD)</th>
<th>Gain (SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic</td>
<td>2.15 (.580)</td>
<td>3.95 (.725)</td>
<td>1.800 (.789)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Content</td>
<td>2.15 (.580)</td>
<td>3.950 (.7246)</td>
<td>1.8000 (.7528)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Structure</td>
<td>2.05 (.497)</td>
<td>3.90 (.699)</td>
<td>1.850 (.818)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Stance</td>
<td>2.15 (.530)</td>
<td>4.40 (.843)</td>
<td>2.250 (1.007)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Sentence Fluency</td>
<td>2.150 (.6687)</td>
<td>3.90 (.658)</td>
<td>1.7500 (.8580)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Diction</td>
<td>2.050 (.5986)</td>
<td>3.70 (.789)</td>
<td>1.6500 (.9733)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Conventions</td>
<td>2.050 (.7246)</td>
<td>3.600 (.6146)</td>
<td>1.5500 (.5986)</td>
<td>&lt;= .001</td>
</tr>
</tbody>
</table>

Table 4.6

*Pre- and Post-Intervention Means and Standard Deviations for Student Writing Samples in the Studies Section*

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Pre-Mean (SD)</th>
<th>Post-Mean (SD)</th>
<th>Gain (SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holistic</td>
<td>2.90 (1.008)</td>
<td>4.00 (.725)</td>
<td>1.100 (.837)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Content</td>
<td>2.950 (1.1110)</td>
<td>4.20 (.992)</td>
<td>1.2500 (.9934)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Structure</td>
<td>2.65 (.905)</td>
<td>3.90 (.771)</td>
<td>1.250 (.980)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Stance</td>
<td>2.75 (.953)</td>
<td>4.15 (.671)</td>
<td>1400 (.837)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Sentence Fluency</td>
<td>2.68 (.950)</td>
<td>3.85 (.745)</td>
<td>1.175 (.936)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Diction</td>
<td>2.85 (1.040)</td>
<td>3.85 (.587)</td>
<td>1.000 (.918)</td>
<td>&lt;= .001</td>
</tr>
<tr>
<td>Conventions</td>
<td>2.80 (1.081)</td>
<td>3.80 (.715)</td>
<td>1.000 (1.051)</td>
<td>&lt;= .001</td>
</tr>
</tbody>
</table>
Figure 4.26. Mean attribute scores for student writing samples, pre- and post-intervention, Strategies section.
Figure 4.27. Mean attribute scores for student writing samples, pre- and post-intervention, Studies section.

Figures 4.28 through 4.39 show individual scores on the writing samples before and after the intervention, by attribute, for each student. For clarity, student scores are shown by section (Strategies or Studies). Individually, only two students decreased on any attribute, and each of these two students decreased .5 points on a single attribute.
Figure 4.28. Content scores by student on writing samples, pre- and post-intervention, for students in the Strategies section.

Figure 4.29. Structure scores by student on writing samples, pre- and post-intervention, for students in the Strategies section.
Figure 4.30. Stance scores by student on writing samples, pre- and post-intervention, for students in the Strategies section.

Figure 4.31. Sentence fluency scores by student on writing samples, pre- and post-intervention, for students in the Strategies section.
Figure 4.32. Diction scores by student on writing samples, pre- and post-intervention, for students in the Strategies section.

Figure 4.33. Conventions scores by student on writing samples, pre- and post-intervention, for students in the Strategies section.
Figure 4.34. Content scores by student on writing samples, pre- and post-intervention, for students in the Studies section.

Figure 4.35. Structure scores by student on writing samples, pre- and post-intervention, for students in the Studies section.
Figure 4.36. Stance scores by student on writing samples, pre- and post-intervention, for students in the Studies section.

Figure 4.37. Sentence fluency scores by student on writing samples, pre- and post-intervention, for students in the Studies section.
Figure 4.38. Diction scores by student on writing samples, pre- and post-intervention, for students in the Studies section.

Figure 4.39. Conventions scores by student on writing samples, pre- and post-intervention, for students in the Studies section.
The results of a Repeated Measures Analysis of Variance comparing the Strategies Section to the Studies section (Table 4.7) revealed no statistically significant differences (alpha=.05) in gains in scores between the two sections.

Table 4.7

Revised Measures ANOVA: Strategies and Studies Sections

<table>
<thead>
<tr>
<th>Score</th>
<th>Source of Variation</th>
<th>Df</th>
<th>F Ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>1</td>
<td>2.164</td>
<td>.152</td>
</tr>
<tr>
<td></td>
<td>Error (between)</td>
<td>28</td>
<td>2.164</td>
<td>.152</td>
</tr>
<tr>
<td>Holistic</td>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occasion</td>
<td>1</td>
<td>83.062</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>Group x Occasion</td>
<td>1</td>
<td>4.840</td>
<td>.036</td>
</tr>
<tr>
<td></td>
<td>Error (within)</td>
<td>28</td>
<td>4.840</td>
<td>.036</td>
</tr>
<tr>
<td>Content</td>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>1</td>
<td>2.710</td>
<td>.111</td>
</tr>
<tr>
<td></td>
<td>Error (between)</td>
<td>28</td>
<td>2.710</td>
<td>.111</td>
</tr>
<tr>
<td>Structure</td>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occasion</td>
<td>1</td>
<td>72.808</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td>Group x Occasion</td>
<td>1</td>
<td>2.368</td>
<td>.135</td>
</tr>
<tr>
<td></td>
<td>Error (within)</td>
<td>28</td>
<td>2.368</td>
<td>.135</td>
</tr>
<tr>
<td>Stance</td>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>1</td>
<td>.486</td>
<td>.491</td>
</tr>
<tr>
<td></td>
<td>Error (between)</td>
<td>28</td>
<td>.486</td>
<td>.491</td>
</tr>
<tr>
<td>Stance</td>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>Occasion</td>
<td>1</td>
<td>110.897</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Group x Occasion</td>
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<td>6.014</td>
<td>.021</td>
</tr>
<tr>
<td></td>
<td>Error (within)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fluency</td>
<td>Occasion</td>
<td>1</td>
<td>68.653</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Group x Occasion</td>
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<td>2.653</td>
<td>.115</td>
</tr>
<tr>
<td></td>
<td>Error (within)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Diction</td>
<td>Occasion</td>
<td>1</td>
<td>53.450</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Group x Occasion</td>
<td>1</td>
<td>3.216</td>
<td>.084</td>
</tr>
<tr>
<td></td>
<td>Error (within)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Conventions</td>
<td>Occasion</td>
<td>1</td>
<td>50.105</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>Group x Occasion</td>
<td>1</td>
<td>2.331</td>
<td>.138</td>
</tr>
</tbody>
</table>

**Attitudes toward writing.** Students’ attitudes toward writing, as measured using the Writing Dispositions survey (n=34), showed moderate gains, although only an increase in confidence was statistically significant, as represented in Table 4.8. In this survey, a 1 represented strong agreement or a positive stance, 3 was a neutral stance, and 5 represented strong disagreement, or a negative stance.
Table 4.8

*Means and Standards Deviations for Students’ Scores on the Writing Dispositions Survey*

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-Mean (SD)</th>
<th>Post-Mean (SD)</th>
<th>Gain (SD)*</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>3.02 (1.386)</td>
<td>2.58 (1.173)</td>
<td>.441 (1.347)</td>
<td>.001</td>
</tr>
<tr>
<td>Passion</td>
<td>3.32 (1.287)</td>
<td>3.24 (1.188)</td>
<td>.088 (1.189)</td>
<td>.388</td>
</tr>
<tr>
<td>Persistence</td>
<td>2.93 (1.145)</td>
<td>2.89 (1.258)</td>
<td>.039 (1.281)</td>
<td>.758</td>
</tr>
</tbody>
</table>

*To simplify reading this chart, the absolute value of negative number has been used.*

**Qualitative Data**

Throughout the intervention, qualitative data suggested progress toward the pedagogical goal of both increasing the amount of revision and improving the quality of student writing. Interviews with the teacher and focal students, think-alouds with students, writing samples collected mid-way through the intervention, electronic communications between students, field notes, and informal conversations with the teacher and students consistently pointed toward increased revision and improvement in the quality of student writing.

**Enhanced definitions of revision.** Both mid-intervention interviews with focal students and my field notes suggest students developed more complex and nuanced definitions of what it meant to revise their work as the intervention progressed. For example, on March 3, 2011, Albert offered the following definition of revision to the class. “Revision is where we think about questions people asked and try to answer them. We look up more facts and add more information.” This was a departure from the initial definitions of revision offered by many students in our focal interviews.
Dee provides another example of an enhanced definition of revision. In our pre-interview, I asked Dee what it meant to revise and she responded, “To look over and see what…mistakes you made or something” (January 26, 2011). In our mid-interview, Dee explained revision as “To make sure the spelling’s right and all that and make sure it makes sense and make sure you are not boring and you still have their attention or something” (March 11, 2011). She expanded her definition of revision even further by the end of the intervention, explaining revision meant, “To check spelling and see if it makes sense. If it confuses you or something, you might want to change it or something. Add more information or take information out or rearrange it” (April 28, 2011).

**Evidence of revision.** Data from field notes, teacher interviews, classroom artifacts, and electronic communication between students provided evidence of increased revision in student writing. My field notes from observations of the classroom in December do not demonstrate much evidence of revision. On December 7, 2010 I noted,

One student, Javon, asked me to read his piece of so far. He had very little written and he wanted help correcting his spelling. I made the comment that he might consider focusing on the content of his piece first and he said, ‘What’s content?’

Field notes from later that month indicate some revision happening in the Studies classroom. “This class had quite long pieces written and were able to revise and edit, particularly adding vocabulary words to improve their word choice” (December, 14, 2010).
As the intervention progressed, more evidence of revision appeared in my notes.

