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Writing in the Digital Age: A Case Study of Fifth-Grade Boys

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WRITING IN THE DIGITAL AGE:
A CASE STUDY OF FIFTH-GRADE BOYS

by

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Dedication

For my son, Luke, who keeps me questioning the world around us.

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Abstract

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The purpose of this qualitative case study was to explore the digital-related writing practices of one classroom of fifth-grade boys in a private school who had embraced a 1:1 laptop model in every classroom for over 12 years. As a response to discussions concerning the role of writing and technology in education, especially as states across the country had been preparing for computerized writing assessments through measures such as the Partnership for Assessment of Readiness for College and Careers (PARCC), the study asked what influenced the digital writing practices and products of students with experience in digital writing technologies. Additionally, as girls have outperformed boys on traditionally literacy achievement measures, the study asked what influences in the digital writing environment impacted the boys' development of their identity as writers. The study found a multiplicity of influences on students' digital writing practices, products, and confidence in participating in the classroom; more specifically, the researcher concluded that peer interactions were a particularly salient finding across the data. Discussions were provided with a proposed model for social interaction in digital writing environments. Future recommendations for research were suggested to extend the limited scope of the research to a variety of contexts. In particular, future research was suggested to explore a variety of student-centered and teacher-centered approaches for understanding the role of social support in digital writing environments such as the influence of peer feedback for improving digital writing

products in various educational contexts and the impact of teacher training for facilitating quality peer responses for improving digital writing.

Keywords: digital divide, digital skills divide, new literacies theory, sociocultural learning theory, digital composition, multimodalities

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Chapter 1

Introduction to the Research

Over the last 10 years, the production of technology not only has become increasingly cost effective, but also more readily available for students in their classrooms (Leu, Kinzer, Coiro, & Cammack, 2004; Mossberger, Tolbert, & Stansbury, 2003; Morrisett, 2001). Recent studies demonstrate that K-12 students are actively constructing knowledge through complex, interactive digital tools such as blogs, wikis, e-mail, and key-pals (Boling, Zawilinkski, Barton, & Nierlich, 2008; Marsh, 2011; McGrail & Davis, 2011; Zawilinski, 2009). Although it is clear that students are engaging in digital contexts at increasingly younger ages, researchers have reported a specialized need to understand how digital composition affects "authorial stances" and literate identities within a community of learners (Bogard & McMackin, 2012; Stover, 2012; Vasudevan, Schultz, & Bateman, 2010). In other words, there is a need to understand the surrounding influences that impact young students' digital writing.

The purpose of this study addressed this need by exploring the digital writing experiences of one classroom of fifth-grade boys in a school that was recognized for embracing a 1:1 laptop model of technology. Guided through multiple assumptions of the New Literacies theories, the research design employed a qualitative case study methodology with the purposeful selection of participants to meet the specifications of the study. The research also aimed to capture the complexities of a single environment while providing a discussion point for educators and teacher educators concerning digital writing in classroom environments.

This chapter begins by framing the background and larger political context of the study, discussing the purpose statement in relationship to the research problem, and

providing the corresponding research questions. This chapter concludes with a discussion of the research approach including the researcher's perspective and assumptions. Additionally, key terms and an overview of the research study are provided at the conclusion of this chapter.

Background and Context

Currently, discussions concerning the role of writing and technology in education are taking place across the country. Central to the field of literacy, many states have embraced a major paradigm shift for writing assessment by adopting assessment models from PARCC (Partnership for Assessment of Readiness for College and Career Readiness) in connection with the Common Core State Standards Initiative (2012). Assessments under this model require students to read complex passages of text and construct reasoned arguments with connections from the text. In their vision for building a K-12 assessment system, PARCC (2014) contends "better use of technology in assessments" will further help to "build a pathway to college and career readiness for all students" (n.p.).

Although some literacy researchers have supported these assessment efforts as they represent a shift in educational reform to help prepare all students to become better writers (Graham & Harris, 2013; Shanahan, 2013), the added dynamic of computerized assessment as proposed by PARCC has contributed to a discussion concerning the inclusion of technology in such assessment models. Although this discussion is not a new one (MacArthur, 2006; Wolf, Bolton, Feltovich, & Niday, 1996), some have argued that the generation of constructive response through computerized assessment presents new challenges for teachers and students alike (Porter, 2011). In particular, these challenges

promote concerns that such assessment models will promote a "digital divide" (Mossberger, Tolbert, & Stansbury, 2003) between students who have had more exposure to technology outside of the classroom than students who have had less exposure to technology outside of the classroom. Thus, discussions concerning the nature and role of digital writing in K-12 classrooms are particularly relevant at this time.

Problem Statement

Traditionally, research in technology integration in schools has reported issues concerning access to technology and a technology gap for students across socioeconomic backgrounds (Fabry & Higgs, 1997; Hare, Howard, & Pope, 2002; Snider, 2000). While this has been documented as a continued concern for students and teachers (Vigdor & Ladd, 2010; Warschaurer, 2011), recent trends provide evidence to show technology access is also increasing. Specifically, as the production of technology continues to become increasingly cost effective and readily available for students both inside of school and outside of school (Morrisett, 2001; Warschauer, Zheng, Niiya, Cotten, & Farkas, 2014), teachers and students alike find themselves in new territory for experiencing digital classroom environments. Thus, researchers report the problem of the digital divide is no longer *only* about how to give students greater access to technology, but *also* how to teach students to use the technology to both read and construct meaning within these digital contexts (Leu et al., 2004). New skills needed for these digital contexts further extend the definition of the "digital divide" to include a "skills divide" (Mossberger et al., 2003). Such a divide in skills requires special considerations for educational decisions, as Jenkins, Clinton, Purushotma, Robison, and Weigel (2007) have contended,

The school system's inability to close this participation gap has negative

consequences for everyone involved. On the one hand, those youth who are most

advanced in media literacies are often stripped of their technologies and robbed of

their best techniques for learning in an effort to ensure a uniform experience for

all in the classroom. On the other hand, many youth who have had no exposure to

these kinds of participatory cultures outside school find themselves struggling to

keep up with their peers. (p. 13)

One possible way of expanding knowledge concerning the digital skills divide is

to explore the ways in which students and teachers have participated in digital writing in

K-12 classrooms. In exploring such contexts, previous studies have focused on the

engagement and motivational aspects of writing with technology as it allows students to

connect to larger audiences and engage in real-world issues (Hutchison & Henry, 2010;

Leu, Kinzer, Coiro, & Cammack, 2004; Lewis & Fabos, 2005). A majority of these

studies, however, have focused on adolescent experiences and more research is currently

needed to understand the digital experiences of students at increasingly younger ages

(Bogard & McMackin, 2012; Forzani & Leu, 2012) with special attention to the digital

writing development of elementary and intermediate students across multiple modalities

(Bogard & McMackin, 2012; Stover, 2012). This research attempted to address this gap

by exploring digital writing experiences of fifth-grade students.

In addition to addressing the need to explore digital writing of students at

increasingly younger ages, this study also considered the need to explore student

experiences from a variety of approaches. Specifically, this study explored the

experiences of fifth-grade boys from a context in which traditional access to technology

had been previously established for each student on a 1:1 basis for over 12 years. By observing an environment where students and teachers had greater access to technology and specific knowledge of "social and cultural capitals" (Bourdieu, 1997), this study attempted to capture one such example of an experienced technology context for discussions concerning the practical and ethical decisions of classroom expectations.

Not only did this study attempt to contribute to the literature by providing a description of an experienced context with digital technology, it also attempted to provoke discussion concerning issues of gender and digital writing. As concerns for the education of boys has traditionally been documented through reading and writing achievement measures (Rutter et al., 2004; Sokal et al., 2005), fields of gender-based brain research have been developed to explain the differences of male and female performance on literacy measures through an international focus of scientific research (Gurian & Stevens, 2005; King & Gurian, 2006; Sommers, 2000). A comprehensive search of engagement studies for boys over the last 14 years concluded that lack of confidence, interest level, and topic choice are significant factors for discrepancy among elementary boys and girls for affecting motivation to read and write (Senn, 2012). These quantitative and mixed-methods studies, however, have been criticized in their failure to explore the individual perceptions of boys in differing social environments (Watson & Kehler, 2012), creating misleading perceptions for both boys and girls by failing to recognize that,

> Simply adopting boy friendly strategies can in fact be counter-productive and contribute both to a misunderstanding about boys, girls, and learning in the literacy classroom as well as the significant misdirection of valuable resources for

all students, not only boys, but the complicated and complicating raced, classed and gendered literate subjects of boys and girls. (p. 52)

Furthermore, these traditional forms of research have failed to explore digital contexts in which boys participate, contributing little to understandings of how the role of gender is performed in digital contexts and how this further complicates decisions for the educational community. For example, in a discussion concerning computer-supported learning, Gunn (2003) poses the following question: "How far do gender imbalances in Computer Suppoted Learning reflect the values and norms of the culture they exist within and how far do they generalize across national and social boundaries?" (p. 14). Although this study did not attempt to make global generalization of gender, it investigated the complexities of these issues by exploring the digital classroom environment of an all-boy culture in a private school setting.

To address all of these concerns, this research provides a picture of one nuanced context by exploring digital writing experiences of fifth-grade boys who have participated in an established school context for digital writing experiences. Ultimately, by exploring the experiences of students in a specific context, this research answered the call for more studies concerning how composing across modalities could potentially impact "authorial stances" and literate identities within a community of learners (Vasudevan et al., 2010).

<center>**Statement of Purpose and Research Questions**</center>

The purpose of this qualitative case study was to explore the digital writing experiences of one classroom of fifth-grade boys in a school that was recognized for embracing a 1:1 laptop model of technology. The following research questions guided the

study: 1) How do elementary boys in established school-based digital contexts participate in digital writing tasks? 2) What influences their writing? 3) What influences their perceptions of themselves as writers?

Research Approach

This research explored a specific case of a school context where students and teachers experienced the use of digital tools for writing. Within this context, the research sought to understand how fifth-grade boys both participated in the digital writing environment as well as developed their identity as writers across digital writing tasks and modalities (Vasudevan et al., 2010). Thus, case study was deemed an appropriate methodology to guide the design because the purpose of the study necessitated a bounded case of place (Yin, 2009).

The study incorporated a variety of data collection methods including classroom artifacts of digital writing tasks and products of one classroom of fifth-grade boys. Additionally, six of the students were randomly selected for interview sessions for understanding their perceptions of themselves as writers after participating in these digital writing tasks. More specifically, the following research data was collected over the 15 weeks of the study: 1) two weekly classroom observations ranging from one-two hours each with corresponding researcher memos, 2) eighteen 20-30 minute semi-structured interviews from six randomly selected focal students, and 3) student writing products from the six focal students.

Researcher Interest and Subjectivity

Throughout my experiences as a mother of a young boy and an online teacher educator for other literacy educators instructing young children, I have been confronted

continually with issues concerning the integration of technology into the educational process and its effects on learning at different developmental levels. While I am optimistic about the benefits of technology for the educational curriculum and its potential to both bridge out-of-school literacies while connecting more students to meaningful learning experiences, I question the expectations and demands placed upon both teachers and students, including the increasingly young age of which students are held accountable for producing text in high-stakes environments. Additionally, I question educational decisions concerning technology integration that do not take into account the complexity of the experiences of students. As a former high school English teacher in a rural school system, my experiences of an initial paucity of technological resources for my students contributed to this skepticism early in my teaching career. As I noticed many of my students were not equipped with basic technology skills for writing, I found myself caught between wanting to help prepare them for such demands, while questioning the extent to which holding my less-experienced students accountable to the same degree as my more-experienced students was ethically and judicial beneficial for all. Moreover, these experiences transferred into my experiences as a doctoral student as I became mindful of Bourdieu's (1977) theories of social reproduction in education as a mechanism for extending social order through the privileged distribution of resources such as technology. Considering my own assumptions and experiences, being continually mindful of my own subjectivity was a necessity throughout the study. Thus, I employed a variety of subjectivity measures throughout all stages of research including triangulation of data sources, analytical memos, and a variety of analysis techniques. I also regularly

communicated with professional colleagues, particularly noting how my own experiences shaped my interpretations.

Definition of Terms

Several definitions are provided to understand the language of this study. These definitions encompass terminology from the theoretical framework to the implications of the study. Definitions of the following terms are provided: 1) digital divide, 2) digital skills divide, 3) new literacies theory, 4) sociocultural learning theory, 5) digital composition, and 6) multimodalities.

Digital Divide

A term used to define the differences between individuals with greater access to information and communication tools of the Internet. These discrepancies can be found across geographic locations such as urban or rural areas or across socio-economic status.

Digital Skills Divide

A term to further extend the definition of the digital divide to include the specific skills and knowledge bases required to be proficient with the use of technology.

New Literacies Theory

Theories which involve the multiple ways in which social beings interact through digital technologies and continually broaden the definition of literacy to include ways of communicating meaning beyond text.

Sociocultural Learning Theory

Theories of learning which emphasize the social nature of learning in the meaning-making process.

Digital Composition

Terms for writing in digital or connected contexts, digital composition means individuals

participate in online production that is then shared electronically.

Multimodalities

Composition across a variety of modes of representation which include both spoken and

written language in the form of speech, movement, sound, and image.

Organization of Study

The first chapter has provided an introduction to the research study. In the

following chapter, the theoretical perspectives of the research and a scholarly review of

the literature are provided. The literature review is comprised of an overview of K-12

writing research, previous research on boys and writing, and current research of digital

composition. In the third chapter, the methodology of the study is described including the

methods for data collection and analysis. In the fourth chapter, the three major findings of

the study are introduced. In the final chapter, the findings are discussed in comparison to

the literature, implications are provided with a proposed model for considerations for

digital writing in the classroom, the limitations of the study are discussed, and

recommendations for future research are made.

Chapter 2

Review of Related Literature

The review of the literature included considerations of the theoretical perspectives related to the design of this study as well as research key to understanding the complexities of the research problem. Thus, this chapter is organized to address these concerns. This organization includes the following major headings: 1) theoretical perspective and 2) literature review. In the following section, the major theoretical perspective is presented in relationship to the design of the study.