The entries below demonstrate some of the revision evident in the classroom.

Dee is very focused and has created a good draft of her found poem. Today she worked on a second draft, adding more information (February 11, 2011).

Students are starting their second draft (adding more information from new sources) of their found poems. Juan has been working with the track changes on, adding new information from his notes and this is the first time I’ve seen that. With track changes on, I saw more revision than I had seen in all their writing to date (February 15, 2010).

Troy was very focused at the start of class. He and Joel were sitting together, working. Troy revised his introduction making the revisions suggested by others and adding some new content. He seemed stuck for what to put in the second body paragraph (February 24, 2011).

Dee spent most of class today working on revisions for other students, sending suggestions. She takes her time as she makes comments (February 25, 2011).

Deandra was making progress today, working diligently with Rachel. She was looking up information and adding to her speech on Etta James and then she and
Rachel would read sentences to one another aloud to see what the other person thought (March 3, 2011).

Marisol is working away. She was stuck with one paragraph. And I saw Gabriela turn to her and tell her to tell her what she wants to say. Marisol does. Gabriela then said, ‘You just write that down. You just have to do the work of writing that down.’ Clearly working through difficult spots together. Good partners (March 4, 2011).

Teacher interviews also indicated revision increased during the intervention. In our mid-intervention interview, Ms. Piper revealed some of the revision she was seeing in the classroom.

Like conventions I see in their writing that they weren’t using before, thinking about how you put your words on paper. I see them having conversations about if a piece sounds right or finding more information to put into it. Devante said to me today, “I read this and I think I missed that.” Like he noticed that it didn’t make sense and said “I’m going to go change it.” And I was like, “Great idea!” He wasn’t doing that before. He was just putting things on paper, hoping for the best (March 11, 2011).

In an email to me on March 31, 2011, Ms. Piper also mentioned some of the revision she was seeing, both as a class and with individual students.

Sarah,
8th period got excited about transitions! Really. I'm attaching the tracked changes. They were concerned about making John's voice sound authentic. "A man on the Oregon Trail would not say currently," Deandra said. "Is John educated?" Vonnie asked.

The students added transitions to their writing from yesterday, and were excited to share. I felt like they were using natural transitions, but stepping out and trying some new transitions as well. We talked about how our transitions help the reader know where you are going and how your ideas are connected.

I loved that when we started revising, Gabriela and Marisol started reading to one another. Lots of the kids were conferencing about their transition words.

Thanks for a great lesson idea!

In our final interview together, Ms. Piper again mentioned seeing more revision than she had seen in the past with her students.

Sarah: So what did revision look like last semester, not in January but September to December, what did revision look like in your classroom?

Ms. Piper: That’s a good question. There wasn’t as much revision because we were supposed to not, we’re supposed to be reading all the time. We weren’t writing (Post-intervention interview, April 28, 2011).

Finally, student posts on the Ning, using the track changes feature in Microsoft Word, revealed that students were posting and revising throughout the writing process. Figures 4.40 through 4.43 show evidence of revision in Kimberly’s work. Students wrote
multiple drafts and revised them using feedback from peers and the teacher throughout the intervention.

![Graphic Organizer]

**Figure 4.40.** Kimberly’s pre-writing.
Coupons, dollar tree, and goodwill

I believe in using coupons, going to goodwill and the dollar tree. My mom had taught me how to use coupons and going to the dollar tree and goodwill. Every time I go to goodwill. I always can find stuff for a dollar and it save me and my mom some money. A lot of my friends don’t go to goodwill but I do, and at the dollar tree everything there is a dollar. So I can get all the stuff I need for only a dollar. We go other places to my mom are always to tell me to use coupons and go to the clearance. I had got this make but it had cost more then I had but my mom had a coupon so then I can afford it. My mom says you have to save money because of price these days. When I am older and I have to pay bills I will be especially be using coupon and going to goodwill and dollar tree. My mom tells me she might not have food stamps and a lot of money but she has coupons and she can go to the dollar tree and goodwill.

Why is it important to save money?
Do you have to work hard for your money? Is that important?

Figure 4.41. Kimberly’s first draft.

Coupons, dollar tree, and goodwill

I believe in using coupons, going to goodwill and dollar tree. My mom had taught me how to use coupons and going to the dollar tree and goodwill. I always find stuff for a dollar and it save me and my mom some money. A lot of my friends don’t go to goodwill but I do, and at the dollar tree everything there is a dollar. So I can get all the stuff I need for only a dollar. We go other places to my mom are always to tell me to use coupons and go to the clearance. I had got this make but it had cost more then I had but my mom had a coupon so then I can afford it. My mom says you have to save money because of price these days. When I am older and I have to pay bills I will be especially be using coupon and going to goodwill and dollar tree. My mom tells me she might not have food stamps and a lot of money but she has coupons and she can go to the dollar tree and goodwill.

Figure 4.42. Kimberly’s draft, with suggestions from Roman.
Attitudes toward writing. In addition to the results from the Writing Dispositions Survey, some improvement in attitude toward writing were evident in students interviews and field notes. In our post-intervention interview on April 28, 2011,
Roman commented he felt more confident as a writer. James, perhaps the most resistant writer, conceded he liked to write in the following exchange:

Sarah: Do you like to write?
James: No.
Sarah: Why not?
James: Because I have bad handwriting.
Sarah: Okay. What if I said you can type? Then do you like to write?
James: Yes.
Sarah: What do you like to write about?

Field notes also indicate less resistance to writing overall as the intervention progressed. On April 6, 2011 I noted, “All the students in this class [Studies section] want to be on the Ning and engagement started before the bell rang. Students were logging on as soon as they entered the room and started working immediately.” This was a distinct change from the classroom I observed in December, “For bell work, the students were asked to write seven sentences as a quickwrite, using academic vocabulary to describe their self-selected reading books. Most students struggled to write even two sentences” (December 7, 2010). By the end of the intervention, students were willing to write for extended periods of time and seemed to have a slightly more positive attitude about writing and more confidence in their abilities as both writers and peer reviewers.
Summary

In this chapter, I have addressed two questions in the framework for conducting formative experiments: (a) as the intervention was implemented, what factors enhanced or inhibited progress toward the goal and (b) how was the intervention modified to better achieve the pedagogical goal? Results reported in this chapter suggest that the primary factors enhancing or inhibiting progress toward the goal fell into four categories: structural/organization factors, student factors, teacher factors, and technological factors. Within these broader categories, specific factors emerged that advanced or inhibited progress toward the pedagogical goal.

Structural/organizational factors that enhanced the intervention included physical structure, explicit time for writing and revision, and interim goals within assignments. The physical structure of Ms. Piper’s classroom, including the use of tables, facilitated peer revision, as did her scheduling of time in the classroom for both writing and revision. For longer writing assignments, the development of shorter term goals for students, a modification made during the intervention, ensured students continued to both write and offer one another feedback throughout the writing process. Student factors also enhanced the intervention, with positive attitudes toward English language arts contributing to a productive classroom environment for student writers. Social bonds and friendships between students encouraged students to share their writing and give one another constructive criticism through peer response. Teacher factors played a primary role in progress toward the goal and included a commitment to writing, openness to new technologies, and reflective practices. Ms. Piper’s commitment to the development of
her students as writers, despite pressures brought to bear on her by school and district mandates, allowed her students to write on a regular basis, with instruction targeted to improve their writing. An openness to new technology meant Ms. Piper embraced the use of a Ning as an online writing community. She was not apprehensive about having her students use an online environment to share their work, nor did she panic if the technology was not working well. Finally, Ms. Piper’s reflectivity about her practices resulted in thoughtful, timely modifications to the intervention, enhancing progress toward the goal. Technological factors also moved the intervention forward, as student engagement was enhanced by student perceptions of the Ning as a playful space within the bounds of school. The visibility of changes and comments assisted students in becoming more effective peer responders and encouraged students to make more changes in their writing.

Inhibiting factors fell into the broad categories of structural/organizational factors, students factors, and technological factors. Structural factors that inhibited the intervention included common planning and assessments for English language arts teachers and an emphasis on testing within the school. These factors limited the teacher’s time for instruction, reduced flexibility in the classroom, and restricted the teacher’s ability to deliver instruction based on students’ needs. Student factors also played a role in inhibiting progress toward the pedagogical goal. Specifically, student resistance to schooling and absenteeism were factors that inhibited students’ growth as writers and peer responders. Finally technological factors, including a lack of support for use of technology in the classroom and an emphasis on technology as a tool for delivering
instruction inhibited the intervention, reducing student access to the Internet in school and impeding instruction within the classroom.

This chapter also discussed the extent to which the intervention advanced the pedagogical goal. Quantitative data indicates students demonstrated growth in the quality of their writing, with significant gains on all six attributes of their writing, as well as their writing when viewed as a whole (holistic scores). Attitude scores showed significant growth in one area, confidence, and demonstrated little change in passion or persistence. Qualitative data also indicated that students felt more confident about their writing and indicated that students may have felt more positive about writing, based on changes in attitude voiced in focal student interviews. Qualitative data also suggests that the students developed enhanced definitions of what it meant to revise their work and the amount of revision among students increased. This data is not meant to establish causal relationships between the intervention and growth. Certainly, at least some of the improvement in students’ writing must be attributed to the instruction provided by Ms. Piper outside of this intervention. Rather, data from this investigation may be used to make inferences about the effectiveness of the intervention in advancing the pedagogical goal of this study.

In the following chapter, I will summarize the findings, describe changes to the instructional environment as a result of the intervention, and examine positive and negative unanticipated effects of the intervention. I will also discuss the limitations of this study and implications for future research.
CHAPTER 5

SUMMARY AND DISCUSSION OF FINDINGS, LIMITATIONS, AND IMPLICATIONS

In this chapter, I will address Reinking and Watkins’ (2000) final two questions in the framework for conducting formative experiments:

1. Has the instructional environment been transformed in some way as a result of the intervention?
2. What were the unanticipated effects, positive or negative, produced by the intervention? (p. 388).

Summary of the Study

Writing process theory suggests that revision is an essential component of the composition process (Flower & Hayes, 1981) and peer writing pedagogies invite learners to work together while writing for authentic audiences, including peers, and publication (Atwell, 1987; Calkins, 1986; Elbow, 1973; Graves, 1983; & Murray, 1978). However, studies suggest adolescents struggle with the peer revision process. Students reported they were not always honest in their appraisal of one another’s work, for fear of alienating peers (Styslinger, 1998; Styslinger, 2008), peer status, gender, and race may affect peer feedback (Christianakis, 2010), and teachers and students may become disenchanted with and abandon the process (Lawrence & Sommers, 1996; Styslinger, 1998). Research also suggests it may take years for high school students to develop the necessary skills to become helpful peer reviewers (Simmons, 2003). The majority of studies are situated in the context of freshman composition courses (Brammer & Rees,
2007; Carmichael and Alden, 2006; Crank, 2002; Eades, 2002; Strasma, 2009; Tomlinson, 2009). There are fewer studies examining revision in high school classrooms (Karegianes, Pascarella, & Pflaum, 1980; Moran & Greenburg, 2008; Simmons, 2003; Styslinger 1998; Styslinger, 2008) and virtually none focusing exclusively on peer revision in middle school classrooms. Research over the past twenty years has also focused on the use of peer revision with second language learners (DeGuerrero & Villamil, 1994; Suzuki, 2009; Nelson & Murphy, 1993; Tuzi, 2004; Villamil & DeGuerrero, 1998) and the use of digital technology to support peer response in college classrooms (Crank, 2002; Honeycutt, 2001; Strasma, 2009).

The purpose of this study was to determine how online peer revision and collaboration might be implemented in a middle school classroom to increase the amount of revision that occurs over multiple drafts of students’ writing and improve the quality of student expository writing. Despite strong theoretical evidence that peer revision improves the quality of student writing, evidence is lacking to support this assertion in the middle grades. No studies have been conducted exploring the use of online communities to support the revision process in middle school classrooms and no formative experiments have been conducted examining the difficulties of implementing peer revision in any form in a middle school classroom.

The current study used a mixed methods approach (Creswell, 2003) for data collection within the framework of a formative experiment. Sequential data analysis (Miles & Huberman, 1994) was used to understand how an online community could increase revision in student writing and improve the quality of writing, and retrospective
analysis was used to examine how the learning environment was transformed by the intervention (Gravemeijer and Cobb, 2006). Quantitative data were collected during the baseline phase and post-intervention to help gauge progress toward the pedagogical goal. Quantitative measures included the Writing Dispositions Survey (Piazza and Siebert, 2008) and student writing samples, scored using the National Writing Project’s Analytic Writing Continuum. Qualitative data were used to understand the factors that enhanced or inhibited the intervention and also determine progress toward the pedagogical goal. Qualitative measures included observations and field notes, teacher interviews, focal student interviews, informal discussions with the teacher and students, focal student think-alouds, electronic communications, and classroom artifacts.

In Chapter 4, the results of data analysis are discussed in detail; this chapter will focus on the transformations to the educational environment, unanticipated effects of the intervention, findings, implications, and limitations.

**Transformations in the Educational Environment**

Formative experiments, according to Reinking and Bradley (2008), are often transformative; that is, “…the intervention…is often one that has the potential to positively transform the environment for teaching and learning” (p. 21). During retrospective analysis, I considered the changes I had seen in Ms. Piper’s classroom over the course of the intervention and concluded that the educational environment in her classroom had changed from my first observations in December of 2010. One particular student, Michael, provides a compelling example of the changes evident in Ms. Piper’s classroom.
In December, my notes indicate Michael was a reader who refused to write in class.

In the [English] Studies class, there is a group of three boys who read like demons and won’t speak to anyone (or do anything else). While the rest of the class was finishing a quickwrite, these boys silently read, ignoring everything going on around them. They read the entire class, refusing to participate in any other activity. Ms. Piper told me that one of the boys (Michael) doesn’t speak at all, and doesn’t write at all (December 6, 2010).

Ms. Piper told me Michael had never spoken to her and, according to other teachers, Michael had not spoken in school in seven years. According to his mother, he spoke at home but chose not to speak in school. Michael had not completed a single writing assignment all year, although he did take notes in his notebook as required and completed quizzes and tests. Michael did not complete the assignment students wrote beginning in November and throughout the month of December that was used as our pre-intervention benchmark. He did, however, write a book review at the beginning of January, his first piece of writing all year, and we used this as his pre-intervention writing sample.

Michael continued to ignore writing, reading books in class rather than doing the research he needed to do for the first writing assignment. Despite the fact he was not one of my focal students, his steadfast resistance to writing captured my attention. On February 10, 2011, Michael joined the Ning when he was invited. He filled out his profile in the most minimal way possible (answering “Nothing” to what he wanted to tell us about himself) and joined the online community. On February 25, 2011, I noted that
Michael was reading and responding to other students’ writing, offering suggestions to them. Although his suggestions were sometimes worded abruptly (“You used right out of context. It’s "write" not "right" (Electronic communications, February 25, 2011)), he became involved with writing. Michael became our most prolific peer reviewer, responding to more posts than any other student. On March 4, 2011, I noted Michael was writing his own piece, not just responding to his peers and on March 7, he posted his piece on the Ning for comments. He revised his piece and posted a final speech on March 9. Michael continued to write and respond to his peers for the remainder of the intervention, completing the second writing assignment as well and demonstrating improvement in his writing over the course of the intervention.

Michael’s peers were initially surprised by his responses to their writing, with one student calling me over specifically to let me know Michael had offered him some peer feedback. The students were used to Michael’s silence in class, although they did attempt to engage him on the Ning. Students “friended” Michael and sent him gifts as soon as he joined the Ning and Michael reciprocated. Students were willing to engage Michael online and sent him comments about his feedback, as well as offered him feedback on his writing. The openness and friendliness students showed Michael online may have encouraged him to become a participant in the community.

Michael is just one example of transformation in the classroom. In my last few visits, I noted that every student in the room not only had a topic for his or her essay in both classes, but was at some point in the writing process working on the piece. At the start of the intervention, one of Ms. Piper’s biggest concerns was students turning in
incomplete work or failing to turn in work. On April 15, 2011, all but one of the 36 students in Ms. Piper’s Strategies and Studies sections turned in their essays on time and the essays were, in the students’ judgment, complete.

My notes also indicate students were able to work on writing for longer periods of time and they seemed more invested in the work. Ms. Piper noted this change in her post-intervention interview as well.

Sarah: So prior to the intervention like how long during a class period would they really be able to focus and write?

Ms. Piper: 20 minutes, maybe. And now they’re doing that for 40 minutes, 45 sometimes. A lot more, and more days of it, which I think makes sense to me as a writer. I’m more focused when I get into something, but sometimes I can’t get them to that point where they’re that into it, so that’s good (April 28, 2011).

In addition to more time spent writing, Ms. Piper had a long list of changes she noted in her classroom since the start of the intervention.

I think that there’s more conversation about writing, like more group learning that happens. A lot more positive feelings about writing and I think it carries over to reading, I really…I think there’s a big connection there. I’m guessing, but I feel like vocabulary becomes less of an issue when they’re writing and using, you know, thinking words all the time. What else has changed? I think they’ve take a lot more ownership throughout the year of their grades and their work and in everything, their class even, how their class runs. They learned to
pace themselves better and to focus more and I think they wanted to do write more, and that’s a good thing.

The students saw the readers on the Ning as an audience for their writing. As Troy noted in his post-intervention interview,

It gave everybody a chance to like see everybody’s writing and for everybody to just see more of their classmates, because a lot of people don't read their writing out loud and will only share with certain people, but on the Ning anybody can go read it (April 28, 2011).

Writing became a way to communicate with other people in meaningful ways, not an exercise confined to the classroom. Students were writing not just for the teacher, but for one another, and this seemed to change their view of writing. As Roman noted in his post-intervention interview, “I just feel more confident.”

**Unanticipated Effects of the Intervention**

According to Reinking and Bradley (2008), formative experiments will likely have effects the researcher may not have anticipated at the start of the intervention. Given the complexity of educational contexts and instructional practice, implementing an instructional intervention will invariably produce unanticipated effects and outcomes, some of which may be neither directly related to the interventions pedagogical goal nor anticipated by whoever theory guides the instructional intervention (p. 51).

Data collection focused on the pedagogical goal of increasing the amount of revision made by students over multiple drafts and improving the quality of expository writing.
However, analysis of this data revealed several effects that were outside the original scope of the intervention: a possibility of accelerated learning by students in how to give effective peer feedback; offering silent students a voice in the classroom; and motivation from my presence as a researcher in the classroom.

**Possibility of Accelerated Learning in Offering Peer Feedback**

Although the intervention was intended to increase revision in student writing and assist students in giving one another meaningful feedback, we did not expect students to become expert in giving peer feedback over the course of the intervention. Simmons (2003) suggested it may take years for students to become effective responders for one another, so our hope was to expose them to the process and encourage them to think more deeply about their own writing and begin asking questions beyond, “Is everything spelled correctly?” when they offered one another feedback.

Ms. Piper and I chose to teach the students a technique (TAG – Tell, Ask, Give) to frame their responses to one another’s writing. We also wanted to be sure that they knew what good feedback would look like, so Ms. Piper modeled feedback in class using TAG in a few mini-lessons and also modeled feedback on the Ning, offering each student some feedback on each piece they posted. We expected this would help students provide each other with some feedback and offer them some scaffolding as they learned to give feedback to one another.