Theoretical Perspective

In order to address the research problem, a variety of theoretical considerations were needed for the study. As this research was concerned with exploring the digital writing experiences of boys and their perceptions of their own identities as writers, this study utilized theoretical assumptions of New Literacies to understand the nature of social interactions in digital contexts. Within this theoretical perspective, understandings of sociocultural learning theories, interpretative approaches to writing research, and observational considerations of educational practice were all considered in the design of the study. In the following section, a brief overview of New Literacies as a theoretical perspective is presented followed by key assumptions of this perspective as they relate to the context of the study.

New Literacies Theories

New Literacies theory is generally defined as the body of research seeking to explore the literacy practices created by emerging digital technologies such as blogs, message systems, gaming software, social networking sites, and a host of continually evolving technologies (Lankshear & Knobel, 2006; Leu et al., 2004; Leu, O'Byrne,

Zawilinski, McVerry, & Everett-Cocapardo, 2009). Specifically important to the educational context, new literacies require skills for interpreting information from the Internet and other communication technologies (Kiili, Laurinen, & Marttunen, 2008; Lankshear & Knobel, 2006). Additionally, new literacies studies extend the definition of traditional literacies as online reading is seen as an increasingly collaborative, social practice (Leu et al., 2009; Zawilinski, 2009). In the following sections, three assumptions of New Literacies are provided for understanding this research. These assumptions are arranged into three subcategories including: 1) assumptions of New Literacies theory for sociocultural understandings of learning, 2) assumptions of New Literacies theory for interpreting writing research, and 3) assumptions of New Literacies theory for observing educational practice.

Assumptions of New Literacies theory for sociocultural understandings of learning. New literacies have echoed previous sociocultural understandings of the social nature of learning and the meaning-making process (Vygotsky, 1986; Wertsch, 1991). Such understandings link literacy education to the social practices within the contexts of which they are found. Specifically tied to the acquisition of literacy, the definition of literacy is assumed to continually shift with societal change within a sociocultural perspective (Kelly & Green, 1998). Thus, New Literacies theories apply to the specific contexts in which they occur. As Lankshear and Knobel (2003) contend, "Literacies are bound up with social, institutional and cultural relationships, and can only be understood when they are situated within their social, cultural and historical contexts" (p. 59). Thus, such understandings require assumptions for learning as embedded, sociocultural practices which occur in the contexts of origination.

Assumptions of New Literacies theory for interpreting writing research.

Three assumptions are key for understanding the theoretical orientations of New Literacies in relationship to writing research. First, New Literacies assume that there are differences between composing online versus paper (Leu, 2006). Features such as hyperlinking require a type of reading and composing which move beyond physical features of pen and paper. The writer is continually navigating a variety of tools to compose meaning in a digital writing environment. Second, not only are there differences concerning composing online, but there are also assumptions of what counts as text in digital writing (Kress, 2003). For example, as multi-modalities are often employed, sound, music, and video are often considered parts of the meaning-making symbols beyond text alone. Third, New Literacies assume expanded audiences (Gee, 2011). Composing with traditional pen and pencil affords a limited audience for sharing, especially in classroom assignments where the teacher is the only considered audience. Digital writing assumes that more audiences for sharing are implicitly available, making an expanded audience an additional assumption for interpreting writing research within a New Literacies framework. In the following section, the final category of New Literacies assumptions is provided.

Assumptions of New Literacies theory for observing educational practice.

Several assumptions of New Literacies theory apply to the educational context. First, student-centered approaches reflect out-of-school experiences including multimedia presentations (Baker, 2000; Truong & Zanzucchi, 2012), digital storytelling (Burke & Kafai, 2012), wikis or blogs (Kuteeva, 2011; Zawilinski, 2009), and social media (Sweeny, 2010). As Gee (2003) has argued, major societal changes involving active

creation and production of knowledge directly impact the educational context as students are no longer passive participants in a variety of contexts. Similarly, Ciardiello (2004) argues critical literacy practices are essential for new literacy pedagogies as "critical literacy practices lead to the interrogation of the ulterior motives and below-surface level ideas of all types of text, including visual, print, digital, and audio" (p. 138). In addition, Comber and Nixon (2011) contend,

> With today's young people increasingly accessing information online as part of their learning, it is more important than ever that they are able to make discerning judgments about what they are reading and this requires in depth engagement with complex print and multimodal texts rather than surface level skimming to meet short term goals. (p. 9)

Last, Leu et al. (2004) add three factors for understanding the digital environment in educational contexts: (1) the importance of speed within new literacies, (2) the importance of social learning within new literacies, and (3) the importance of the revolving role of the instructor within new literacies. These assumptions were considered when observing the practices of the participants of the current study in their digital writing classroom experience. In the following section, the literature review of the research that informed this study is also presented.

Literature Review

As the literature review continued throughout the research process, considerations for both the design of the study and the interpretation of the findings are represented in the bodies of research represented. Two major strands from the literature were identified to inform the research design and interpret the findings of the study including: 1)

educational research in writing and 2) research in the education of boys. The focus of this review was to gain an understanding of the digital writing research with boys and its immediate implications to the context of the study.

Educational Research in Digital Writing

Writing is a relatively new area of study within the field of literacy, especially in connection to K-12 education. Early writing research can be traced to the 1970's with researchers like Emig (1977) whose theories of process writing shifted classroom practice from traditional product-based instruction and assessment. Frameworks for understanding the writing process (Hayes & Flower, 1980) have been subsequently researched. Although these early researchers focused on the composition practices of secondary and post-secondary students, other researchers have focused on specialized topics with elementary students such as the development of student writing as invention and reinvention (Dyson, 1995; Graves, 1994), the emergence of internal strategies for writing (Graham, 1989; Graves, 1975; Harris et al., 2011), and the progression of self-monitoring of the writing progress as students develop as writers (Bereiter & Scardamalia, 1982). Such traditional studies have focused on the achievement measures of students within their school experiences, but as the role of writing outside of the classroom has turned increasingly social, more research has been dedicated to exploring digital writing both inside and outside of the classroom.

Digital writing inside the classroom. Recent attention within the field of writing research has shifted to digital writing, reflecting the growing use of digital writing both inside and outside of the classroom (Anderson & Mims, in press; Anderson, Goode, Mitchell, & Thompson, 2013; Whittingham, Huffman, Rickman, & Wiedmaier, 2013).

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Research in composing online in school contexts originally focused on early email exchanges among students and cultural writing exchanges during school experiences, highlighting the importance of the role of audience in digital writing experiences (Fabos & Young, 1999; Riel & Levin, 1990). Other studies have since reviewed the role of word processing (Wolfe et al., 1996) and assistive technologies for writing achievement in school (MacArthur, 1998; MacArthur, Graham, Haynes, & De La Paz, 1996). These studies focused on the effectiveness of technology for improving students' writing achievement, but often found technology was only one component in a larger contextual environment. For example, in Graham's (2008) review of word processing tools used for revision, he argued that the use of word processing tools alone did not support higher revisions as "the effects are largely dependent on the context in which word processing is used" (p. 251). Such context dependent features highlight the increasingly complex understandings for the purpose of writing in the classroom and the potential for digital technologies to create more authentic learning experiences for students by mirroring the experiences of students outside of the classroom. In the following sections, more detail concerning research on the digital writing experiences of students outside of the classroom is provided, including research on how some teachers have attempted to bridge the out of school digital writing experiences into the classroom.

Digital writing outside the classroom. Shifts in how both students and teachers have participated in digital experiences outside of the classroom have altered traditional definitions of literacy (Howell & Reinking, in press). For example, Alloway and Gilbert (1997) have called to mind "what it means to be 'literate' is constantly being negotiated and renegotiated as we become increasingly affected by technological and informational

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change" (p. 51). Various studies have documented the out of school digital writing experiences from students representing a variety of ages. For example, some studies have documented adolescent students in their digital composition experiences such as creating fan fiction (Alvermann & Hagood, 2000; Chandler-Olcott & Mahar, 2003; Lewis, Black, & Tomlinson, 2009) composing stories on blogs (Boling et al., 2008) and participating in social media (Buck, 2012; Davies, 2012; Lenhart et al., 2010). Other studies have demonstrated the growing trend of students at intermediate and elementary ages who are participating in the larger digital culture such as participating in digital creations through gaming such as *Minecraft* (Shifter & Cipollone, 2013). The literature has also documented varying perceptions of what constitutes as literacy (Kress, 2003). When asked about writing experiences, for example, it has been found that students have not always connected their out of school experiences to "official" writing, instead calling in-school writing "required" writing (Purcell et al., 2013a, p. 14). Although there has been evidence to point to the benefits of out-of-school digital literacies (Alverman, 2002; Guzzetti & Gamboa, 2005; Jenkins, 2013), such as the critical and creative components of gaming theory that has been found to transfer to similar cognitive functions needed for writing (Gee, 2007), these literacies are still being challenged in traditional school contexts. One way this study sought to add to this conversation was by exploring the experiences of students who had access to digital technologies both in-school and out-of-school to explore the ways in which they experienced the digital writing in their classroom environments. In the following section, previous research in how other school contexts have attempted to integrate out of school digital literacies is presented.

Teacher integration of outside digital writing. As technology has become more available for teachers who teach writing, more studies have been conducted on how teachers are implementing digital literacies into the classroom (Hutchison & Reinking, 2011; Purcell et al., 2013a). Studies demonstrating how secondary and post-secondary teachers have implemented free online collaborative writing tools such *Google Docs* or *SkyDrive*, for example, have been documented (Brodahl et al., 2011; Wood, 2011). Although it appears more secondary and post-secondary teachers are implementing digital tools for collaborative writing into the classroom, a recent online study, however, found that the teachers who implemented such tools into the classroom experience did not fully integrate the collaborative potential for peer feedback as only 29% allowed or required students to edit or provide feedback to their peers work (Purcell et al., 2013b). Additionally, although such studies of collaborative writing in the classroom have been documented for adolescent students, few studies have explored how collaborative writing is occurring for younger students (Bogard & McMackin, 2012). Other studies have demonstrated how teachers have been implementing more "motivating" digital writing practices from outside of the classroom which focus on larger audiences for students' writing (Alvermann, 2008; Guzzeti & Gamboa, 2005; Witte, 2009). Although these studies have concluded that there is a potential for student engagement through the authentic audience established through such experiences, some researchers contend that there is also a danger in "trespassing" into more private student spaces that could potentially present problems for students and teachers alike (Witte, 2009, p. 24). Additionally, some research has found that the same level of student engagement and participation was not necessarily transferred from out-of-school experiences to in-school

experiences for some students when teachers attempted to implement similar digital experiences from the students' digital culture into the classroom (Alvermann & Hagood, 2000). Researchers such as Gee (2007) point to the ethics of addressing this subject, both cautioning the way teachers attempt to assimilate student culture into the classroom and calling for a greater understanding of how students navigate between digital spaces both inside and outside of the classroom. Addressing such sensitivities, this study sought feedback from students to understand how they experienced the digital context constructed in their classroom and how it impacted their perceptions of themselves as writers. In the following section, more detail explicitly outlining how the current study addresses other issues for the study is provided.

Digital writing research needed. Considering the continually evolving nature of digital writing as it reflects societal change both inside and outside of the classroom, more research is needed to explore the complexities of this social phenomenon. Currently, there is a call for more research on how digital composition affects the literate identities of students at increasingly younger ages (Bogard & McMackin, 2012; Vasudevan et al., 2010). More specifically, Bogard and McMackin (2012) claim there is a particular paucity of documentation of students composing across modalities at the elementary level in connection to their writing identity. Additionally, Vasudevan et al. (2010) argue that as composing across modalities affects "authorial stances" and literate identities within a community of learners, more research is needed to understand the complexities of student experience in the educational context. By seeking to explore how one classroom of fifth-grade boys experience digital writing environments in relationship to how those environments influence their writing identities, this research sought to fill

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this gap. In the following section, specific detail of how this research relates to previous research in the education of boys is provided.

Research in the Education of Boys

Concern for the education of boys, particularly in regards to a gender gap in achievement scores in literacy, is not a new topic of study as questions concerning the nature of schooling for boys have been central to an international focus of research on gender in education for the last two decades (Francis, 2002; Hall & Coles, 2001). For the public at large, books have been written to specifically address this issue to a larger audience about this "crisis" in the education of boys including *Bringing Up Boys* (Dobson, 2010) and *Pink Brain, Blue Brain* (Begley, 2009). What exactly has fueled this discussion and source of concern for boys? The following sections discuss research on boys and literacy achievement, potential explanations for achievement gaps in gender, boys and gendered discourses in education, and, ultimately, research on boys' writing.

Boys and literacy achievement. With the rise of achievement-based assessment, many studies have studied gender-based differences in relationship to academic achievement in literacy skills (Coley, 2001; Ready et al., 2005; Rutter et al., 2004; Wilkinson, 1998). For example, Coley (2001) used achievement testing results from NAEP to conclude that females outperformed males in both reading and writing across all grade levels. In a study of kindergarten achievement, Ready et al. (2005) found that boys entering kindergarten did not possess the same literacy skills as girls, a gap which increased over the kindergarten year. Specific ability-based studies, however, have shown mixed-results with Feingold (1988) reporting only a slight difference between the spelling abilities of boys and girls, while Hedges and Nowell (1995) reporting virtually

no effect size for comprehension. According to Gorman (2014), a recent synthesis of research across grade-levels points to only a slight disadvantage in reading between boys and girls entering kindergarten. This was seen as a steady rise in the gap throughout schooling, representing an average of an equivalent of 1.5 years of schooling in reading between boys and girls by the age of 17. These research studies represent a quantitative approach to measuring achievement between boys and girls, and some researchers argue that these studies present a limited picture to the problem (Watson, Kehler, & Martino, 2010).

The previous research in gender-based achievement has been critiqued for a variety of reasons. First, some researchers have argued that the differences within gender are more significant than between gender (Collins, Kenway, & McLeod, 2000; Lingard, Martino, Mills, & Bahr, 2002). For example, some researchers have found a significant gap between socio-economic status and argue this within factor variables make a more significant difference than variables between genders alone (Collins, Kenway, & McLeod, 2000; Mead, 2006). Mead (2006) further adds that such large-scale achievement measures fail to consider a variety of social features including race and socioeconomic status contending that, "when racial and economic gaps combine with gender achievement gaps in reading, the result is disturbingly low achievement for poor, black and Hispanic boys" (p. 9). Moreover, Blair and Sanford (2004) have argued that the analysis of results from achievement measures research are "limited in their interpretation, perhaps even biased, and do not tell the full story about boys' literacy abilities and practices" (p. 452). Specifically, Watson et al. (2010) contend that such research propels discourses of boys as "disadvantaged literacy learners" which could

potentially impact the way teachers view their students. Such critiques call for a more nuanced approach to studying boys in their naturalized environments (p. 356).