Data collected from both interviews and think-aloud protocols suggest that making feedback visible through Microsoft Word’s track changes feature and the Ning may have accelerated students learning process. During the think-aloud protocol,
students independently focused their comments and suggestions on content and structure when offering suggestions on a cold piece of text. This was a change from the start of the intervention, when students own definitions of revision were limited to “fixing mistakes” which they defined as errors in grammar and punctuation. During our post-intervention interviews, I asked focal students what they had learned about writing from using the Ning.

Sarah: Did the Ning help you learn some things about writing, did it help you as a writer?

Brad: Yeah.

Sarah: Yeah? What do you think you learned?

Brad: Like I learned how to actually give helpful suggestions rather than just criticizing people’s writing. So, I gave helpful suggestions instead.

Sarah: And do you think it helped you with your own writing as a writer?

Brad: Most definitely.

Sarah: In what ways did it help you?

Brad: It helped me actually, since I know how to actually revise people’s work now, it helped me learn how to revise mine better than I did (April 28, 2011).

Ms. Piper also noticed the difference in her students’ comments.

I think they worked hard at it, they accomplished, they gave each other really excellent feedback, it was a lot easier than I thought it would be. I thought they would not know what to say. I think they learned to enjoy it and to really think
like a writer. I think by revising the other person’s, they really learned how to
look back at their own, too (Post-intervention interview, April 28, 2011).

Ms. Piper also noted that students seemed to have learned to offer one another effective
feedback with little scaffolding or instruction on the part of the teacher.

One thing that really surprises me about the Ning is we don’t have to say look for
this or look for that and to scaffold their revising, like a lot teachers, I think,
think you have to do, you know, like give them a revision sheet. They just
needed that structure of somewhere to put their work (Post-intervention
interview, April 28, 2011).

Although we wanted students to be able to offer one another meaningful feedback,
students outperformed our expectations for their learning, becoming more adept at
offering feedback than the existing studies suggested was expected.

**Offering Silent Students a Voice**

Another unanticipated outcome was the degree to which silent students, or quiet
students, were given voice and became participants in the classroom. Michael’s story is a
dramatic example of a student finding his voice through writing, with the Ning as his
instrument. Other quiet students were also effectively given a place to participate in
class. For example, Linda was an avid writer but generally silent during class. During
face-to-face feedback, she did not feel comfortable unless paired with a friend and then
she spoke little. However, when given space on the Ning, she commented freely on the
writing of other students, including students she did not know well. Juan was another
quiet student, earnest and a diligent writer. He was shy and as an English language
learner, he was less confident as a speaker of English. However, he did not hesitate to post his work on the Ning and used the feedback offered by his peers, as well as offered feedback to other students. Juan told me he preferred using the Ning to offering face-to-face feedback, “[b]ecause sometimes you get more nervous when you're talking to people and that way you just can write” (Post-intervention interview, April 28, 2011).

**Motivation from Having a Researcher in the Classroom**

Finally, my presence had an effect on the classroom. Although I was a regular fixture in the classroom, I was a second adult in the room who could offer students attention. Students were anxious to share their writing with me, asking me if I had read what they posted to the Ning. Nearly every time I was in the classroom one student in particular, Fernando, would say, “Yes! Ms. Hunt-Barron is here!” and within a few minutes would invite me to his desk to see what he had written so far or what he was working on. Students saw me as an audience for their writing and often asked me if I had read what they posted and what I thought about their work. Students also asked me for help when Ms. Piper was unavailable. Ms. Piper noted the difference my presence made in students’ motivation to write.

> I think having you here helped. I think having you here, you are a real audience… you’re not their teacher exactly. Also you are able to just be there for them (Mid-intervention interview, March 11, 2011).

> My presence also impacted Ms. Piper’s instruction in ways I had not foreseen. In our post-intervention interview, she revealed that having me in her classroom encouraged
her to continue when she was feeling discouraged about the progress students were making.

One thing I think is useful for a teacher, I don’t know if this is relevant, but is like having you here and looking at it like a researcher is really just useful in general, to see like…see things through somebody else’s eyes kind of. You’d think that would be more stressful because it would be like, “Oh what am I doing wrong?” which sometimes I do that to myself anyway. But it’s like nice to see, well kids are kids and they’re doing different things and they’re all going to respond differently, not like, not looking at it like “Oh, it didn’t go good!” Just looking at it differently. Asking myself what were the strengths and what happened. And being able to let go of a little bit of the structuring of it, where like because there’s some things that probably would have stressed me out if I’d been doing it by myself, like “Are they messaging, what are they messaging?” you know. But since we were doing it together, you can kind of let it go, just let things happen for a second and see if it’s a problem or not, you know. So I like that (April 28, 2011).

My presence enabled Ms. Piper to distance herself from events she might have viewed as setbacks and begin to see the strengths of her instruction, rather than focusing on perceived weaknesses. My presence also enabled Ms. Piper to take risks with her instruction, deciding to break from the expectations set out by the district and her school and allot more time for writing than was expected at her grade level.
A unique feature of this study is the close sense of partnership I had as a researcher with the teacher. We truly viewed this as a joint venture, in which we each were working toward the same goal of improving student writing. Early in the year, Ms. Piper wrote, “I have great kids this year. I'm so excited. They will be great for your project because their weakness is writing (according to the scores) and we are being asked to really push the writing. (Yay!) You are welcome whenever to observe etc.”

Going into the study, I looked to develop a positive, collegial relationship with Ms. Piper. Because we had known each other in a professional context, I worried this exiting relationship could be problematic if Ms. Piper did not feel she was a valued participant in the research (Snyder, 1992). I spent time before the study, discussing formative experiments and our goals for both the research and students with Ms. Piper. Between January 2010 and August 2010, we discussed how we envisioned such a study taking place in her classroom, our possible roles in the study, and the aims of the research, Ms. Piper was enthusiastic about the study from the start. She viewed this as an opportunity to have another teacher in the room with her and another set of hands working with her students. Ms. Piper and I both viewed this opportunity as a partnership.

**Major Findings and Implications**

In this investigation, an online community, in this case a closed online community, was established as a vehicle for students to offer one another peer feedback in an effort to increase the amount of revision in middle school students’ writing over multiple drafts and improve the quality of their writing. The results of this study are significant for several reasons: the results support findings from college classrooms that
asynchronous feedback may be an effective tool in peer revision (Crank, 2002; Honeycutt, 2001; Strasma, 2009) and the use of computers in K-12 environments may support improvement in the quality of student writing (Goldberg, Russell, & Cook, 2003; Moore & Karabenick, 1992). The results also offer support for the use of online spaces as potential academic communities of practice (Britsch, 2005; Clarke, 2009; Gunawardena, Hermans, Sanchez, Richmond, Bohley, & Tuttle, 2009). The results are not intended to be generalized to all classrooms; however, these results may offer insights to into similar classroom environments. Replication of this study across multiple environments is essential to better understand how the results may differ across contexts. The factors that enhanced or inhibited this investigation should be considered, as each holds important implications for future research. Figure 5.1 offers a visual representation of the factors that enhanced and inhibited this intervention. Each factor will be discussed separately in the sections that follow, beginning with factors that enhanced the intervention.
Figure 5.1. Factors enhancing or inhibiting the formative experiment in this investigation.

Structural/ Organizational Factors

Structural/ organizational factors that enhanced the intervention included physical structures within the classroom, explicit time for writing and revision, and interim goals within assignments. Ms. Piper’s willingness to structure and organize her physical environment and instructional time to facilitate collaboration and revision among students was critical to the success of this intervention. Existing research suggests time to write (Cutler & Graham, 2008; Graham & Perin, 2007, National Commission on Writing, 2003) and the ability to collaborate with peers (Coker & Lewis, 2008; Gere, 1987; Gere
& Abbott, 1985; Graham & Perin, 2007; Langer, 1999, 2000) are effective instructional tools in the teaching of writing. Further research is needed on the impact of establishing interim goals within longer writing assignments, which proved to be an effective modification during this investigation.

**Student Factors**

Students’ positive attitudes toward English language arts were an important factor in this intervention. Students were willing to take risks and make an effort in their English language arts class. This willingness to learn and try new things emboldened the students to share their work and work hard to improve their writing. Students had strong social bonds with their peers which enhanced the intervention, as students tried to be tactful in their feedback, but also wanted to help their peers succeed as writers. Connectedness to and engagement with school has been tied to several factors, including peer relationships (Beiswenger & Grolnick, 2010; Perdue, Manzeske, & Estell, 2009; Waters, Cross, & Shaw, 2010). This raises questions about the intervention itself. Did the intervention encourage students to forge new social relationships? Did students begin to take more risks with their writing? Ms. Piper believed that students did form some new relationships.

Sarah: Do you think the Ning has changed the way student write or communicate with one another?

Ms. Piper: I think so. I think some of them are more willing to be academic on it, which is surprising to me, like they’re willing, they might be resistant out loud but they’ll post online. So I think that, I think they were always friendly, pretty
friendly to one another, but seeing each other as real people who could help them and having a space to do that in I think is neat. I think it’s also been neat for cross class communication because there’s some kids that maybe don’t fit into their classes well or they’re the smartest one or the, you know, and they can interact with people online, so I think that’s been great (Post-intervention interview, April 28, 2011).

She also noted more risks in their writing.

I see more, a lot more attention to audience with figurative language, word choice and how they’re going to tell their story, a lot more personal risk, too. The topics they’re choosing are more interesting and risky and personal (Post-intervention interview, April 28, 2011).

These relationships and willingness to take risks may vary classroom to classroom and further research should be done to examine the effects of these social relationships and bonds between students on academic online communities.

**Teacher Factors**

Ms. Piper’s unwavering commitment to writing, particularly in the face of the factors that inhibited the intervention, allowed this intervention to proceed uninterrupted. It is unclear whether this intervention would have progressed toward the goal of increased revision and improved quality of writing without Ms. Piper’s dedication to the teaching of writing in her classroom. Ms. Piper embraced a workshop approach to writing, which includes offering students time to write in the classroom and conferencing
with students. However, this investigation encouraged Ms. Piper to increase the amount of time students spent writing during the second semester.

Sarah: So what did revision look like last semester, not in January but September to December, what did revision look like in your classroom?

Ms. Piper: That’s a good question. There wasn’t as much revision because we were supposed to not, we’re supposed to be reading all the time. We weren’t writing (Post-intervention interview, April 28, 2011).

Ms. Piper’s students were not writing for extended periods of time and when they were writing, they were primarily writing in response to reading. The second semester, the students focused on writing two days per week and the writing complemented what the students were reading, but they were not responding to what they were reading during this writing time. Ms. Piper noted a difference in their reading during this time as well.

[Students have] a lot more positive feelings about writing and I think it carries over to reading, I really…I think there’s a big connection there. I’m guessing, but I feel like vocabulary becomes less of an issue when they’re writing and using, you know, thinking words all the time.

This raises questions about the types of writing occurring in classrooms and the effectiveness of this intervention. Students wrote expository text over time throughout this investigation, and authentic mentor texts were used as models for students. Students read a number of texts in the genre in which they were writing, reading the text as writers and examining the ways the texts were crafted. Students then chose their own topics and wrote the texts in the genre. Would this intervention have been as effective if students
had been writing texts in response to what they were reading? What role did choice play in the success of this intervention? Would students have been as willing to revise essays that responded to a prompt, rather than essays on topics of their own choosing? Would they have been as willing to read and respond to each other’s essays if everyone had written to the same prompt? Understanding the role of choice and its importance in this intervention is an area that needs further investigation.

Furthermore, Ms. Piper’s openness to new technologies and her reflective practices complemented the intervention. Because technology was a key component of this intervention, the classroom teacher needed to be a teacher who was comfortable using technology as a tool for instruction and student learning. Ms. Piper was willing to take risks for her students, using technology in ways that were outside the norms of her school, and turning over control of the technology to her students. If this intervention was implemented in a classroom with a teacher less comfortable with technology, would it have been as effective? Are there prerequisite skills a teacher must have before implementing this intervention in his or her classroom? Investigations that aim for a deeper understanding of teacher factors that foster success with digital technologies and writing in the K-12 classroom are warranted.

**Technological Factors**

This study found student perceptions of the Ning as a playful space enhanced this intervention, increasing student engagement. This bolsters Prensky’s (2006) argument that students will become more engaged when instruction includes the digital skills they bring to the classroom. Students played with their identities on the space, as well as
language, often using their own version of texting language to communicate with one another. Bi-lingual students added comments to their posts in both English and Spanish. These practices reflect Gee’s (2001) description of Discourse communities as identity kits. “It’s almost as if you get a tool kit full of specific devices (i.e. ways with words, deeds, thought, values, actions, interactions, objects, tools, and technologies) in terms of which you can enact a specific identity and engage in specific activities associated with that identity” (p. 719). Alvermann (2001) asserted that Gee’s concept allows for “…multiple identity formations within different Discourses…that is, our ways of seeing, acting, believing, thinking, and speaking that make it possible for us to recognize and be recognized by others like ourselves” (p. 679). Howard (2010) noted that shared experiences, such as those participants experience in online communities, help eliminate cognitive dissonance as participants communicate with one another and develop shared socially constructed understandings (pg. 57). Students defined themselves in playful ways on the Ning, using it as a hybrid space between their academic selves and their social selves. This raises further questions of identity. Did the Ning help students to develop an academic identity for themselves? Ms. Piper suggested it did when she noted, “I think some of them are more willing to be academic on it, which is surprising to me, like they’re willing, they might be resistant out loud but they’ll post online” (Post-intervention interview, April 28, 2011). In what ways might an online community foster the development of an academic identity for at-risk students? What other identities might students adopt in an online community developed for academic purposes? Further
research on the development of academic identities through online spaces is needed, particularly focused on at-risk students in K-12 settings.

Students also exercised influence (Howard, 2010) in setting up the policies and standards of the online community themselves through the creation of rules. These rules and standards had no explicit sanctions; rather, students agreed the rules they created (see Appendix B) should be followed and students followed them. This not only gave students a sense of buy in, but contributed to the playfulness of the environment, as students gave themselves room to change their identities and play with language in their informal discussions online while maintaining a more formal tone in their academic writing. This leads to questions about working in online environment with students. Would classrooms be better served by spending more time having students create rules for online spaces than asking teachers to review pre-existing rules, often set by school districts, with students? How would students handle infractions committed by peers? Can influence be used to create safer online spaces for children and teens?

The visibility of students’ writing and thought processes enhanced this intervention. Students were able to not only read one another’s writing, but also use the comments peers made as models for their own feedback. They were also able to revisit comments peers had made throughout their writing process. The current investigation suggests that making the response and revision process visible to students is an effective way to both foster peer response and increase revision in student drafts. This leads to questions about the value of having students read their work aloud as a form of peer response, a practice encouraged in peer writing pedagogies (Atwell, 1987; Calkins, 1986;
Elbow, 1973; Graves, 1983; and Murray, 1978). Does sharing writing aloud provide a complement to sharing writing in an online environment? Are there specific phases during the writing process (generating ideas, prewriting, etc.) where sharing writing aloud is more effective than sharing writing online, as might be implied from Honeycutt’s (2001) research on asynchronous and synchronous responses to writing? Future research might examine the effectiveness of written response versus oral response in peer feedback at different points in the writing process.

**Factors Inhibiting the Intervention**

Further research should focus on examining the effects of this intervention across varying contexts. Factors that inhibited this intervention were not unique to this classroom, but are factors that vary across classrooms, schools, districts, and states. Constraints placed on Ms. Piper by school, district, state and national mandates included common planning and assessments and an emphasis on testing. These structural and organizational factors inhibited the effectiveness of the intervention. Student factors that inhibited the intervention included resistance to schooling and absenteeism. Although these factors may exist in any classroom, their presence varies across contexts. It may be that resistance to schooling in this classroom was higher than might be seen typically, or perhaps it was lower than would be encountered in other contexts. The technological factors that inhibited the intervention were also specific to this classroom and school, with a lack of support and maintenance for the computers and an emphasis on the use of computers for delivery of instruction, rather than as tools to enhance instruction. Because these inhibiting factors were driven by forces outside of the classroom, it was difficult to
address them within the scope of this intervention. Ms. Piper attempted to engage students through her lessons, making school as relevant as possible to each student in her classroom, and worked individually with all of her students, including students resistant to schooling, but these efforts did not eliminate the effects of student resistance on the intervention. Because these conditions vary across classrooms, schools, and districts, it is important to examine the effects of this intervention in multiple contexts.

**Summary and Considerations for Teachers**

This investigation suggests that instruction in writing can be enhanced through the use of digital technologies, specifically the use of an online community to enhance peer response and revision among middle school students. Specifically, online communities may be effective in increasing revision in students’ writing and improving the quality of students’ writing in classrooms in which teachers attend to the development of a strong community, effectively model feedback and revision for students, encourage student ownership, have access to technology on a consistent basis, and devote time in class for writing and revision. Considering the primacy of the teacher’s role in this study, as well as student factors, it is likely that the use of a Ning, or other online community, for online peer revision might look different in other classroom environments. This study had promising results, with increased revision by students and statistically significant improvement in writing samples, as well as increased student confidence as writers and more effective peer feedback. However, replication in multiple contexts is necessary to further understand the effects of an online community on revision and writing. This investigation lays the foundation for future investigations on peer revision and response...
in online environments, enabling researchers to focus on particular aspects of peer revision. This study also offers teachers a starting point for using online communities as tools to enhance revision and writing in their own classrooms, offering concrete examples of the possibilities of an online environment for peer response, as well as potential pitfalls that may undermine effective instruction. This investigation raises questions teachers may wish to ask as a starting point for using online communities in their own classrooms as spaces for peer revision and writing, including: (a) What experiences, both positive and negative, have my students had using peer revision? (b) How much time am I able to offer students in class for writing and revision? (c) What type of online community might best suit the needs of my students? (d) How might I best model effective feedback for my students? (e) Is there the administrative and technological support necessary for using online communities in my instruction? and (f) In what ways might school, district, state, and national mandates affect instruction in my classroom?

**Limitations**

Although this study adds to the literature on peer revision and the use of digital technology for writing instruction, the results must be interpreted in light of the study’s limitations. This study was conducted in a single classroom over a limited period of time and is therefore not generalizable to classrooms across contexts. No direct comparison was made to a control classroom, so inferences cannot be made comparing quantitative data focused on student growth to what would be considered “typical” growth over the same period of time. This study makes no claims about improving students’ writing on prompted writing samples, an area of emphasis currently found in classrooms and tested
at the state and national levels. Replication of this investigation, with pre-intervention prompted writing samples gathered as baseline data and prompted writing samples gathered post-intervention, would inform understandings as to this intervention’s affect on students’ on-demand writing.

This investigation was also limited to a single semester. Implementing this intervention over the course of a full school year, or over multiple school years, might yield more information about students’ writing growth, specifically if growth would continue over time or if growth would plateau. Because this intervention was thirteen weeks long, it is possible student engagement was bolstered by the novelty of the intervention. Using an online community as a tool for instruction for a longer period of time might offer insights into whether student engagement would increase or wane over time. A longer intervention would also offer insights into peer feedback; would more opportunities to offer peer feedback over time result in more effective feedback?