Biological explanations for achievement gaps in gender. Although there are many factors which highlight the complexity of understanding such achievement gaps, much research persist to attempt to explain the differences between girls and boys in literacy achievement (King & Gurian, 2006b). To understand this complex social phenomenon, two major bodies of research have attempted to explain the differences between gender achievement gaps including both biological and social fields of study. First, researchers have attributed the achievement gap in literacy between boys and girls to biological differences. Most notably, brain-based studies between the differences of boys and girls have been conducted (Blum, 1997; Gurian & Stevens, 2005; Rich, 2000). For example, Kimura (2005) found more highly developed verbal processing features of the brain for girls, whereas Blum (1997) found more highly developed spatial processing features of the brain for boys. Rich (2000) found that cross talk between hemispheres of the brain was more evident with girls than boys, making multi-tasking more difficult for boys. Such brain-based differences have led some researchers to conclude that such differences lead to significance implications for classroom practice (Gurian, Henley, & Trueman, 2001; Gurian & Stevens, 2005; King & Gurian, 2006a).

Specifically related to literacy milestones, these studies point to the developmental features between boys and girls and have been linked to contributing to the gap in literacy performance in school as Mead (2006) explains, "Differences in verbal abilities are among the first to appear; vocabulary differences, for example, are seen before children are even 2 years old, and by the time they enter kindergarten, girls are

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more likely than boys to know their letters and be able to associate letters with sounds." Mead further contends such developmental delays between boys and girls have been linked to diagnosis of learning disabilities explaining,

> Boys make up two-thirds of students in special education—including 80 percent of those diagnosed with emotional disturbances or autism—and boys are two and a half times as likely as girls to be diagnosed with attention deficit hyperactivity disorder (ADHD). The number of boys diagnosed with disabilities or ADHD has exploded in the past 30 years, presenting a challenge for schools and causing concern for parents. (pp. 11-12)

Such a concern for the way boys participate in education has also been liked to other biological differences. For example, levels of chemicals in the body such as oxytocin have been attached to the differences in the ways in which males and females participate in educational tasks as such differences have been attributed to higher levels of male aggressiveness, competiveness, impulsivity, and less likely to be attributed to "bonding malleability" and relationship building through verbal or emotional functions (Blum, 1997; Gurian, 1998; Taylor, 2002). It should be noted, however, that biological approaches to understanding the way boys participate in the classroom have been critiqued. For instance, Eliot (2009) contends that biological differences are small and insignificant when accounting for ability differences and postulates that other factors in boys' and girls' environments play a more prominent role in shaping such differences. Mead (2006) contends the relationship between biological differences and behavior is difficult to link, "as correlation does not always signify causation in social science research, correlations between differences in brain structure and observed differences in

male and female behavior do not necessarily mean that the former leads to the latter (p. 16). Thus, in an attempt to further understand the differences between boys and girls participation in literacy tasks, researchers have explored the social aspects in the environments between boys and girls such as the role of practice and repetition for performance activities such as throwing a ball or repeating a nursery rhyme. Such social roles of research question assumptions of biological approaches as the sole means for understanding the performance differences between boys and girls.

Social explanations for achievement gaps in gender. Related to critiques of biological differences in literacy achievement across gender, researchers have also explored the achievement gap in literacy between boys and girls to a second body of research, researching the extent to which social factors account for such differences. For example, some researchers who investigated the achievement gap in literacy between boys and girls point to "feminized environments" where the majority of female teachers and caregivers in these environments influence boys to view literacy as a "feminine" activity (Biddulph, 1994; Newkirk, 2002; Pollack, 1998). For example, Scieszka (2002) identified female teachers and librarians as dominate promoters of reading who influenced boys to think reading was an "un-masculine" activity (p. 23). These explanations have also been criticized, however, in their "inattention to a more nuanced understanding of masculinities, gender and power as it intersects with race and class" (Phoenix, 2003, p. 228). Thus, other studies have further explored the role of discourses of boys in school more in-depth. In the following section, research exploring the various approaches to gendered discourses of boys is presented.

Boys and gendered discourses in education. In response to critiques of "feminized environments" as over-simplified attempts to explain male achievement gaps, researchers have explored other discourses surrounding boys and education. Such researchers have explored how boys' perceptions influence their participation within their immediate educational contexts (Brozo, 2005; Francis, 2000; Phillips, 1998). For example, Phillips (1998) observed boys who mirrored masculinized discourses and were "expected to be tough, competitive, and independent" (Blair & Sanford, p. 453). Brozo (2005) studied teenage boys who were "turning off to reading" and their relationships with peers who regarded traditional literacy activities as "uncool" (p. 18). Francis (2000) observed how performative discourses of boys including "messing about, horseplay, verbal banter and abuse, physicality, humor, and 'cheeking' the teacher" functioned in the classroom environment (p. 118). In the following section, particular attention to how the discourses of the learning styles of boys have been applied to educational contexts is provided through a review of "boy-friendly" learning environments.

Boy-friendly learning environments. Other research approaches for understanding gendered discourses about boys in education have looked at the relationship between these discourses and the decisions made within educational contexts such as instructional strategies, reading materials, or larger policy decisions. Such discourses affecting educational decisions include assumptions of what boys "like" to read or which "boy-friendly" strategies will engage boys. For example, King and Gurian (2006a) have presented an educational framework for establishing "boy-friendly" learning environments that encompass both "genetic and socialized" differences between boys and girls (p. 4). This framework was applied to an elementary school in Boulder,

Colorado with successful literacy gains across gender with boys outperforming girls in literacy achievement and special education students achieving 7.5 times the average growth for students within the same population in their school district. The framework consists of eight considerations for the learning environment of boys including: 1) Increasing experiential and kinesthetic learning opportunities, 2) Supporting literacy through spatial-visual representations, 3) Letting boys choose topics that appeal to them, 4) Helping boys with homework, 5) Offering single-gender learning environments, 6) Making reading and writing purposeful, 7) Seeking out male role models, and 8) Getting serious about gender learning (King & Gurian, 2006a, pp. 2-4). This framework represents one approach to such "boy-friendly" strategies that have been applied to learning environments.

Although some argue that the application of such strategies can sometimes be beneficial for all students, others argue that the potential danger in implementing such approaches lies in failing to recognize the complexities of the individual student. In particular, such discourses affecting educational decisions for boys and girls include "the need for single-sex classes" and "more male teachers, who are better suited to relate to boys and address their learning needs" (Martino & Kehler, 2007, pp. 407-408) have been critiqued. In a critical response to boy-centered mandates across Canada, Blair and Sanford (2004) conducted a two-year ethnographic study that highlighted the complexities of implementing such strategies. Ultimately, these strategies were found to be "inadequate to address the literacy learning needs of some boys," further adding to the discussion of how tacit assumptions in policy function in students' experience:

Many of the strategies and suggestions for implementation are potentially

effective for both boys and girls; however, the suggestion in these officially-

sanctioned documents is that boys' engagement and achievement can be improved

through gender-specific and explicitly boy friendly instructional practices that

cater to boys' innate strengths and interests (p. 452).

Thus, there is a need to not only consider the discourses circulating within

individual contexts of boys, but also the consideration of how such discourses are

perpetuated in both research and policy. The current research did not seek to explicitly

address discourses of gender, but admittedly found it necessary to address when

discussing the context of one all-boy classroom. Additionally, the literature review of

such discourses served as a point of reference, especially in the analysis process and

representation of findings. In the following section, final considerations for more specific

issues of the current research are presented including boys and digital literacies and boys

and digital writing.

Boys and digital literacies. Aspects of gender and computer technologies have

long been established in previous research studies, pointing to trends in computer science

and computer industries as dominated by males (Natale, 2002). Early studies exploring

boys and their participation in computer-mediated experiences in the classroom found

promising results for engaging boys in visual-spatial representations (Smith, 1996). Later,

these studies were applied to active learning principles for boys to manipulate their own

learning through creating charts or presentations on interactive whiteboards (Higgins,

2002). More recently, Sokal and Katz (2008) explored the use of technology for reading

with both male and female teachers and found that the "use of computer-based books

demonstrated their ability to de-feminize boys' views of reading" (p. 81). As a growing

field of game-based research has been correlated to literacy abilities including multi-

tasking, critical thinking, and collaborative planning (Gee, 2007), other researchers have

looked specifically at boys' interests in out-of-school experiences and how they have

compared to their educational environments (Livingstone & Bober, 2005). For example,

Aarsand (2010) studied peer relationships of 6- and 7-year-old boys participating in

digital games and argued that their "game competence" transferred to their social

relationships within the school environment as the boys mediated participation

cooperatively (p. 38). Additionally, he called for more research to explore how digital

games and social relationships among peers impact their participation in the pedagogical

decisions of teachers. In the following section, more attention is provided to these

pedagogical decisions, including the ways in which research concerning boys and

writings has developed into the field of digital writing studies.

 Boys and digital writing. As previously indicated, although it has been heavily

critiqued, a literacy gap between boys and girls in writing has been demonstrated in the

literature (Rutter et al., 2004; Sokal et al., 2005). More specifically to this study, research

has shown a gap in writing achievement between boys and girls (Mead, 2006). Various

studies have explored the relationship of boys' self-efficacy, motivation, and engagement

in regards to writing (Pajares, 2003; Pajares, Britner, & Valiante, 2000; Pajares, Miller, &

Johnson, 1999; Pajares & Valiante, 1999). Such connections to writing engagement in

boys have been extended to discussions concerning the potential for digital composition

to engage boy writers. For example, Clark and Dugdale (2009) surveyed boys and girls

ages 8-16 in the United Kingdom and found that although girls were more likely to report

an enjoyment for writing or self-rate higher skill levels for writing, boys were more likely

to hold "more positive attitudes towards computers, being more likely than girls to

believe that computers are beneficial to writing" (p. 5). Such results point to the need to

explore the impact of digital technologies with boys and writing achievement.

Furthermore, in a review of the literature of improvement of boys' writing across the

United Kingdom, North America, Europe, and Australia, Daly (2002) found 21 factors

associated with poor performance of boys in writing. Noted studies identified a complex

relationship between boys and their learning environments including types of writing

assignments (Connell, 1989; Jordan, 1995; Mac & Ghaill, 1994; Maynard, 2002;

Thomas, 1997), writing demands (Bleach, 1998; Daly, 1999; Goodwyn, 1995; Millard,

1997), and teacher expectations (Barrs & Pigeon, 2002; Frater, 2000). Additionally, the

review noted 21 factors associated with improvement of boys' writing including the

implementation of active learning tasks (Bleach, 1998; Frater, 1998; Penny, 1998;

Pickering, 1997), the use of visual media (Higgins, 2002; Millard, 1997, 2001; Smith,

1996), and more facilitation of Information and Computer Technologies (Noble &

Bradford, 2000; Tweddle, 1997). As such bodies of research align to key assumptions of

New Literacies and the digital learning environment, this research seeks to further

understand the contextual influences on boys for digital writing. Furthermore, the

continually changing or "deictic" nature of digital literacies means as new literacies are

continually emerging, there is a need to continually understand how they are influencing

the educational environment (Lankshear, Knobel, & Curran, 2012). This study looked at

how one classroom of fifth-grade boys was influenced by the social participation of

digital literacies within their classroom environment.

In sum, this study did not seek to provide a rationale for "boy-centered" strategies for learning, but rather highlight the complexities of a single environment to elucidate understandings of how the boys in the context situated themselves as writers in their digital writing experiences. As Alloway and Gilbert (1997) have argued, the importance of such nuanced approaches to literacy research represents larger issues for consideration:

> We remind ourselves and others as teachers and teacher educators, that concerns for boys, but more importantly, the concerns for boys and girls, needs to be understood with a more sophisticated and more nuanced appreciation of what it means to teach in literacy classrooms (p. 49).

Chapter Summary

This chapter has presented both the theoretical perspective for the study as well as a review of the literature. The theoretical perspective was informed by a variety of assumptions from New Literacies theories. The review of the literature included two major bodies of research including research in writing in education as well as research in the education of boys. Research in writing in education provided a brief overview of traditional writing research before presenting digital writing research. Subcategories within writing research included: 1) digital writing inside the classroom, 2) digital writing outside of the classroom, 3) outside digital writing integrated into the classroom, and 4) digital writing research needed. Research in the education of boys included the following subcategories: 1) boys and literacy achievement including both biological and social explanations for achievement gaps, 2) boys and gendered discourses in education, 3) boy-friendly learning environments, 4) boys and digital technologies, and 5) boys and digital writing.

Chapter 3

Methodology

The purpose of this qualitative case study was to explore the digital writing experiences of one classroom of fifth-grade boys. Through exploring digital writing practices of students within this context, this research aimed to provide a contextualized picture of one classroom of boys participating in digital writing experiences. In order to meet this aim, this study was guided by the following three research questions: 1) How do elementary boys in established school-based digital contexts participate in digital writing tasks? 2) What influences their writing? 3) What influences their perceptions of themselves as writers?

This chapter describes the research methodology and includes discussion of the following areas: (1) rationale for qualitative research design, (2) rationale for case study methodology, (3) description of the research sample, (4) considerations needed to conduct the study, (4) overview of research design, (5) IRB approval information, (6) methods of data collection, (7) analysis and synthesis of data, (8) ethical considerations, (8) issues of trustworthiness, (9) limitations of the study, and (10) chapter conclusion.

Rationale for Qualitative Research Design

Qualitative research has been described as an inquiry approach implemented to attempt to "understand, interpret, and explain complex and highly contextualized social phenomena such as classroom cultures, avid readers, or peer group development and maintenance" (Kamberelis & Dimitriadis, 2005, pp. 17). Through exploring the experiences of fifth-grade boys within an environment of an established school context for digital writing experiences, this research sought to understand the complexities and

nuances of the students' experiences. Additionally, because a component of the study required special attention to the formation of the students' writing identity through their digital writing experiences, a qualitative approach was deemed most appropriate. Unlike quantitative approaches, a qualitative design attempts to capture the complexities of the human experience, often creating powerful vignettes of nuance to inform both research and practice.

Rationale for Case Study Methodology

Case study is one example of a qualitative approach to research. It is best suited for studying a unit of analysis in detail and answering the "how" and "why" questions. It can be used to describe a case, explain it, or explore it. According to Creswell (2012), the case can be multi-site or within-site, instrumental, collective, or intrinsic. This study represented an instrumental within-site case site in order to explore the complexities of students' digital writing experiences in relationship to the development of their identities as writers within their educational context.

The Research Sample

This study employed purposeful sampling techniques (Patton 1990, 2005) to invite the participation of students from one teacher's classroom within a specified school context. To meet the characteristics of the study, the context was required to meet the following criteria: (1) a school site with an established commitment to the development of digital skills across multiple grade levels from early elementary to intermediate students through its general mission statement or action plans, and (2) a classroom site with multiple opportunities for digital integration of writing tasks such as the classroom

use of wikis, blogs, microblogs, zines, or digital document sharing through Web 2.0 tools such as Microsoft's *SkyDrive* or Google's *Google Drive*.

Consideration of such a school context had been ongoing through the recommendation of researchers specializing in literacy and technology integration in K-12 settings using snowballing (Crotty, 1998) sampling techniques. As the researcher had previously studied and published in these two bodies of research (Anderson et al., 2013), collaborative writing efforts had been established which allowed the researcher to solicit recommendations from other professionals. Additionally, these partnerships allowed the researcher to meet other educators and school leaders who were committed to technology integration. Ultimately, the cooperating teacher in the study was one such educator whom the researcher had previously met in this work.

Although the researcher had an established relationship with one of the teachers from the school site, the selected school context was identified as one of seven school sites in the Mid-South region of United States that espoused a focus on digital skills development as well as considered specialized approaches to the education of boys. Consideration for how this school context met the criteria above the other identified school contexts was made. First, the school's focus on digital skills development was evidenced through the tenets of its mission statement including a focus on preparation for a "global community" in the "21st century" and incorporating technology for creative thinking, creative application, and collaboration.

Not only did the school site articulate its mission to develop digital skills, but it also demonstrated this commitment in the programs it offered for its students and the training it provided for its teachers. For example, as a 1:1 laptop school for over 12 years,

the school site afforded the opportunity to observe students who had been exposed to hands-on approaches to technology throughout their educational experiences. Additionally, teachers from the school had been trained and awarded nationally for their innovative uses of technology into their school curriculum. Furthermore, online courses in various disciplines were offered to students, parents, and teachers, establishing participation in digital environments through communicating within various modes of writing. Thus, the criteria for the selection of the school site were met through identifying these categories. In the following section, considerations needed to conduct the study are provided.

Considerations Needed to Conduct the Study

In order to conduct the study, the researcher needed to enlist the support of the school selected for participation, the classroom teacher who was also willing to participate, and students' assent with corresponding consent from their respective guardians. Once such considerations were met, the researcher needed to consider how to observe the interactions of the students during digital writing tasks as unobtrusively as possible. Also, the researcher needed to consider the time and location for interviewing students regarding their digital writing experiences with special considerations for the students' continued assent, privacy, and scheduling demands. Finally, the researcher needed to access classroom archival records such as student writing products that required the researcher to become a digital community member in applicable online environments. All of these aspects required special considerations for the researcher to make ethical decisions concerning the implementation of the research design. In the following section, an overview of the research design is presented. Following, a detailed

explanation of the human subjects review process will further discuss the ethical decisions from the research design.

Overview of the Research Design

Before the study was conducted, the research process began by seeking the appropriate human subjects approval from the institution's Institutional Review Board (IRB). The study took place over the span of one year from the initial approval process to its completion with the representation of the study. Data collection for the study correlated with the participating school's academic school year and occurred over 15 weeks from August to December. Analysis was ongoing with a special allotment of time from December to January to complete this stage of research. The representation of the results took place during the months of January and February. The results were shared with participants and colleagues during the month of March to discuss any conflicting areas of analysis, interpretation, or representation.

IRB Approval

As previously indicated, the researcher completed and submitted an internal review request which considered ethical decisions for conducting research with students as a vulnerable population of human subjects (see Appendix F). First, the researcher solicited and provided a letter of cooperation from the appropriate school administrator. Next, the researcher developed and submitted recruitment materials for parents and students. These materials included fliers for advertisement of the study, a script for verbal invitation to the study, and letters explaining the purpose of the study in language appropriate for its audience. Finally, the researcher developed and submitted the appropriate consent and assent forms for both the students in the study to obtain their

assent and their respective parents to obtain their consent. The consent from parents included permission for students to participate in the study including observations in the classroom, collection of student artifacts, and the potential to be randomly selected as a focal student for multiple interview sessions (see Appendix G). The assent from students was comprised of two separate forms. The first form solicited assent from students to participate in the observation process and artifact collection (see Appendix H). The second form included assent to the focal students who were randomly selected to participate in the interview session (see Appendix I). Each focal student completed a separate interview form for each interview session. No data was collected from any student without both parental consent and student assent. All of these components were submitted and approved by the IRB before the start of the data collection process. In the following section, the data collection methods are discussed.

Data Collection Methods

In order to answer the research questions, establish triangulation of data sources, and provide a rich description of the context for this study, the researcher collected data from a variety of sources including field observation, student interview, and artifact collection. The following research data was collected over the course of the study: 1) two weekly classroom observations ranging from one-two hours each with corresponding researcher memos, 2) a total of eighteen 20-30 minute semi-structured interviews of six randomly selected focal students, and 3) student writing products from six focal students.

Observation

Prior to the start of this study, the researcher established contact with a teacher from the school who had previously worked with the researcher on a collaborative research project for studying technology integration. After explaining the purpose of the

study to focus on digital writing and the consideration of her school's context for the study, the teacher expressed interest in allowing her classroom to participate in the study as she was also interested in the writing experiences of her students. The researcher then met with this classroom teacher to discuss the project with the school's administrator, determine appropriate times for classroom observation, and share the classroom rotation with the researcher. All total, the teacher taught six different sections of students in two different classes, including English and Writer's Lab. In order to observe the variety of classroom experiences, the researcher followed the classroom rotation of one of the teacher's six sections to observe both the English and the Writer's Lab classes with the same group of students. Before these observations started, the researcher first visited all of the six sections to invite participants to the study.

Upon the first visit to each classroom, the teacher introduced the researcher. The researcher then explained the purpose of the study to the students and invited all students to participate. A flier was also placed in the classroom with the researcher's and teacher's contact information. Additionally, the researcher gave each student an invitation with an attached consent and assent form to explain the research to the students' guardians. On the following week, the researcher compiled the returned consent and assent forms. Of the six sections of students, the classroom with the highest interest rate was selected for observation.

Once the appropriate section for observation was selected, observations commenced twice a week and followed the teacher's rotation for the same section. On the first classroom visit of the week, the researcher observed a total of 20 students during their English block, a 2-hour time period in the afternoon. On the second classroom visit

of the week, the researcher observed the same students during their Writer's Lab block, a

1-hour block of time. During the Writer's Lab, 10 of the 20 students remained with the

teacher for 30 minutes while the other 10 students rotated to a different elective course

such as a foreign language class. After the 30 minutes of Writer's Lab, the same group of

students then switched, repeating the same process.

The researcher collected observation data using a variety of strategies. First, the

researcher recorded field notes by hand through both participant and non-participant

observations throughout the duration of the study. The researcher particularly noted

classroom activities and corresponding times, teacher directions, student participation,

and interactions among various members of the class. When applicable, the researcher

also captured direct quotes *in situ* of the classroom activity. Next, the researcher

immediately expanded and typed field observation notes into field observation memos

(see Appendix A). These notes were organized and archived on the researcher's computer

throughout the duration of the study. Finally, the researcher utilized the strategy of

analytical memos by writing researcher reflections for coding and analysis considerations

throughout the research process (see Appendix B). Researcher memos were used to help

the researcher consider potential points for analysis throughout the research process.

Interview

Three semi-structured interview sessions with six randomly selected focal

students were conducted, recorded, and transcribed for this study for a total of 18

interviews (see Appendix C). Six randomly selected focal students participated in the

interview sessions at three different intervals of the study (see Appendix D). Before

interviewing the students for the first time, the researcher first observed the classroom

environment for one week. From this time forward, the researcher observed the students

for a total of four weeks before the next interview sessions. Thus, student interview

sessions took place during week 2, week 7, and week 12 of the study. All interviews were

conducted in a private location. The recorded data was stored on the researcher's personal

computer which was also password protected. The recorded interviews were then

transcribed and assigned a code. After the data was transcribed, the recorded data files

were then deleted from the researcher's computer.

Artifact Collection

After observing students in their classroom environment and interviewing focal

students, the researcher collected classroom artifacts (see Appendix E). Specifically, the

researcher collected the digital writing assignments and products of the six focal students.

Throughout the study, focal students were asked to further explain their writing products

in the interview sessions. This process added a layer of complexity to the study as

students were asked to describe their experiences creating the products as well as their

perceptions regarding the products. It should be noted that digital artifact collection

included the use of "sharing" folders through focal students' *Google Drive*. Here the

researcher was not only able to access the digital writing products, but also digital

interaction trends, particularly when students worked collaboratively on digital writing

products. At times, the interaction trends included the use of peer comments on digital

writing documents. At other times, the interaction trends included the various versions of

documents in which students had made annotations. During the data collection process,

the researcher continually reflected on the data across methods by composing analytic

memos. In the following section, the methods for data analysis and synthesis are discussed.

Methods for Data Analysis and Synthesis

Analysis of data for a case study methodology has traditionally employed an embedded or holistic analytic strategy (Creswell, 2012). In a holistic design, one unit of analysis is addressed, while multiple units are addressed in an embedded design (Yin, 2009). For this case study, both an embedded and holistic strategy was employed in order to explore the research problem. The embedded strategy was utilized to account for multiple aspects of analysis for inspection in the digital writing environment. For example, the researcher considered the multiple features of the digital writing environment that could potentially impact the students' digital writing experiences. The holistic strategy was then employed to individual student interviews to address the students' perceptions of their own identities as writers. By utilizing both of these strategies, the researcher was able to connect students' individual experiences to the larger classroom context.

More specifically, the analysis process utilized categorical aggregation (Creswell, 2012) to analyze the data by searching for patterns across multiple sources. This was accomplished by first utilizing axial or line-by-line coding procedures (Ezzy, 2002) across all data sources. Initial categories included technology facilitation, writing processes, and digital composition. These categories divided the codes from the data into three units of analysis. As codes from the data were sometimes interconnected, careful consideration for the relationship of technology to writing was the first major step of the analysis process. Ultimately, the role of technology in the digital classroom was

categorized as a *facilitation tool* when it did not otherwise overlap with the writing experiences in the classroom. Also, codes associated with writing were categorized as *writing processes* when they aligned with traditional writing approaches that could occur outside of the realm of technology. Finally, *digital composition* represented codes that encompassed both technology facilitation and writing processes, creating a category of analysis unique to the digital writing environment.

By further dividing the codes within the category unique to the digital writing environment, subcategories of analysis emerged including the categories of skills, attitudes, and dispositions that were explicitly linked to digital composition. As these patterns were developed from a variety of data sources, categories were refined by continually returning to the data set for confirmation that proceeded into naturalistic generalizations. In the particular case of exploring students' experiences in a digital environment, emerging themes from the data were analyzed to elucidate understandings of the development of the writing identities of the students in the study. As a result, twelve themes emerged from this analysis. Four themes were identified in relationship to the categories of skills attitudes, and dispositions of digital writing. Themes for *skills* included the following: 1) processing multiple steps in instructions and procedures, 2) implementing writing knowledge, 3) utilizing technology as a writing tool, and 4) meeting school and classroom behavior expectations. Themes for *attitudes* included: 1) students' expressions of relationship to others, 2) students' expressions of confidence in participating in tasks, 3) students' expressions of affinity or enjoyment for the task, and 4) students' expressions of the task in connection to future plans or goals. Themes for *dispositions* included: 1) behaviors of social interactions, 2) emotional responses of

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students, 3) reactions to restrictions of student participation, and 4) engagement features of students.

Ethical Considerations

Research and interaction with all human subjects required ethical considerations, and the research of special populations, such as the children in the study, required additional sensitivities. Thus, the researcher was mindful of ethical considerations for the teacher in the study as well as the students. First, the researcher exercised consideration for the students and their educational experience by working with the teachers in the study to establish the least intrusive environment for all participants. When interviewing students, the researcher worked with the teacher to give the students options for their preferences for when they wanted to participate in the interview sessions. Next, the researcher established a friendly, yet unobtrusive presence in the classroom environment to ensure that both the teachers and the students understood the purposes of the research and felt comfortable with the process. When explaining the research process to the students, the researcher was especially mindful of the vocabulary utilized and issues concerning student perceptions of adult power dynamics. Finally, the researcher established and communicated safeguards to protect student and teacher identities. A pseudonym system was used for all data collected in the field.

Issues of Trustworthiness

Although epistemological assumptions of qualitative research typically differ from quantitative research, measures to address traditional quantitative issues of validity and reliability are sometimes still employed in qualitative research. Lincoln and Guba (1998) argue that these issues should be addressed differently within qualitative research and include the following categories: credibility, dependability, confirmability, and

transferability. Whether or not this terminology is employed, qualitative research can still address the potential for researcher bias throughout each stage of the research process.

Credibility

Credibility is comparable to the quantitative term of validity that establishes measures for the researcher to ensure the study actually measures what it reports to measure. This study employed measures to ensure credibility by considering the rigor of the design, analysis, and representation at all stages of research by considering the perspectives of the researcher, the participants of the study, and future readers of the research proceedings. First, the researcher collected multiple sources of evidence from various participants in the field. Next, the researcher disclosed personal subjectivities while continually reflecting upon these subjectivities through the use of researcher memos. Finally, the researcher addressed rival explanations by an analysis of the literature and by continually engaging in ongoing conversations with colleagues.

Dependability

Dependability is comparable to the quantitative term of reliability and addresses the extent of which the research can be replicated in other studies. Because qualitative research generally does not employ large numbers of data, Lincoln and Guba (1986) argue it is more important to ask whether or not the findings are consistent within the individual context of which the data was collected. For this study, the researcher assumed a "transparency of method" (Merriam & Associates, 2002) in order to document procedures for coding data and creating appropriate categories. The researcher discussed the findings of the data with the teacher of the study to check for consistency, especially when representing specific interpretative occurrences from the classroom observations.