I was a participant-observer in this intervention, which makes it difficult to separate my influence over the classroom and the intervention from the effectiveness of the intervention itself. As noted earlier in this summary, my presence as a researcher had a clear effect on students. I was able to provide another set of ears and eyes to students who wanted to share their writing with an adult when Ms. Piper was engaged with another student. Ms. Piper’s behavior was also affected by my presence in the classroom, as she saw me as a collegial presence in her classroom and a source of support throughout the investigation. An investigation in which the researcher assumed the role of an observer may offer additional information about the effectiveness of this intervention.
Finally, qualitative data collected through student interviews and focal student think-alouds suggest that students found feedback aimed at improving spelling and grammar as valuable as feedback aimed at improving content, word choice, and structure. Asking students to rate one another’s feedback on a scale to indicate usefulness would offer further insights into the types of feedback students’ value, as well as provide data for researchers to use during interviews with students to gain deeper understandings of what feedback students find helpful and why.

**Reflections on the Methodology of Formative Experiments**

Formative experiments speak to me as both a researcher and a teacher; they have the potential to bridge the gap between research and practice, partnering practitioners and researchers to meet valued pedagogical goals. My goal as a researcher is to explore instructional methods that may prove useful in the classroom. Formative experiments enable me to do just that, testing humble theories in real-world contexts to uncover promising practices. Critics of formative experiments or designed-based research cite the flexibility of the formative experiment, allowing researchers to modify a promising intervention to enhance progress toward a pedagogical goal, and its lack of generalizability as methodological flaws. This study contributes to the growing body of work that demonstrates formative experiments provide a rigorous method for testing promising practices in authentic settings with the aim of improving learning. In this investigation, the results of the intervention cannot be separated from the context in which it occurred. The factors that enhanced or inhibited the intervention were largely unique aspects of the environment in which the intervention was conducted. It would
have been impossible to control for all the factors at play in the classroom studied, making a formative experiment a logical choice for this study. I am grateful this method, which embraces both success and failure within the classroom, exists and believe formative experiments have the potential contribute much to educational research.

A Final Word

This study offers some initial insights into the use of an online community for peer revision and collaboration to increase revision among middle school students and improve their expository writing. I view these findings with cautious optimism, as the online community that developed in this investigation seemed to foster revision, improve the quality of student writing, and help students become more effective peer responders. Based on this study, I offer the following recommendations to middle grades practitioners hoping to implement an online community within their English language arts classroom for peer revision and collaboration: (a) offer students regular time for writing and revision in the classroom; (b) offer students authentic audiences for their writing; (c) give students room for play in the online space; (d) encourage student ownership, allowing students to set parameters for the online space and giving students choice in their writing; (e) model effective feedback in your responses to students; and (f) encourage students to share and revise their writing throughout the writing process.
## Appendix A

### Data Moves Matrix

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activity</th>
<th>Reflection on Key Points/ Issues</th>
<th>Instructional decisions, moves made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 (January 15)</td>
<td>January 20 (Th)</td>
<td>Internet Use Survey (15 min)</td>
<td>Period 4 struggled to complete this – answers may not be thoughtful. Period 5 took a LONG time. Many didn’t know the terminology</td>
<td>Limit use to a baseline for choosing focal students. Create interview questions that may get at other issues with Internet use.</td>
</tr>
<tr>
<td></td>
<td>January 21 (Fri)</td>
<td>TAG Minilesson Definition of hero (Face to face revision)</td>
<td>Students did make revisions after mini-lesson. Issues with network connectivity meant no revisions made on their final document, which may lead to problems. Students self-grouped – girls with girls, boys with boys. Some students struggled with who to pair with – issue between J and L led to them NOT pairing. Grouped by ability level to an extent; resistant to pairings with weaker students or less serious students. Importance of writing assignment – expository writing but something ALL.</td>
<td>Reduce face-to-face time and move to Ning more quickly? Post TAG prompts slide to Ning for everyone to reference. Helpful and students used the sentence starters.</td>
</tr>
<tr>
<td>Date</td>
<td>Activity Description</td>
<td>Details</td>
<td></td>
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<tr>
<td>January 21 (Fri)</td>
<td>Identify Possible Focal Students with Ms. P</td>
<td>Students identified. Used several criteria: Comes to school. Variety of interest in writing. Score on PFA – highest to lowest – range. Teacher recommendation. Students TAGd.</td>
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<tr>
<td>Week 2 (January 24)</td>
<td></td>
<td>Students do not, by and large, no what revision is. Most confuse it with “fixing errors”.</td>
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<tr>
<td>January 26 (Wed)</td>
<td>Focal Student Interviews</td>
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<tr>
<td>January 26 (Wed)</td>
<td>Teacher Interview</td>
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</tr>
<tr>
<td>January 27 (Th)</td>
<td>Writing/Practice conferencing using TAG (FOUND POEMS)</td>
<td>Met possible heroes to research through a scavenger hunt. Looking up ideas of who to pick for a hero.</td>
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</tr>
<tr>
<td>January 28 (Fri)</td>
<td>Track changes/saving multiple drafts minilesson (FOUND POEMS – TAXEDO)</td>
<td>Ideally students filled out a research proposal and submitted to the teacher (not all did). This proposal identified their heroes and why they were the chosen hero.</td>
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<tr>
<td>Week 3</td>
<td>Benchmark</td>
<td>Students began. I sent Ms. P the</td>
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<tr>
<td>(January 31)</td>
<td>(Th)</td>
<td>writing for first 20 minutes of class. Minilesson on citations - specifically filling out a source sheet <em>(Found poems)</em></td>
<td>taking notes on their person using found poems. Write their notes – found poems. Learning to cite sources.</td>
<td>source sheets on Tuesday so she could try using them with students, as they were struggling with citations. Seem to offer some scaffolding, but still students don’t really get why they are filling them out.</td>
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<tr>
<td>February 4 (Fri)</td>
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<td>Minilesson on citations, taking notes <em>(Found poems)</em></td>
<td>Taking notes using found poems. Students are writing the note-taking poems and looking for a second source, but seem unclear why they might need this information (despite explanations of the assignment – writing a speech from the perspective of their hero about their heroes life)</td>
<td>Continued to work with students on citing sources. Noted the amount of work for this project – to prepare them to write expository text – is huge. Suggested setting mini-deadlines or benchmark dates for students so they can keep moving forward with the project. Ms. P will give mini-deadlines to them.</td>
</tr>
<tr>
<td>Week 4 (February 7)</td>
<td>February 11 (Fri)</td>
<td>Found poems – using track changes, saving as drafts, and joining the Ning <em>(Found poems – draft 2)</em></td>
<td>Getting students on the Ning a little tricky. Some students, when they saw the box that told them they would be approved by the administrator, clicked “Withdraw my application”</td>
<td>Students used status updates inappropriately – had to turn off that feature.</td>
</tr>
</tbody>
</table>
Week 5  
(February 14)  |  February 14  
(M)  |  Found poems – drafts 2 and 3  
Taught students to track changes AND post to the Ning!  |  Students posted found poems to the Ning and made suggestions for revision using track changes.  |  Discussed having students create rules for their own online community. Students will set these up next week.  
---|---|---|---
February 15  
(Tues)  |  Students wrote introductions with Mr. P, expert speech writer (professor at C. College)  |  Students, using what they remembered about their heroes, wrote the introduction to their speeches in class today on paper (in library – joined with Mr. T’s class).  |  
February 16  
(Thursday)  |  Students posted introductions to the Ning  |  Students posted their introductions to the Ning.  |  Ms. P and I responded over the weekend to students to model responses for one another when they peer revise their own work.  
Suggested setting up response pairs so each student has assigned person to respond to, but also give them an incentive (points, online gifts, something) for responding to more than one
| Week 6  
(February 21) | February 24  
(Th) | Write intro and first body paragraph and post to the Ning | Students posted their intros and body paragraphs – as much as they had – to the Ning. | Told students they would get extra credit for replying to people on the Ning. |
| --- | --- | --- | --- | --- |
| February 25  
(Fri) | Time to read/respond in Ning. Finalize speeches. Classes set rules for Ning. | Students paired based on who had posted in each class. As students posted, paired with partner. Students responded to one another on the Ning. Continued to revise speeches based on feedback and if on another draft, re-posted. | Students will likely need at least three class periods to write next week. |
| Week 7  
(February 28) | March 3 (Th) | Time to write/ revise. | Students finished speech draft and posted to Ning. |  |
| | March 4 (Fri)  
(Assignment Due today) | ML: Revision Time to respond/ revise/ write. | Students revised one another’s writing and posted final drafts | Ms. Piper gave ML on revision – kids brainstormed what kind of comments would be helpful before starting. |
| Week 8  
(March 7) | March 10 (Th) | Collect final student samples (online) for this assignment | Monday of this week – reviewed rubric, blogged reflection, posted final drafts Students finished up final drafts, using feedback on Thursday. |  |
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity Description</th>
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</thead>
<tbody>
<tr>
<td>March 11 (Fri)</td>
<td>Collect final student samples</td>
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<tr>
<td></td>
<td>Practiced speeches (dress rehearsals) on Friday</td>
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<td></td>
<td>Students scheduled to have museum Monday or Tuesday – MAP testing Friday</td>
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<td>Week 9 (March 14)</td>
<td>March 14, 15 (Monday, Tuesday)</td>
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<tr>
<td></td>
<td>Interview focal students, teacher</td>
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<td></td>
<td>Interview Ms. P – perceptions, kid’s growth, revision, etc.</td>
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<tr>
<td>Week 10 (March 21)</td>
<td>March 24 (Th)</td>
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<tr>
<td></td>
<td>Focal student think-alouds</td>
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<td></td>
<td>Read This I Believe essay on Monday of this week to prepare for next writing assignment</td>
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<td></td>
<td>March 25 (Fr)</td>
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<tr>
<td></td>
<td>Remainder of focal student think alouds</td>
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<tr>
<td></td>
<td>Brainstorming ideas for This I Believe Essay</td>
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<tr>
<td>Week 11 (March 28)</td>
<td>March 31 (Th)</td>
</tr>
<tr>
<td></td>
<td>ML – Transitions, add transitions to benchmark writing, Pre-writing</td>
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<tr>
<td></td>
<td>Students were able to revise and add transitions to own work as well as when modeled in class.</td>
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<td>April 1(Fr)</td>
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<tr>
<td></td>
<td>Post pre-writing to the Ning for feedback, if finished. Pair-share.</td>
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<tr>
<td></td>
<td>Posted pre-writing to the Ning for feedback from peers</td>
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<tr>
<td></td>
<td>Started writing draft 1.</td>
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<tr>
<td>Week 12 (April 4)</td>
<td>April 5 (Tues)</td>
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<tr>
<td></td>
<td>Time for writing. Post drafts (1 or 2).</td>
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<td></td>
<td>Revisited transitions. Posted to Ning. Offered feedback.</td>
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<td></td>
<td>April 6 (Wed)</td>
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<tr>
<td></td>
<td>Time for responding, revising.</td>
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<td></td>
<td>Offered feedback to peers in pairs, posted to Ning</td>
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<td>Week 13</td>
<td>April 14 (Th)</td>
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<tr>
<td>(April 11)</td>
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<td></td>
<td>April 15 (Fr)</td>
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<tr>
<td>Week 14</td>
<td>Revisit writing done throughout the year – post and respond, revise earlier samples?</td>
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<tr>
<td>(April 25)</td>
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<tr>
<td>Week 15</td>
<td>PASS testing preparation</td>
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<tr>
<td>(May 2)</td>
<td></td>
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<tr>
<td>Week 16</td>
<td>PASS TESTING!</td>
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<td>(May 9)</td>
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</table>
Appendix B