Additionally, the researcher provided an overview of the findings for the participants in the study and invited them to share their responses to the research process. Where discrepancies existed, the researcher reviewed the analysis to ensure its consistency with the whole picture from the field.

Confirmability

The term confirmability is comparable to the quantitative concept of objectivity. As this term differs epistemologically in qualitative research, different considerations for addressing this issue will be employed in this study. Although the researcher did not assume that an objective stance could be assumed, the researcher initiated the process of generating findings transparent to the reader. Lincolin and Guba (1986) name this process the audit trail and includes the ongoing reflection of the researcher through the use of researcher memos and well-kept records such as field notes and interview transcripts. By using such protocols, the researcher employed whenever possible a reflexive and transparent stance to illustrate the origins of the data itself.

Transferability

The term transferability is comparable to the quantitative term of generalizability. Although qualitative research generally does not assume that findings can be transferred from one context to the next, Patton (2005) contends that inferences concerning the likelihood that such findings can be applied to similar, but not identical, settings can be speculated in qualitative research. By gathering as much data from the field as possible, the researcher aimed to address this issue by providing a rich detail of information for future readers.

Chapter Summary

In conclusion, this chapter provided a detail of the study's methodology. A qualitative case study design was employed in an attempt to capture the complexities of boys participating in the digital writing environment. Participants included one classroom of fifth-grade boys with six randomly selected focal students. Data methods included semi-structured interviews, archival documentation, and field notes from observations. The data was analyzed for elucidation of emerging themes. In conclusion, the intent of this research design was to make a scholarly contribution to the understandings of the digital writing practices of boys in experienced technology settings. By exploring this specific context, the researcher considered the implications for the transparency of knowledge in relationship to the cultural and social practices found within this environment. In the following chapter, the findings from this study are presented.

Chapter 4

Findings

The purpose of this case study was to explore the digital writing experiences of one classroom of fifth-grade boys. Major research questions included: 1) How do elementary boys in established school-based digital contexts participate in digital writing tasks? 2) What influences their writing? 3) What influences their perceptions of themselves as writers? This chapter presents a contextualized overview of the research site and three key findings. All information presented in this chapter was obtained from field observation notes over a fifteen-week study with corresponding researcher memos, three interview sessions with six randomly selected focal students, and the collection of classroom activities including student writing samples.

Contextualization

Before presentation of the findings, contextualization is deemed a necessary consideration for methodological designs of case study research as individual cases are inextricably linked to their respective contexts (Stake, 1995; Yin, 2004). According to Baxter and Jack (2008), case study research "facilitates exploration of a phenomenon within its context using a variety of data sources" (p. 544). Furthermore, Bassey (1999) defines key features of the educational case study including methods "conducted within a localized boundary of space and time" and situated "mainly in its natural context within an ethic of respect for persons" (p. 58).

To contextualize the findings, the researcher first provides a brief description of the school context. Next, a description is provided of the focal students' prior experiences with technology including a description of their self-reported in-school and out-of-school

experiences with technology. Finally, an overview of the classroom practices is provided that includes the instructional environment, digital writing resources, and digital writing assignments.

A Description of the School Context

As noted previously in the methodology chapter, the purpose of the study required the selection of the research site to explore contexts in which digital writing had been previously established in an elementary school environment with particular attention to the experiences of boys. Thus, the researcher identified a total of seven elementary school contexts in the Mid-South region that were publicly noted for their technology usage through awards or other recognition, recommended by technology integration specialists, or self-advertised for their use of technology in the classroom. The school site chosen for this study was ultimately selected for a variety of reasons including recognition for its use of technology as a 1:1 laptop school for over 12 years. Additionally, teachers at the school were trained in various aspects of technology integration, and professional development sessions were offered to both its teachers and local educators. Finally, the school was recommended from researchers studying various aspects of technology integration as particularly informed by established connections from the researcher's previous work.

Although all students in the school utilized laptops in their classroom experience, students entering the fifth-grade were issued their own school computer to take home for the first time in their school experience. Both students in the study and the classroom teacher mentioned how students signed a "responsibility" contract at the beginning of the year for this privilege. This contract outlined unacceptable uses of the computer as well

as disclosed information concerning the monitoring of student activities by school authorities. For example, students mentioned that someone was "constantly" monitoring their school-issued computers and could "ghost" their computers and even type messages back to them. One focal student in particular noted that he thought it was "interesting that the teachers could watch his screen and know what he was doing." Thus, the larger infrastructures and procedures regarding the sanctioned use of technology in the school further contextualize the focal students' experiences with technology within the classroom.

Focal Students' Prior Experiences with Technology

In this section, contextualization of the focal students' prior technology experiences is provided. This description provides a brief picture of how these students reported their in-school and out-of-school experiences with technology as informed through three interview sessions with each focal student throughout the study.

Out-of-school experiences with digital technologies. All focal students reported having access to digital technologies beyond the school context. For the purposes of this study, access to "digital" technology beyond the school context means Internet access outside both the school's appointed laptop and the school's wireless service. Additionally, half of the focal students not only had access to digital technology in their homes but also had access to multiple devices including smart phones, tablets, iPods, and additional computers in their homes. Not only did the focal students report what devices they used outside of the classroom, but they also reported a variety of ways in which digital technologies functioned in their homes. First, students reported using technology for communicative purposes more than any other function. Specifically, these students

reported using video conferencing tools such as *Skype* and other digital applications such as *Tango* (a chat app which integrates video, graphics, and texting into one interface) to communicate with their classmates, friends, and family members. In particular, students reported using *Skype* and communicative functions of gaming technologies to communicate with friends while either working on homework assignments for school or pursuing leisure activities. Students also reported using email to communicate with friends, immediate family members residing in their homes, and other family members not residing in their homes.

Besides specific communication references, students reported a variety of other ways in which digital technologies functioned in their homes. For example, one student mentioned that his parents used the "family" computer for work purposes while he used it for entertainment purposes such as "playing games." Other students who mentioned using digital technologies for entertainment purposes specifically named "game-playing" at home. When asked to further describe these activities, some students detailed "computer games" housed on the Internet such as *Minecraft*, while others described gaming systems connected to the Internet. Students further reported a variety of "gaming" genres including "action," "space," fantasy," or first-person perspective games where the student would be "chasing the bad guy."

Not only did students report the use of video games as a form of entertainment with digital technologies, but they also reported usages of digital technologies that serve a variety of other purposes. For example, one student mentioned creating comic books with his older brother through online applications, working with his family to start a blog to sell homemade bracelets online, and researching how to take care of a family pet. Such

activities provide evidence of a variety of embedded practices utilizing digital technologies within the social unit located outside of the classroom. These out-of-school experiences serve to contextualize how students' report their experiences within the classroom. In the following section, other experiences within the school context serve to further contextualize students' report of their experiences within the classroom.

In-school experiences with digital technologies. Not only did students report their out-of-school experiences with technology, but the students also reported a variety of digital experiences within their school at large. First, students reported the usage of digital technologies for acquiring particular skills. For example, several students mentioned using their school's LMS (Learning Management System) called *Haiku* for formative assessments such as "checking in's" or "skill checks" in skills-based classes such as mathematics. Students also reported a variety of other websites used to practice such skills like the website *Mangahigh*. Not only did students report participating in skills-based activities, but students also reported participating in a variety of other activities which required them to apply their skills. For example, students reported using specific applications found on their school-issued laptops: they used *Garage Band* to record translated podcasts in their Mandarin class, applying a variety of skills for acquiring a foreign language. Other school assignments for the application of skills included responding to open-ended questions on *Google Doc*s, communicating with classmates about articles online related to school projects like an Ancient Egypt slideshow, creating a digital poster concerning the statistics of Grizzly bears in a science class, and reporting on their findings from the "Stock Market Game" in their math class.

Beyond school assignments, students also reported the ways communication within the school was both allowed and restricted. For example, students frequently mentioned the use of email during school hours when discussing ways that they communicate through technology. Students reported emailing parents when they received good news at school, and they also reported parents emailing them if afterschool plans had changed. Students also communicated to both their peers and teachers through email. However, students also mentioned ways that this form of communication was restricted in their school context. For example, students mentioned the oversight of school authorities who could "ghost" their computers and write messages to them if they were doing "things they weren't supposed to be doing." Another student also mentioned that there was a difference between "chatting" online with their friends during school and "doing assignments" with them. The ways communication was both allowed and restricted further contextualized the school culture and facilitated understandings for the interpretation of the findings. In the following section, a brief description of the classroom from the study is provided to contextualize the digital writing environment of the students.

Overview of Classroom Practices

The classroom selected for the study represented a paperless environment where students conducted a majority of their assignments online. The teacher was observed at times during the study explaining to students that they had the option to use paper and pencil for each assignment. Occasionally, students were observed writing with traditional pen and paper, but a majority of the observed student assignments were conducted online. In the following sections, the researcher will provide an overview of the classroom

practices including a description of the instructional environment and digital writing

resources that are helpful for understanding the findings of the study.

Instructional environment. A number of instructional decisions provide the

context for the digital writing environment of this study. First, instructional grouping was

utilized in the classroom, including an individualized approach to student learning based

on ability level. For example, students were "grouped" or "tracked" according to ability

level from diagnostic assessments before units of study. Thus, students worked on

various assignments at different paces. To begin class, the teacher delivered instruction as

a whole group by using her laptop and the projector screen to provide an overview of the

online directions for the day, deliver instructional content, refer to the directions for the

week on the board, and direct students to their daily assignments through links on their

class calendar on their school's LMS. Some assignments involved students "checking-in"

for the teacher to review their knowledge of the current skills before further instructional

decisions were made for the day. At times, the assignments included links to videos the

teacher recorded to explain instructions, particularly if she was absent or if the students

would be working at different points for the day.

Another key feature of the instructional environment was the interaction of the

teacher with the students in the classroom. Although students often worked at various

paces, the teacher would often circulate the room and monitor the progress physically.

Also, when giving feedback to students, the teacher gave both written and verbal

feedback during class, and she frequently referred to digital feedback given to students

outside of class. Other times the teacher interacted with the students when they explicitly

asked her questions. When students posed questions to the teacher, they often approached

her with their laptops in hand, both teacher and student viewing the students' screen. Some students also mentioned that they also emailed questions to her as well. During class time, the teacher would sometimes answer student questions by encouraging students to "explore" on their own to find new ways of solving problems versus directly telling them an answer.

  Digital resources. A number of digital resources were utilized in the classroom that further helps to contextualize the study. First, a variety of learning platforms were used to provide a central location for organizing student work or assignments. For example, the school's Learning Management System (LMS) called *Haiku* was used in the classroom as a platform for unifying instructional content. This site served a variety of purposes including links to daily classroom assignments on the classroom calendar, contact with the teacher, and posting of resources. In addition to the school's LMS, the teacher utilized *Google Drive* for students to complete their work assignments and turn them into her. Particularly, the teacher used the *Google Docs* folder options to deliver paperless instructions and writing templates for students to build paragraphs. Furthermore, the teacher used a classroom blog called *Weebly* for students to post writing activities related to contests and events from websites such as *Story Bird*. For delivery of content, the teacher used face-to-face instructional techniques as well as teacher-recorded content instruction through *Screenflow*. For helping students to develop language skills, the teacher utilized spelling websites such as *Spell City* and *Word Voyage* for vocabulary and spelling development. Apart from the school's learning management system, all of the digital websites and file-sharing sources were free of charge for both teacher and

student use. The sections above were included to provide a contextualization of the study. In the following section, the findings of the study are presented.

Findings

Three major findings emerged from this study including the following: 1) Students' digital writing practices were impacted by a multiplicity of influences, 2) Digital writing products of the students varied by the level of peer interaction in the classroom, and 3) Students' perceptions of their identities as writers varied according to their confidence in participating in the digital writing experiences of the classroom. Each finding is presented below with corresponding data to illustrate the findings.

Finding 1: Students' digital writing practices were impacted by a multiplicity of influences.

Specifically, five influences were identified that impacted students' digital writing practices: a) digital writing tasks, b) degree of peer interaction, c) students' interaction spaces, d) functionality and reliability of technology, and e) students' perception of the purpose of the writing assignment. Figure 1 provides an overview of this finding by illustrating how each influence constitutes the whole of the digital writing practices of the classroom.

Figure 1. Influences Impacting Students' Digital Writing Practices

Digital Writing Tasks

The first influence found to impact students' digital writing practices were the digital writing tasks. Although there were a variety of classroom assignments, digital writing tasks were defined as tasks that required students to compose a series of interconnected ideas online. Digital writing tasks varied depending upon the duration of the task. For example, digital writing tasks were sometimes periodic, meaning they occurred in one to three work sessions, or sometimes sustained, meaning they occurred over four or more work sessions. The impact of digital writing tasks on the students' digital writing practices varied depending upon the amount of time required to complete the digital task. In the following sections, a description of each of these types of digital writing tasks is provided in conjunction with evidence to support how each impacted students' digital writing practices in differing ways.

Periodic writing tasks. The first type of digital writing tasks to impact students' digital writing practices were periodic. These writing tasks were defined as tasks that occurred in one to three work sessions. These tasks were more frequently implemented in daily classroom activities than sustained writing tasks and usually involved students first completing an individual writing task before sharing it with either the teacher or a classmate. In some cases, however, students also worked collaboratively on these periodic tasks. The following student products illustrate the nature of periodic writing tasks as shown in Figure 2 and Figure 3. Following the examples, a description of how these tasks impacted the digital writing practices of the classroom is provided.

Crafting Power Sentences

Take the basic sentence below and create power sentences using the descriptions provided. Use the Word Choice link to help paint a picture with your words.

Basic Sentence	Subject	Verb Choice (simple predicate)	Remainder of complete predicate
5a	The boy	ate	his food.
5b	The boy	walked	in the rain.
5c	The boy	began	the game.
5d	The boy	went	to the party.

Mood	Phrase, Dependent Clause, Adv	Subject (with any modifiers)	Verb Choice (simple predicate)	Remainder of complete predicate
Excited	Galloping on the soaking sidewalk,	the jolly child	pounced through	the puddles of rain.
Reluctant or Sad	Water trickling down his cheeks,	the mournful little youngster	was hauling himself down the soggy sidewalk	in the pelting rain.
Scared, Sneaky	Very cautious about his surroundings,	the frightened infant	was sprinting through the road	in the hailing rain.
Happy, Carefree	Skipping through the rain with a smile on his face,	the little tot	was hopping in the puddles of rain	down the street.
Angry	Stomping through the puddles of rain,	the frustrated tyke	was kicking sticks and punching bricks	in the soaking rain fall.
Cautious	Tiptoeing through the puddles,	the juvenile delinquent	watched for the police very carefully	while walking down the dark, and wet sidewalk.

Figure 2. Teacher-Created Periodic Digital Task #1

Choose file and make a copy. Place your section and name on the document and **organize it in your grammar folder.**

pp= prepositional phrase
dc= dependent clause
s= subject
hv= helping verb
mv= main verb

Show Don't Tell

Use the picture and sentence patterns to write 4 descriptive sentences using helping verbs in verb phrases to indicate **past tense**.

Sentence 1:   pp, + s + hv + mv
1. On the boat, the brave soldiers had marched onto the dock.
Sentence 2:   s + pp + hv + mv
2. The fierce soldiers on the dock had maneuvered their way into the peaceful village.
Sentence 3:   hv + s + mv (question form)
3. Had the men traveled alone?
Sentence 4:   s + hv + hv + mv
4. The confident soldiers should have plodded more cautiously off the unstable plank.

Figure 3. Teacher-Created Periodic Digital Task #2

As indicated in Figure 2 and Figure 3, a variety of periodic digital writing tasks were included in the digital writing tasks of the classroom. Although both of these tasks required students to compose a series of interconnected ideas, they were not considered sustained digital tasks because the task was generally considered complete after one-three attempts. In the first periodic digital writing task, students were asked to "craft power sentences" by expanding upon the provided sentence pattern to include the descriptions provided by the teacher. In the second periodic digital writing task, students were asked to compose sentences with various patterns based upon the picture prompt provided by the teacher. In both of the two periodic digital writing tasks, the teacher provided students with initial ideas and requirements for writing. Students were then expected to expand upon these ideas while simultaneously working within the parameters established for the assignment. Thus, students' digital writing practices for composing periodic digital writing tasks generally followed a prescribed pattern. In the following section, the differences between periodic digital writing tasks and sustained writing tasks will be illustrated. These differences illustrate how the type of digital writing tasks impacted students' digital writing practices in the classroom.

Sustained writing tasks. Although there were frequent periodic digital writing tasks in the classroom, sustained digital writing tasks were less frequent and were in some cases determined by students' instructional level. For example, students who demonstrated mastery of grammatical concepts were able to "test out" and participate directly in digital writing experiences such as responding to online writing prompts, working collaboratively with their peers to improve their writing, entering their work into writing contests, and showcasing their work on the teacher's blog. The teacher called

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these experiences "Freelance Writing" opportunities, and although all of the students would have the opportunity to participate in them, students who "tested out" worked collaboratively with their peers during class while students who did not "test out" worked individually on the same sustained writing assignment. In the following section, more information is provided concerning one type of sustained digital writing activity in the classroom, "Freelance Writing."

Freelance writing. A major sustained digital writing experience in the classroom was called "Freelance Writing" by the teacher. The guidelines directed students to choose an online writing prompt, write at least 15 paragraphs on a *Google Doc* shared with the teacher, and include at least two pictures as illustrations for their work. Once students completed the task, students were able to read their entry to the class, and after feedback was applied from the teacher, students were able to publish their work on classroom blogs. Additionally, students who published their work were able to enter their stories into various contests as promoted on the teacher's blog. Although all students in the class participated in these activities during their 30-minute "Writer's Lab" time, students who scored high on skill-based assessments "tested out" of regular class time to work with peers on their "Freelance Writing." Two different opportunities to "test out" and participate in these sustained writing projects were presented over the course of the semester. In the following field observation memo, the teacher introduced the concept of "Freelance Writing" to the entire class in the group's "Writer's Lab" time:

9/9/13 - Teacher Introduction of "Freelance Writing" to the Class (Field Observation Memo)

(2:30)

For the last thirty minutes of the day, the students participated in a "Writer's Workshop" with their teacher. Since this was their first time to do so in fifth grade, the teacher told the students that she was going to explain the process to them and give them time today to explore something that her former students "begged" to do called "Freelance Writing" time. The teacher mentioned that they would have choices of things to write about while she pulled a few students to her writing table to work with her on "Writer's Workshop" days.

As the teacher showed the students how to navigate the Freelance Writing tab that she had posted on their LMS, she explained the concept of a freelance writer, and one student noted that his father was a freelance photographer while another student shared that his father was a graphic designer. She also described different types of jobs for freelance writers such as travel writing, resume writing, content writing for the Internet, writing e-books, etc.

Next, she asked students to choose from a list of genres from the overhead projector in order to view writing prompts together. The students chose "Mystery" for the teacher to select, and she read several of the prompts which corresponded to a picture in the same category: "You sneak into a country club swimming pool and find a dead body," "You are in a haunted house," and "Write about a politician who wants to be elected to the point of breaking a law" were a few of the prompts read aloud. She also showed the students different prompts that had music and videos for them to consider when writing as well.

She concluded this session with demonstrating how to access former students' freelance work both independently written and co-authored that had been published to the teacher's blog as well as contest opportunities that they would be working to submit together during the year. The teacher told the students to be thinking as they explored for something they liked about freelance as well as a headline (a brief phrase to summarize their impression) to share with the class as a ticket out of the door (meaning everyone had to supply an answer before leaving the classroom).

(2:45)

The students then had the last fifteen minutes to view the site as "explorers." [Immediately], three students approach her at the front of the room to ask if they could get started with actually writing, and she explained that she would never discourage them from writing, but that she wanted them to also spend time exploring today.

At the end of this time, the teacher asked students to raise their hands to share something about "Freelance Writing." One student said that he liked how the pictures allowed him to be creative. The teacher connected this to what he had mentioned about his father's work as a graphic designer. Other students reported that they liked: opportunities to write about their own beliefs and what is important to them, a prompt about falling asleep and having superhero powers, a "creepy" mystery prompt, enjoying the genre of mystery because it keeps you guessing and you never know what will happen next, creating a villain profile (here the teacher shared an author who came to talk to the class who shared that this was the way he became an author), writing about someone they admire, a lesson learned, getting ideas from a story but making it their own, having so many different ideas available, a prompt asking you to consider what someone is thinking based on a picture, a picture of someone behind bars and asking them to explore why he was there, what I would do without technology for good old-fashioned fun, and describing getting a present.

As time for class came to a close, the teacher asked students, "Who is now excited about Freelance Writing time?" It appeared that all of the hands in the classroom went into the air as the response to this question, and I heard one student say it was better than fourth grade "Writer's Workshop" because they had options this year. The teacher reminded the students about their headlines, and students individually shared something to the class as they left for the day. The teacher [smiled] and raised her voice and said, "Yes!" at various responses.

As the previous field observation illustrates, students in the classroom reported a variety of characteristics of what they liked about the "Freelance Writing" prompts. During the next week of observation, all the students in the class took a diagnostic exam to determine which students would "test out" of the skill-based instruction to participate in individualized instruction including "Freelance Writing" opportunities during their regular class time. The teacher explained this process to the students as well as discussed this instructional decision after class with the researcher as illustrated in the following observation memo from the field:

9/18/13 - Teacher Explains "Testing Out" for "Freelance Writing" (Field Observation Memo)

(1:18)

The teacher further explained that they would have different paths in the class and that "Everybody has a different need." Here the teacher explained the projects would be more application type activities like "Freelance Writing." She said that they would take their "own path as needed" and explained the diagnostic also allowed her to see "where they were" before she made instructional decisions. She continued to elaborate to say some skills they may be really good at doing, while others they would need to study and work harder. One student asked her if he had to "test out" if he passed the diagnostic. The teacher replied that if he did not have the confidence, she would not push him; it would be his decision.

The teacher continued to explain that everyone could do "Freelance Writing" at home, and they could set aside their work if they didn't like the topic and try a different topic. She said they were allowed to do this, although sometimes she may push them to do required assignments like poetry. Here one of the focal students, Andrew, said, "Poetry? That's not my strength."

(3:05)

After class, the teacher talked with me about her decisions in grouping the students. She said that in the past, she had struggled with how to separate the lower and middle groups to better meet their needs, but that technology had allowed her as a teacher to customize instruction. She also said that she believed that some advanced students were not motivated or did not show interest in "testing out" in the past because they thought the work would be "harder" but she thought that by including "Freelance Writing" that the students had "perked up."

This field observation illustrates the instructional grouping decision associated with "Freelance Writing," a sustained digital writing task that students would participate over the course of the study. For the students who "tested out" and participated in "Freelance Writing" early in the semester, opportunities were built into the instructional time of the regular classroom to work with their classmates. For the other students, the "Freelance Writing" assignment was ongoing throughout the semester as students completed their other work assignments during their regular class time or during their

thirty minute "Writer's Lab" elective time. Thus, the students who "tested out" were given more class time to complete their "Freelance Writing" prompt, while the other students worked on the prompt after they had completed all other assignments such as the skill-based assignments associated with the results of their diagnostic exam. Of the six focal students, two students participated in the first opportunity for "Freelance Writing" with peers at the beginning of the semester, and one student participated in the second round of "Freelance Writing" with peers during the last month of the study. The other three focal students participated in "Freelance Writing" throughout the semester, but their participation occurred after other assignments were completed and did not work with peers during regular instructional time on the assignment. In the following illustrations, the different writing experiences associated with "Freelance Writing" is reflected through field observation memos and focal student interviews. First, two field observation memos of two students who participated in "Freelance Writing" with peers are presented.

11/6/13 - Focal Student 'Dylan' Shares his Freelance Writing to Class (Field Observation Memo)

(9:50)

As I approached the classroom, I observed focal student "Dylan" reading aloud his work from his "Freelance Writing" project at the [front] of the room. I stand at the door for a few seconds, watching his gestures. He keeps his eyes on the screen, one hand balances his laptop, and I see him gesture with his other hand with two fingers as if to make a quotation mark. At this point, the teacher notices me at the door and motions for me to enter. I [mouth] that I did not want to interrupt, and I [quickly] and as [silently] as possible find the closest open seat, a chair at the far edge of the room between the two stations of chairs and directly behind the largest table in the room of ten seats at the [front].

As I am seated, I do not take notes initially. (I did not want the shuffle of papers to distract the student reading his work.) I listen and I hear a [story] with the words "vampire" "clown" and "monster" striking a key in my memory. The story seemed to involve defeating the various characters. At the end of the story, the boy states that all of the so-called monsters take off their costumes except the clown.

(9:55)

After Dylan finishes reading, the teacher comments by asking a question of what cartoon on Saturday morning does that remind the students in the class. Students respond with [various] answers of cartoons of which I was not familiar. This discussion continues until it is time for the students to take a break.

(10:00)

At this point, students take a "Maintenance and Me" (break) by asking for snacks. Some students leave for their elective time, but the rest of the boys cluster around the back corner with the "bungee" chairs. Dylan tells the group that he made a second story stating, "Because you know how it ended, the clown was a ghost." Other students ask questions like, "If the shark died, how did he get back to life?" Another student explains that the whole time, the characters were playing pretend and all had costumes. During this exchange, four boys are bouncing on bungee chairs, eating "Goldfish" snack bags, with a [few] other boys either standing around this group or seated on the floor around them.
Dylan continues to elaborate on his future writing plans by telling the group that in his second story, the characters would travel to an abandoned island where they discover the clown is really a ghost. Here another focal student, Ethan, tells the group that he "came up with his ending." Another student asked, "What ending?" and Dylan replied, "Where they take off their costumes, except for the clown, and he's a ghost." Another student adds an alternative ending for Dylan's new story by stating, "In the lab, it should have a duplicating machine, and when it duplicates, it makes an evil clown." This conversation is interrupted as the teacher announces that it is time to return to their seats.

In the previous field observation, one of the two focal students who had "tested out" of the regular skill-based assignments presented his "Freelance Writing" to the class after working with peers to complete it. After the presentation, he continued to talk informally with his peers concerning his future plans for writing. Thus, the digital writing task for this student included developing a sustained writing task with peers, presenting his work to the class, and further discussing his work with classmates. In the next field observation memo, an experience is presented for a student who "tested out" of the skill-based curriculum during the last month of the study.

11/26/13 - Focal Student Franklin Tests "Out" for the First Time (Field Observation Memo)

(10:00)

As I enter the classroom, I see the end of one split session before I am set to observe the beginning of the next session. (Note: In the morning schedule, student's participate in "split sessions" where half of the students, ten total, attend "Writer's Lab" while the other half attend another elective course such as a foreign language. After thirty minutes, the students switch.) Here I notice Franklin is conferencing with the teacher. (Note: I later learn that he "tested out" for the first time this semester and that he is using a website called *Story Bird* to produce a piece of writing for his "Freelance Writing" experience). At the front of the room, the teacher is explaining the instructions to him for this assignment. He is first to explore the site to choose the artwork that will then inspire his story. The teacher shows him "Winter Wonderland" and "Where the Wild Things Are" as two examples. As he goes back to his seat, one boy asks him what he is doing. Franklin and two other students also cluster around and talk about what artwork that he should choose. I hear students say, "That's just random!" Another student then joins the group, and he says [almost laughingly], "Don't crowd me." I hear the students around him continue to talk based upon the prompts and pictures on the screen. Specifically, I hear them say "C" for Christ and "H" for holiness, and it appears that they are viewing a [nativity] scene. They switch and talk about a football scene, and then I hear "Jingle Bell Rock" and one student says, "Do the 'Santa Claus' one." At this point, the teacher closes the class by asking, "Who has not finished the reflections? That is important."

As Franklin packs to leave, he is seated close to me and I say, "I'm excited to hear about your story." He [smiles] and says, "I'm entering it in a contest, too."

In the above illustrations, two focal students participated in a sustained writing task in the classroom. A key feature of the sustained writing experience for students who were able to "test out" was their ability to spend more class time with their peers on their digital writing task. Not only were these two students able to spend time more time with peers during the digital writing task, but also they were able to share their work with their classmates. As illustrated above, students who shared their work with their peers also received feedback and suggestions for their work from other members of the class as their project appeared to generate interest and response from other classmates. As illustrated in

the following illustrations, however, students participating in the sustained writing task

individually reported different writing experiences.