Student Created Rules for the Ning

**Studies Section:**
- Positive language for comments
- No bullying
- Be real & honest
- Appropriate pictures
- Use humor
- You should be writing about your writing
- Ok to use text words on comments
- You can get extra credit for commenting on people’s writing.
- Use Ning only at appropriate times

**Strategies Section**
- Use the language we use with teachers
- Stay on topic
- Have appropriate profile pictures
- Appropriate, positive language
- Stay on task
- Be helpful and positive – constructive criticism
- Yu cn use txt language 4 cmts
- Emoticons ok in comments
- Use the comments you have before you get more
- No drama!
- No bullying
- Extra credit for responding to people’s draft
## Appendix C
### Sample Lesson Plan

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>Teacher</td>
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<tr>
<td>Subject</td>
<td>ELA</td>
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<tr>
<td>Grade</td>
<td>7</td>
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<tr>
<td>Date</td>
<td>Feb, 28-March 4</td>
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**EQ:**
- E.Q.: How will I revise and finish the body of my speech?
- E.Q.: How will I conclude my speech?
- E.Q.: How do I revise my speech with feedback?
- E.Q.: How will I revise my speech for your audience?
- E.Q.: How will I read my speech aloud to captivate my audience?

**Standards:**
- 7-6.5 Use appropriate organizational strategies to prepare written works, oral and auditory presentations, and visual presentations.
- 7-6.2 Use direct quotations, paraphrasing, or summaries to incorporate into written, oral, auditory, or visual works the information gathered from a variety of research sources.
- 7-6.6 Select appropriate graphics, in print or electronic form, to support written works, oral presentations, and visual presentations.
- 7-5.1 Create informational pieces (for example, book, movie, or product reviews and news reports) that use language appropriate for a specific audience.
- 7-4.5 Revise writing to improve clarity, tone, voice, content, and the development of ideas.
- 7-6.8 Design and carry out research projects by selecting a topic, constructing inquiry questions, accessing resources, and selecting and organizing information.

**Activating Strategy:**
- Model revision process with body of teacher speech
- Class reading of famous speech endings
- TAG a speech together from the class
- Pair Share: Read speech aloud to one another
- Teacher models speech performance

**Teaching Strategies:**
- Review speech progress and see revisions suggested
- Writer's workshop
- Make a list of concluding strategies as a class
- Writing workshop
- Writing Workshop
- TAG partners writing
- Model thesis statement of teacher written speech
- Writing workshop: Students use outlines created on Monday to write their thesis
- Pair share introductions and TAG: Look for 4 parts of a speech introduction with check list
- Brainstorm class list of qualities important in a speech to create a rubric
- Practice speech reading. Highlight areas of concern

**Summarizing Strategy:**
- Pair Share/post to Ning
- Pair Share/post to Ning
- Revise work based on TAG ideas
- Author’s Chair
- Writer’s chair

**Assessments:**
- Stem quiz, draft, conferences
- Conferences, drafts
- Observation, conferencing, TAGs
- Speech introductions, TAG sheets, observations
- Observation
Appendix D

Description of National Writing Project’s Analytic Writing Continuum

Scoring Category Descriptions

Content (Including Quality and Clarity of Ideas and Meaning)
The content category describes how effectively the writing establishes and maintains a focus, selects and integrates ideas related to content (i.e., information, events, emotions, opinions, and perspectives) and includes evidence, details, reasons, anecdotes, examples, descriptions, and characteristics to support, develop, and/or illustrate ideas.

Structure
The structure category describes how effectively the writing establishes logical arrangement, coherence, and unity within the elements of the work and throughout the work as a whole.

Stance
The stance category describes how effectively the writing communicates a perspective through an appropriate level of formality, elements of style, and tone appropriate for the audience and purpose.

Sentence Fluency
The sentence fluency category describes how effectively the sentences are crafted to serve the intent of the writing, in terms of rhetorical purpose, rhythm, and flow.

Diction (Language)
The diction category describes the precision and appropriateness of the words and expressions for the writing task and how effectively they create imagery, provide mental pictures, or convey feelings and ideas.

Conventions
The conventions category describes how effectively the writing demonstrates age-appropriate control of usage, punctuation, spelling, capitalization, and paragraphing.
Appendix E

Writing Dispositions Survey

Directions:
Please rate each of the following statements on the 1-5 scale found below each statement. Circle the number for your rating.

1. My written work is among the best in class.

   1 ______________ 2 ______________ 3 ______________ 4 ______________ 5
   Strongly Agree Neutral Disagree Strongly Disagree

2. Writing is fun for me.

   1 ______________ 2 ______________ 3 ______________ 4 ______________ 5
   Strongly Agree Neutral Disagree Strongly Disagree

3. I take time to try different possibilities in my writing.

   1 ______________ 2 ______________ 3 ______________ 4 ______________ 5
   Strongly Agree Neutral Disagree Strongly Disagree

4. I would like to write more in school.

   1 ______________ 2 ______________ 3 ______________ 4 ______________ 5
   Strongly Agree Neutral Disagree Strongly Disagree

5. I am not a good writer.

   1 ______________ 2 ______________ 3 ______________ 4 ______________ 5
   Strongly Agree Neutral Disagree Strongly Disagree
6. Writing is my favorite subject in school.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

7. I am willing to spend time on long papers.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

8. If I have choices during free time, I usually select writing.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

9. I always look forward to writing class.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

10. I take time to solve problems in my writing.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

11. Writing is easy for me.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Neutral</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>
# Appendix F

**Internet Use Survey**

## 1. Survey of Internet Use

You have been selected to take part in this survey of Internet use. We want to find out how much time students spend on the Internet and what kinds of things they do on the Internet. This information will help us to understand how middle school students use the Internet in school and out of school. Your parents have already signed a letter saying it is okay for you to take this survey.

If you agree to respond to this survey, you will be asked to read and answer questions on the Internet. This survey should take about fifteen minutes to complete.

Participation in this survey does not involve any risks to you and will not affect your grade in any way. Participation in this study is entirely your choice. You may refuse to participate in this survey at any time.

## 2. ABOUT ME

<table>
<thead>
<tr>
<th><strong>1. My first name is:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>2. My last name is:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>3. My age is:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4. I am:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Male</td>
</tr>
<tr>
<td>☐ Female</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>5. I am currently in:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ 6th grade</td>
</tr>
<tr>
<td>☐ 7th grade</td>
</tr>
<tr>
<td>☐ 8th grade</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>6. I am:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ African-American/Black</td>
</tr>
<tr>
<td>☐ Asian/Pacific Islander</td>
</tr>
<tr>
<td>☐ White/Caucasian</td>
</tr>
<tr>
<td>☐ Hispanic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

## 3. School Assignments
1. Select one response for each question.

<table>
<thead>
<tr>
<th>How often have you been REQUIRED to use the Internet for a school assignment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How often have you been GIVEN THE OPTION to use the Internet for a school assignment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

4. USING THE INTERNET: AT SCHOOL

For the next section, please respond to items about how you use the Internet when you are at school.

5. This is how often I do the following AT SCHOOL:

1. Select one response per row.

<table>
<thead>
<tr>
<th>I use the Internet AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I use search engines AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I read email AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I send email AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I use Instant Messenger (IM) AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I read blogs (Blogs, LiveJournal or MySpace) AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I post to blogs (Blogs, LiveJournal or MySpace) AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I use chat rooms AT SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
</tr>
<tr>
<td>〇</td>
</tr>
</tbody>
</table>
2. Select one response per row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I read internet discussion boards AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to post to discussion boards AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to download music AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to read about movies, music, or sports stars or other entertainment topics AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to view clip art and pictures AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to find images AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

3. Select one response per row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the internet to read manga or comics AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to read about science AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to read about social studies AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to read about current events AT SCHOOL</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I use the internet to read about literature AT SCHOOL</td>
<td>☐</td>
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</tr>
<tr>
<td>I use the internet to read about math AT SCHOOL</td>
<td>☐</td>
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</table>
### 4. Select one response per row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the Internet to read information about other school subjects AT SCHOOL</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>I use the Internet to read information about my hobbies AT SCHOOL</td>
<td>[ ]</td>
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</tr>
<tr>
<td>I use the Internet for school-related assignments AT SCHOOL</td>
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</tr>
<tr>
<td>I use the Internet for things other than school assignments AT SCHOOL</td>
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</tr>
<tr>
<td>I use the Internet AT SCHOOL to help me decide what to buy</td>
<td>[ ]</td>
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</tr>
<tr>
<td>I use the Internet to play online games AT SCHOOL</td>
<td>[ ]</td>
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</tr>
<tr>
<td>I use the Internet to create websites AT SCHOOL</td>
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</tbody>
</table>

### 6. USING THE INTERNET: OUTSIDE OF SCHOOL

For the next section, please respond to items about how you use the Internet outside of school.