10/30/13 - Brandon Explains Lack of Time for "Freelance Writing" (Interview Two)

What kinds of technology have you been using outside of the classroom so far?

Haiku. We do most of our homework on that. For homework, we watch videos and do a little quiz on them. Mostly _Haiku_. We've done _Word Voyage_ for English. We haven't really done as much _Weebly_.

Which of those do you prefer?

Probably math and _Haiku_ because it's easiest to use. There's a little bar next to it and it shows you the unit that you're on and you just click on that and it shows you the videos for the unit you're on, and you just watch the videos. It's simple.

You said you haven't used _Weebly_ as much. What is _Weebly_ and what do you think about it?

It's our own little blog type thing where we can post our writing. I don't know why we haven't used it as much. We usually post freelance on it. And that's just basically if we get done with all our work. I've just done all mine in class and by the time I get to freelance, it's over.

So you're saying you don't have any time in class to do freelance?

Sometimes she assigns it for homework and then we post it. I got an email from the director of _Weebly_ saying you haven't been on your website in a while. And if you want to delete your account that's fine, but they wanted to know if we had any problems.

Did you respond back?

I just said it was for English class and I haven't posted anything in a while. No problems, but thanks.

As noted in the previous example, focal student Brandon represents a student who

did not "test out" of the skill-based curriculum. He reported that much of his time was

spent working online through *Haiku* or *Word Voyage* that presented skill-based

assignments. Furthermore, he reported that by the time he finished his skill-based

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assignments, he did not have time to participate in "Freelance Writing" online on his

Weebly blog. Another student who did not "test out" and worked independently on his

"Freelance Writing" shared his experiences as well. His response was recorded in the

following interview session.

10/22/13 Andrew Explains Abandoning "Freelance Writing" Topic (Interview Two)

Have you been doing any writing in your classroom with technology?

In my classroom we do something called "Freelance" where you pick a topic and you write about that topic, and when you're done, (our teacher) lets you present it in class.

Have you chosen to write about anything yet?

I've kind of been thinking about one, but it's just not working, so I'm probably going to start over with a new one.

So which one were you thinking about?

Chores. I had a last one but I've kind of abandoned that last topic.

Do you remember that last one?

I think it was "Kids in Charge" and there were just so many possibilities, I just couldn't choose.

What was hard about writing about if kids were in charge? What made you abandon it?

There were so many choices, I couldn't choose which one I liked better. I've also just seen a bunch of movies with kids in charge and if think of ideas, movies come in and I don't want to take ideas from movies. I want to make it my own writing.

Have you seen any of your classmates writing with freelance?

Yes. (A student) presented his yesterday. He owned a joke store. Someone robbed it and took all the whoopee cushions and there was a bunch of murders from filling them up with gas.

Were you able to read that before he presented it? How did he share that writing with you?

At the end of yesterday, he put his laptop connected to the SMART board where everyone saw the writing. But he also stood on the side and read it from his computer.

Do you know if there are any plans to publish your writing? Like on a blog?

I'm not sure if (our teacher) is thinking about something when we are doing with our freelancing. But I might when I finish mine on my own. I'm still thinking about it.

In the above illustrations, two focal students shared their experiences participating in the sustained digital task of "Freelance Writing" on an individual basis. Although these students participated in the same sustained writing tasks as students who worked collaboratively, ultimately, they did not finish their writing task during the course of the study. As a result of not finishing the tasks, they did not verbally share their work with the class, nor did they receive comments from their peers. Thus, there were not only differences between the two types of digital tasks, periodic or sustained, but there were also different student experiences within tasks as particularly noted with sustained digital tasks such as "Freelance Writing." Ultimately these differences illustrate that the students' digital writing practices in the classroom varied according to how they engaged in the variety of digital tasks.

Degree of Peer Interaction.

The second factor for impacting students' digital writing practices was the degree of peer interaction within the classroom. All students participated in a number of writing activities in which they would both give and receive feedback to each other for their writing. At various points in the semester, students were observed working together as a class, working with classmates, and working individually. At the beginning of the study, students spent more time working together as a class and less in groups or partners, but

by the end of the semester, the students were given longer periods of time to work in groups and pairs. The extent to which students were allowed to participate with each other was governed by classroom expectations. When students failed to meet those classroom expectations, the result was a consequence of limited peer interaction. The following section describes the expectations for peer interaction in this digital writing classroom.

Expectations for peer interaction. The first way the degree of peer interaction impacted the digital writing practices of the classroom was the expectations of peer interaction in the classroom. When interacting with peers, students were expected to not only hold themselves accountable for their own actions, but also to hold each other accountable as illustrated in the following two field observations.

9/23/13 – Individual and Group Expectations for Social Interaction in the Classroom (Field Observation Memo)

(2:10)

As students returned and work on their assignment in groups around the room, the teacher calls one student, he appears to smile, and then she asks him to speak to her. I hear her say that she is serious and that she wants him to manage himself better or he will need to work individually instead of with a partner. At this point, [various] students ask the teacher questions as some have trouble-shooting questions and others are finishing testing from the hallway.

(2:15)

The teacher calls the group's attention for a second time and tells them if she has to do it again, they will all work individually.

Student "F" Explains Group Expectations for Social Interaction in the Classroom (Interview One)

Tell me a little bit about what you and your classmates do together online. You said something about your friends working together.

Yes, they usually put us in groups online so we can look out for each

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other on the Internet because I know people tend to want to look up other things. And when we work in groups, it's not as bad as some people think it is because you actually get good ideas and people can piggy back your ideas and elaborate. It's really fun to work in groups because you get all these different ideas and you can put them together or take them apart and make them bigger.

Tell me what your teacher does while you're working online?

Well we usually get on *Google Docs* and we can share a doc and put it in a folder. And my teacher, if we are doing a test or something individually, she will get on her computer and look at all our screens and I actually think that's interesting because if we stray offline or anything we are not supposed to she can actually catch us.

Do you think that helps?

I think it just helps some people just concentrate on their work because they know they'll get caught. And if you get caught doing something that's not good online, you signed a form about it and you're not really supposed to break that form. You kind of vowed not to do bad things on the Internet.

The previous illustrates highlight expectations for peer and group behavior. As described in the previous field observations, students were both expected to manage their own behavior by staying on task as well hold each other accountable by monitoring the progress of their peers. These expectations resulted in direct consequences for further peer interaction for both individual students and the entire classroom when these expectations were not met. In the following section, the consequences for not meeting the classroom expectations for peer interaction are further described.

Consequences for peer interactions when not meeting classroom

expectations. Although the classroom experience provided opportunities for students to learn from each other in socially constructed circles, there were times when the participation in these events were restricted based upon the classroom expectations. In these instances, both groups in the classroom and individual students were limited from

further social interactions. The following field observation illustrates instances where the

social interactions were limited for the entire class as well as for individual students.

11/11/13 – Peer Interaction Limited for Classroom (Field Observation Memo)

(10:00)

When I enter the classroom, the students are seated at various locations around the room. There are four clusters of boys at two different tables, and there are varying clusters of boys on each side of the bookshelf where two spaces of various lounge chairs are located. Additionally, there are two students at the back of the room, seemingly paired together.

(10:08)

The teacher then addresses the group with, "Based on all of your chatter, we've been working for ten minutes, and it sounds like you've abandoned the revision process." The teacher continues by asking students if they were to take another evaluation of their writing, would they see a difference?

(10:10)

Teacher continues to walk around the room and then addresses group once more, "I want you to open your history. Show your partner if you don't know. I want you to scroll down to the bottom, and I want to see your changes."

(10:15)

As the teacher proceeds to conference with each individual student, I hear her makes comments such as, "You only have two changes...Okay, I see more." "1-2-3-4-5, yeah, looks like you need more revisions." "You need to develop your conclusion."

(10:20)

The teacher calls the group back to their seats and instructs them to log into WPP online. (...) Teacher asked the students to "fist" their laptops (lower the screen to a fist's length) after they have logged into WPP. She says, "Stop, look, and listen."

10/9/13 - Peer Interaction Limited for Individual Focal Student Brandon (Field Observation Memo)

(1:05)

The students continue to enter the classroom. At first, I count ten boys and then I note that there are thirteen students present out of the twenty students enrolled in the class. (Note: I wonder if the approaching Fall Break has anything to do with the absences?)

(1:10)

Teacher announces to the group, "Today, we're going to use *Skype*" (Here the students were told that they were going to use this tool talk to a classmate traveling with his family in Ireland). I see students clap and make gestures around the room [as if they are excited] and I see focal student Brandon appear to smile. I further learned that the student was already traveling with his family in Europe, and the students would have the opportunity to work with him on his travel writing reflection through asking him questions as they used *Skype* to talk to him in Ireland.

(1:20)

As the students work at various paces, the teacher calls the students' names aloud who had not completed spelling four. For one particular student she added, "Revising is not an option." "I give you feedback on everything." "If there's any indication that you have not [revised], that counts down on your writing process." She adds that the only way to show growth is to apply the changes from feedback.
The teacher continues to call students who were supposed to do an extra practice assignment for not making above 70% on their last test. She said that she wanted to see this assignment so that they could talk about it together.

She calls Brandon's name and says, "Brandon, you here? You did the extra practice, right?" He replies, "Yes, Ma'am." Teacher says, "Pull it out, I need to see it."

(1:34)

Brandon approaches the teacher and tells her that he can't find his work. He is instructed to fill out a form for not having the assignment. (I later learned that this means he will need to stay after school in a study hall each day until he has completed the work.) The teacher says [calmly], "It's not the end of the world, go sit down and fill out the form." I can see the student is visibly and audibly crying. His face is red, and he shakes his head [as if in anger] and [silently] mouths something [inaudible]. The teacher calls him to her and says that he will need to sit outside in the hallway and complete this assignment instead of *Skyping* with the rest of the class.

In the previous illustrations, the social interactions of the students were impacted by the teacher's interpretation of the students' work productivity or other overt actions. Although students had been given gradual opportunities to interact with peers on their writing projects in the classroom, this experience was sometimes limited at the teacher's discretion. For example, students were either warned or called back to their seats as a

group as deemed necessary by the teacher. In some cases, individual students like focal student Brandon were excluded from social interactions based on their lack of productivity whether inside or outside of the classroom. Thus, the degree to which students participated in the digital writing tasks was impacted by the expectations and consequences of their interaction with peers. Ultimately, this degree of interaction was the second factor found to impact the students' digital writing practices in the classroom. In the following section, the third factor found to impact the students' digital writing practices is presented.

Students' Interaction Spaces

The third factor found to impact the students' digital writing practices was the interaction spaces of the classroom. In the digital writing environment, these spaces were not only physical but also digital spaces as well. In the following sections, a description of both the physical and digital interaction spaces is provided. Additionally, each section provides evidence of how the interaction space of the classroom impacted the students' digital writing practices.

Physical interaction spaces. Students participating in digital writing occupied multiple locations throughout the classroom and immediate hallway. At the beginning of the academic year, the teacher allowed the students to design the room by incorporating "spaces" for different purposes and functions. The students used beanbags and bouncy chairs provided by the school to create group spaces, while the teacher utilized the space at the front of the room for explaining instructions, delivering content knowledge, and providing feedback for students. Five pairs of rows were arranged in the middle of the classroom. This arrangement allowed students to sit across from other students by pairing

two lines of desks directly in front of each other with space between each of the five

"paired" rows. In the following field observation from the researcher's first classroom

visit, the physical space of the room is further described.

8/26/13 - Researcher's First Classroom Visit (Field Observation Memo)

At the top of the stairs, I take a right at the second classroom to enter the classroom of my study. Immediately to my left, a high table with one chair holds various papers, presumably a space defined for the teacher. Behind the table and lining the "front" of the room is a dry erase board. Directly behind the table, there are magnetic clips with papers and instructions written on the board for varying sections of classes including "A&C" and "B&D." In the middle of the "front" of the room, a projector screen with a small desk and connected laptop sit directly in front of it. On the other side of the small desk, another round table sits low to the ground, with four chairs around it. In the middle of the room are four tables with chairs on each side. The chairs do not face the board, but the chairs are directly seated across from each other. On the far left side of the room, two distinct areas with [bungee] chairs and [beanbags] on each side define the space, presumably as areas for the students to sit. A large bookshelf separates the two areas. On the back of the wall, two more areas hold school supplies like markers and paper. A display board with the words, "Peel the Fruit: Working to the Core of Fifth Grade Communication One Layer at a Time." There is also an easel here with circles and squares drawn that look like design plans of the room.

As noted in the above field observation, the interaction spaces of the room

included spaces for students to work collaboratively at their desks as well as differing

locations in the room. The desks in the classroom did not face the board and the "teacher"

space at the front of the room, but rather the desks faced each other. Other spaces defined

peer work areas as well. In particular, two distinct spaces in two corners of the room held

"beanbags" and "bungee chairs" for students to congregate together. In the following

focal student interview, student "Connor" explains how the space of his writing

classroom would appear to an outsider visiting his classroom.

Connor, Interview Three: "Writing is Very Open"

How would you describe to someone what it looks like to step into your writing class?

Writing is very open and we can move around and do our work at different places.

So free flowing?

Yes.

Are there different spaces that are different that you go during the day?

Reading is more sitting at the desk and doing our work. So is math. Except the tables are bigger and we get to collaborate at the table.

In the previous interview selection, a student briefly describes the layout of the room in relationship to writing. As noted in the above interview, students noted how their writing experiences differed from other tasks throughout their day such as reading or collaborating on math problems. Although working together digitally, students shifted in various locations within the physical space of the classroom, sometimes even utilizing the space directly outside the classroom in the hallway. Predominantly, students would begin the class block at their seating arrangement, and the teacher would direct the students to their *Haiku* calendar. Depending upon the instructions from the teacher, students would either work from their seats or move to various locations around the room. Although students were sometimes observed to stay in the same location until the end of the class period, students were generally observed shifting locations depending upon the time allotted by the teacher for each activity. In the following section, a description of the digital interaction spaces is provided.

Digital interaction spaces*. Not only did students use the physical space of the classroom, but students also utilized digital interaction spaces for classroom assignments as well. When referring to digital interactions in the classroom, students predominantly cited the use of *Google Docs* as their primary location for interacting digitally. In the

following interview selections, two students describe this digital writing space and the

interaction that occurred there.