### 7. This is how often I do the following OUTSIDE OF SCHOOL:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the Internet outside of school</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I use search engines outside of school</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I read email outside of school</td>
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<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I send email outside of school</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I use instant messenger (IM) outside of school</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I read blogs (like LiveJournal or MySpace) outside of school</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I post to blogs (like LiveJournal or MySpace) outside of school</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I use chat rooms outside of school</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>[ ]</td>
</tr>
</tbody>
</table>
2. Select one response per row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I read internet discussion boards OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I post to internet discussion boards OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I use the internet to download music OUTSIDE OF SCHOOL</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I use the internet to read about movies, music, or sports sites or other entertainment topics OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to view pictures OUTSIDE OF SCHOOL</td>
<td></td>
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</tr>
<tr>
<td>I use the internet to find images OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read manga or comics OUTSIDE OF SCHOOL</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Select one response per row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the internet to read about science OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read about social studies OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read about current events OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read about literature OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read about math OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read about other school subjects OUTSIDE OF SCHOOL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use the internet to read about my hobbies OUTSIDE OF SCHOOL</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Select one response per row.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a week</th>
<th>Once a week</th>
<th>A few times each week</th>
<th>Once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use the internet for school-related assignments outside of school</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I use the internet for things outside of school</td>
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<tr>
<td>I use the internet outside of school to help me decide what to buy</td>
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<tr>
<td>I use the internet to play online games outside of school</td>
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<tr>
<td>I use the internet to create websites outside of school</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Select one response per row.

<table>
<thead>
<tr>
<th>Task</th>
<th>Never</th>
<th>Once in a while</th>
<th>About half of the time</th>
<th>Most of the time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check the accuracy of information I read on the internet outside of school</td>
<td></td>
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<tr>
<td>Look at who created information I am reading on the internet outside of school</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

8. Email

1. Your teacher wants you to send your report as an attachment in an email. Make a list of the steps you would use to attach and send it. (You may not use all 10 steps below.)

   Step one: Open your email account on the computer.
   Step two:
   Step three:
   Step four:
   Step five:
   Step six:
   Step seven:
   Step eight:
   Step nine:
   Step ten:

9. How Good I am at Using the Internet
1. Rate your skill level for each of the following by selecting where you feel your skill level falls between being an expert or beginner.

<table>
<thead>
<tr>
<th></th>
<th>1 beginner</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7 expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Searching for general</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>information on the Internet</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Searching for specific</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>information on the Internet</td>
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</tr>
<tr>
<td>Searching on the Internet for topics related to school subjects</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Reading information on the Internet</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sending email messages.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Keyboarding (typing quickly and accurately).</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Using the Internet to answer a question.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Using the Internet in general.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

2. Rate how comfortable you would be explaining to an adult (or thinking aloud) about how you read and write using the Internet.

- Very comfortable
- Somewhat comfortable
- A little comfortable
- Not at all comfortable

10. Thank you!

Thank you for taking our survey.
Appendix G

Teacher Interview Questions

Pre-Intervention

Teacher Interview Questions (used 1/26/2010)

1. How long have you been teaching? Teaching here?
2. How would you describe your teaching style?
3. Can you describe a typical day in your classroom?
4. Are students tracked? If so, how does tracking impact instruction?
5. How do you typically teach writing in your classroom?
6. How would your students describe their writing process? Would they all answer this way?
7. Do your students like to write? Why or why not?
8. What do you see as the your students strengths as writers? What would you describe as their weaknesses?
9. Do your students use technology in school? In what ways? How often?
10. What do your hope you students might gain from using an online community for writing?
11. What are your concerns about using an online community for writing?
12. Do your students give each other feedback on their writing? When? If so, is it effective? Why or why not?

Mid-Intervention

1. How would you describe your students overall feelings about writing at this moment in time? Is this a change from earlier in the year? If so, how?
2. What progress have you noticed students making in their writing during this first project? What factors do you think led these changes?
3. How has working with the Ning gone so far, overall?

4. How would you describe your students experiences with peer revision thus far? What have you noticed about the peer revision that is happening?

5. How much revision is oral versus written (partners in class)?

6. Are there students you have been particularly surprised by in their writing or responses? Has the Ning changed the way students write or communicate with one another?

7. What do you think the biggest challenge in peer revision is for students? How might we help them?

8. What has surprised you most about this intervention?

9. Are there are obstacles that the Ning poses? If so, what?

10. What would you change about this intervention? What would keep the same?

11. What else would you like to add that might be important?

Post-Intervention

1. How would you describe your students overall feelings about writing at this moment in time? Is this a change from earlier in the year? If so, how?

2. What progress have you noticed students making in their writing during this semester? What factors do you think led these changes?

3. How would you describe your students experiences with peer revision with the Ning?

4. What did revision look like last semester in your classroom?

5. What does revision look like in your class now, with the Ning?

6. Has the Ning changed the way students write or communicate with one another?

7. What helped students use the Ning more effectively for revision?

8. What were obstacles you faced in using the Ning for revision?

9. What has surprised you most about this intervention?
10. What would you change about this intervention? What would keep the same?

11. What has changed in your classroom this semester?

12. What else would you like to add that might be important?
Appendix H

Focal Student Interview Questions

Pre-Intervention

1. What is your favorite subject in school?

2. What do you like to do outside of school? How much time do you spend doing this (these) activities?

3. What do you like about your English Language Arts class? What do you dislike?

4. Do you like to write? Why or why not?

5. Of all the things you do write, what do you like to write best (can prompt with ideas if necessary)?

6. When you write in school, what do you like to write? Why?

7. Can you tell me all the steps you might go through when you write something?

8. What does it mean to revise?

9. How often do you revise your work?

10. When you write, do you share your writing with other people?

11. When you write in school, do you share your drafts with other students?

12. (If yes) Do you like to share your drafts with others? Why? Why not?

13. Do other people give you feedback about your writing? (If yes, probe with questions about if the feedback is valuable and why)

14. Do you give other people feedback about their writing? (If yes, probe with questions about the type of feedback they might give and why)

15. How much time to do you spend on the computer each day? What do you do on the computer?
Mid-Intervention

1. What did you think of the assignment to write a speech? Why? (probe: what like, what didn’t like, etc.)

2. Tell me about speech you wrote. What did you learn while writing the speech? (probe: about topic, about speeches, about writing)

3. What did you think about using the Ning to share your work? (probe: like, dislike, why, why not)


5. Do you use the Ning outside of school? Why or why not?

6. What steps did you go through to write your speech?

7. What does it mean to revise your work?

8. When you posted your work online, did you get helpful feedback? From who? What did you do with the feedback? Why?

9. How many times do you think your went back and revised your speech? When?

10. When you read someone else’s work online, what kind of feedback might you give them?

11. How would you change the way we offer each other feedback in this classroom?

12. How do you feel about the peer revision process?

13. What role should students have in the feedback process?

14. What role should the teacher have in the feedback process?

15. How do you feel about writing?

Post-Intervention

1. Do you like to write? Why or why not?

2. When you write in school, what do you like to write? Why?
3. Can you tell me all the steps you might go through when you write something?

4. What does it mean to revise?

5. How do you know when you are finished with a piece of writing?

6. What did you think about using the Ning?

7. Did you revise your work that you posted on the Ning? (how often, why, etc.)

8. What did you think about using The Ning to share your work? (like, dislike, why, why not)

9. Did other people give you feedback about your writing? (If yes, probe with questions about if the feedback is valuable and why)

10. Did you give other people feedback about their writing? (If yes, probe with questions about the type of feedback they might give and why)

11. What did you think about using The Den to share your work? (like, dislike, why, why not)

12. In what ways, if any, did using the Ning change learning in Ms. Piper’s classroom?

13. Do you use the Ning outside of school? Why or why not?

14. How do you feel about the peer revision process?
Appendix I

Swain, Graves, and Morse (2010) Prominent Features

Positive Features
Elaborated details
Sensory language
Metaphor
Alliteration
Vivid nouns/verbs
Hyperbole
Striking words
Cumulative sentence
Verb cluster
Noun cluster
Absolute
Adverbial leads
Balance and parallelism
Effective repetition
Sentence variety
Effective organization
Subordinate sequence
Transitions
Coherence/cohesion
Voice
Narrative storytelling
Addresses reader

Negative Features
Usage problems
Weak structural core
Garble
Weak organization
Redundancy
List technique
Faulty punctuation
Faulty spelling
Shifting point of view
Illegible handwriting
Appendix J

Refined List of Prominent Features from this Investigation

Swain, Graves, and Morse (2010) Prominent Features
(Italics indicate those added during this study)

Positive Features
Elaborated details
Sensory language
Metaphor
Alliteration
Vivid nouns/verbs
Hyperbole
Striking words
Cumulative sentence
Verb cluster
Noun cluster
Absolute
Adverbial leads
Balance and parallelism
Effective repetition
Sentence variety
Effective organization
Subordinate sequence
Transitions
Coherence/cohesion
Voice
Narrative storytelling
Addresses reader
Dialogue
Appositives

Negative Features
Usage problems
    -AAVE
    -ELL
Weak structural core
Garble
Weak organization
Redundancy
List technique
Faulty punctuation
Faulty spelling
Shifting point of view
Illegible handwriting
*Shifting verb tense*
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