Ethan, Interview Three: Peer Interaction in the Digital Space of Google Docs

Have you been using any online tools for writing in your classroom?

**We've used *Google Docs* so we can share them with friends so they can edit or revise
yours and help you with yours. Help you write it if you're stuck on a part. And
Google docs if you need to, you can have a writing folder on the side on your
desktop and if you have a lot of writing you can put it in there.**

Andrew, Interview Three: Peer Interaction Differs in Digital Spaces

You mentioned that giving feedback is different online. How is giving feedback in your
class different when it's online verses when it's not?

**I think it's different because we don't really have to get with
our partners, we can just share it with each other on *Google
Drive* and it's much different from getting with your partner
and getting their paper and actually marking through it. All we
have to do is highlight what they can change and press comments
and type it. Once he sees it is highlighted, he can click on it and
the certain message will pop up and he can read it.**

In the above illustrations, students describe where they typically interact in digital

spaces of the classroom as well as how they interact. Predominantly, students used the

digital writing space in *Google Docs* to give and receive feedback on their writing

products. Students used the features of the digital tools such as highlighting and adding

comments to direct the attention of their peer to a specific selection of the text. Following

this process, students would have the opportunity to resolve the comments and any issues

in their writing. Although these two examples illustrate how students interacted in digital

spaces, it should be noted that the teacher in the study also interacted with the students in

digital spaces as well. In the following field observation, a student in the classroom

engages with the teacher concerning her online interaction in digital spaces.

9/11/13 Student-Teacher Interaction in Digital Spaces (Field Observation Memo)

Franklin: Last night was mine okay?

Teacher: You were on last night at the same time, and the box said you couldn't do (the work) because I was on at the same time.

Franklin: Where do you post comments?

(Here the teacher explained where to find the comments, and then added that students would need to read the comments and correct their mistakes. The student continued to ask questions.)

Franklin: When do you usually get on?

Teacher: During break or home at night. I try to do so each day, and you should get into the habit of checking it every day.

Franklin: How long do we have to correct our mistakes?

Teacher: I will be lenient on deadlines - we have lives, we can't be on the computer all of the time. We will figure it out together.

In the previous field observation, an example was provided of a student who

asked the teacher questions concerning her digital interaction habits. As indicated in this

exchange, the student was interested specifically in the times the teacher would be

interacting and how long they had to correct their mistakes. The teacher describes her

interaction as asynchronous, meaning she posted at times of her preference without

expectation of students to be engaged in a response at the same time. This highlights how

students not only interacted with their peers in digital spaces, but also their teacher as

well. Both the physical and digital writing spaces of the classroom impacted digital

practices in the classroom by not only structuring where students and teachers could

interact together but also the mode in which they could interact. Ultimately, physical

spaces allowed for students to sit side-by-side and verbally communicate while talking

about their writing, while digital spaces allowed for students and the teacher to make

comments without necessarily being in physical proximity of one another or interact in "real" time with one another. In the following section, the impact of the functionality and reliability of technology on students' writing is discussed.

Functionality and Reliability of Technology

Next, the functionality and reliability of technology in the classroom was also found to impact the digital writing practices of the classroom. As technology functioned as a way for students to store and share work, they experienced difficulties when they did not follow procedures for managing digital work. Additionally, students experienced difficulties when they encountered unanticipated problems with technology that they did not possess the troubleshooting skills to address. At times, students tacitly raised questions concerning the reliability of technology when they experienced such difficulties. Specifically, the creation of digital writing products revealed a variety of concerns, struggles, and frustrations for students who write with digital technologies in the classroom. These issues were categorized either as procedural or troubleshooting processes with particular attention to when students raised issues concerning the reliability of technology. The following section will further discuss the issues raised as students participated in procedural technology processes.

Procedural technology processes. A number of issues were raised in regards to how technology functioned in the classroom. Specifically, the interruption of procedural processes with digital writing was found to impact students' digital writing practices. Procedural processes were defined as routine classroom procedures directly linked to digital experiences in the classroom. At times, these routines were interrupted as students experienced difficulties remembering the steps required for these routines. These

instances were noted in the classroom and classroom writing artifacts and included

categories such as accessing websites, understanding steps to assignments, and managing

files.

Accessing websites. The first way students experienced difficulties with

procedural processes was when students had problems accessing websites. A majority of

these experiences were tied to specific occurrences where students had difficulties

remembering their passwords. In the following field observation, students having

difficulties with accessing a website due to not remembering a password is illustrated.

9/11/13 – Students Experiencing Problems with Passwords (Field Observation Memo)

(1:10)

Teacher: "We're going to use *Diigo* for the first time."
Student: "I've seen that so many times."
Teacher did not respond to comment and explained that an account had been created for them by Mrs. S. (Researcher note: I did not know at the time if this was an outside teacher, or technical support person, but I later remembered that this lady had been referenced previously and served as the technology coordinator for the school.) Teacher referred to a list of instructions with passwords and told students that this was the username with 456 and the password with 15. She explained that they had encountered issues in previous classes, and that they were going to be patient. She said some of their names might have been shortened for this account as well. At this point, she modeled on the overhead project how to login, and many students had issues logging into the account.
Student: "Is it our AR password?"
Teacher: "It's the one with 15 after it."

(1:45)

The teacher asked students who still had problems to raise their hands so that she could record their names, and several hands [flew] into the air. The teacher explained that they could work in small groups today with the people who were able to login.

As illustrated in the above field observation, there were times in the study when

students were not able to access the website due to not having the correct password.

When students were not able to login, the teacher had to make instructional changes. It is

important to note that the teacher was aware of student passwords in her comment that "It's the one with the 15 after it." Even though the teacher followed an established routine for setting accounts and helping students to remember passwords, students still experienced difficulties. Problems with accessing accounts were only one such way in which interruptions of procedural activities with technology impacted the digital writing practices of the classroom.

Understanding steps to assignments. A second way in which procedural activities with technology were interrupted in the classroom was instances where students needed clarification for procedural steps for completing assignments. As the students in the study experienced a variety of digital writing tasks, the processing demands of the student were increased by the digital skills required for each assignment. For example, in some writing tasks, students needed to highlight a text or insert a file or picture into a digital document. In the following example from a field observation, a student illustrates his confusion over the multiple steps required for the digital tasks.

9/23/13 – Confusion over Digital Procedures (Field Observation Memo)

(1:45)

At this point, one student said that he had gotten confused on the assignment and asked the teacher to show him what to do. (I couldn't remember, but I thought this was perhaps one of the students who did not do the homework or communicate with the teacher about what he did not understand.) Teacher said that she would show him after she explained it to the class first. As the teacher demonstrated how to insert a table, she reminded the students that they would need four categories, and she continued to expand upon the direction by showing students how to change colors or how to delete the entire table. At this point, the teacher addressed the student who had asked the question, and she said that she needed him to focus while she was explaining his question. (Here I wondered if the boy was able to follow the different steps as he looked [confused] to me.)

As noted in the illustration, multiple processing demands were required to complete the digital assignment. For example, students had to first be able to insert a

table into their document and remember the number of categories needed to house the information for the assignment. Next, students had to be able to highlight or change colors of specific parts of the document as indicated by the assignment. Students who were unable to demonstrate the technical competence required for this skill were not able to progress with the rest of the assignment. Thus, students' failure to understand how to complete the steps of the assignment was another way in which the procedural processes of the classroom were interrupted as students experienced difficulties with such tasks.

   Managing files. A final way in which students experienced difficulties with the digital processes of the classroom was remembering the procedures for managing files. The following four field observations illustrate four instances where students experienced difficulties in managing digital files. These episodes include students who misplaced files, did not follow the teacher's protocol for saving files, or deleted the file altogether.

9/30/13 – Misplaced Work Assignments (Field Observation Memo)

(1:20)

Here a student helps the student with his folder when the student tells the teacher that the work was there, just in the wrong folder. Standing behind the student, the teacher tells the student to click on the folder now. She asks the student to scroll for her. (Here I think the teacher is viewing the student's history.)

9/30/13 – "Good Habits" for Saving Files (Field Observation Memo)

(1:35)

The teacher then says, "Here's what I discovered when I went to grade travel journals: no name, missing work, not organized, and not following the rubric." (...) She tells the students that she will check the way they save it until they develop good habits. The teacher then goes around the room to check to make sure they are all saving the day's assignment in the specified format (presumably the same from the start of the day). (...) Teacher says to me that this group is not doing well with choices and it changes from year to year. She said that she hadn't had this issue in a while.

10/7/13 – Unorganized File (Field Observation Memo)

(2:45)

Here Andrew told the teacher that he could not find his reflections. The teacher told him that he was not remembering to organize. When he returned to his seat, he says, "I found it" and the teacher replies, "Make sure you organize it."

10/7/13 – Deletion of Files (Field Observation)

(2:50)

The teacher has another conversation with a student about his reflections and says, "You owe me three reflection." Student put hands in face and says that he knows he did them. Teacher asks, "Is it in your trash?" Student replies, "I emptied my trash." Teacher calls attention to the class and has them repeat each phrase after her: "I do not," "Have permission," "To empty my trash."

In the above illustrations, students experienced difficulties managing their files. In some instances, the students had simply misplaced their file into the wrong folder, while in other cases they had not labeled the file in such a way as the teacher had required for the assignment. Students who voiced to the teacher that they had done the assignment were sometimes visibly distraught when they could not find their work due to not having the skill of managing their files appropriately. Thus, the lack of skills required for managing files impacted the procedural skills in the classroom, and ultimately, the larger digital practices of the students in the classroom.

Troubleshooting technology processes. Not only did students experience difficulties with procedural tasks, but they also encountered several issues directly technical in nature. Particularly, students reported problems with accessing the Internet at home, using different browsers, and troubleshooting various websites.

Internet access at home. The first way in which troubleshooting procedures impacted the digital writing practices of the classroom was through students reporting

problems with the Internet outside of the classroom. As the students were required to

complete homework and incomplete class assignments outside of the classroom, students

occasionally reported to their teacher that they experienced difficulties in accessing the

Internet at home. In the following field observation, the students who were unable to

complete the required assignment are faced with consequences in their classroom

experience.

9/23/13 - Reported Problems with Internet Access (Field Observation Memo)

(1:08)

The teacher asks the students who did not have Internet last night. She also asks why
students did not communicate with her about the issues last week. (It seems as if this is a
conversation of which I am in the middle. I think some students do not have their
assignment, and the teacher is calling attention to how long they had the assignment.) The
teacher points out that one student stayed after school last week to work on this
assignment.

(1:40)

Teacher mentions to everyone that travel journal will not be available after 5:30 tonight.
She also mentions that she gave them extra time and that she gave this as a gift to them.
At this point, the teacher asks students who did not have their assignments to fill out a
carbon paper form to give to their parents. (Later I would hear the phrase "I did not
communicate with my teacher" as a phrase one student was instructed to write on the
form.) The teacher says that just because there were issues with *Google Drive* where they
type their assignments, this does not mean that they could ignore the assignment. She
reminds them that she had told them that they could always use pen and paper and that
she had even mentioned to parents on Parent's Night that you could always choose pen
and paper. (I wondered how many times this had been an issue in the classroom, as this
was the first time that I had observed questions of access and availability of the Internet.)

As illustrated in the above field observation, students who were unable to

complete the assignment, regardless of whether they reported that they had technical

issues at home, were met with consequences upon their return to the classroom.

Following this instance, there would be multiple occasions in which students who did not

have assignments were required to sign a carbon paper which they had to send home to

their parents. Thus, this occurrence illustrates how students not having the specific skills

required to solve technical issues that they experienced at home affected the digital

writing practices of the classroom.

Problems with browsers and troubleshooting websites. Another way in which

students experienced difficulties with technical processes was through experiencing

problems with browsers and specific websites. In the illustration to follow, a student

explains in depth to his teacher one way in which he attempted to troubleshoot the issue

he faced with accessing his *Google Drive* at his home.

*9/30/13 - Reported Problems with Internet Browsers and Google Drive (Field
Observation Memo)*

(1:10)

As the teacher begins to address the group, she mentions that there has been a lack of
follow through (Researcher note: I think she is referring to the missing homework
assignments) and poor work ethics. At this point, she shows the students a [stack] of
discipline referrals from home and mentions this has been "unusually high." (...) Finally,
the teacher says that she is going to have to "hold their hands" for a while.

(1:15)

Here the teacher shuffles some papers (I think at the front of the room) and asks how
many students have problems with *Google Drive*. She mentions that other boys had
problem-solved (Here I wish this was direct quote as I think she has used this term more
than once) on their own and that they have options like hitting command-off-refresh or
logging off and back on. She mentions that if they do not use the computer to complete
the assignment, they will have to print it before they go home. (Here it seems as if this is
implied as a negative thing. I wonder if this is because it seems to be less convenient or
wasteful of supplies?)
Here the discussion turns to networks at home and browsers. She tells the students that it
shouldn't matter what browser they use. If they can get on the Internet, Google will work.
(Here I wonder how the teacher differentiates between actual problems students have
with technology and technology-related issues versus her perceptions of their lack of
follow-through being a work-ethic issue.)

(1:20)

Here a student shares that his computer works at school, but not home, and that he has even gotten outside help to address the issue (I'm not exactly sure if this is a person at school, a tech person, or a family member) but he told the student to sync *Google* to it (Again, I think he means to the network, but I am unclear of this technical issue myself. I wonder how the teacher feels about not knowing all of the answers to these issues.)
The teacher replies that it made her sad that he couldn't use his computer at home.
The student again responds that it is just his drive.
Teacher hums as if [perplexed] and says that it is interesting.
Boy replies, "I've been getting on my mom's computer."
Teacher responds that he still has to have his work completed.
Student responds, "I did my work but it's not on my computer."
Finally, the teacher tells the student that this needs to be a personal conversation because there was more work missing.

Franklin, Interview One: Trouble with Individual Website

What would you say was your least favorite part of your first writing assignment?

The *Weebly* site was not functioning very well. It was slow sometimes then it would speed up. That's just the Internet and how it works sometimes.

The previous illustrations show a variety of instances where students needed specific troubleshooting skills to solve the problem at hand. The first field observation illustrates how one student experienced troubleshooting a technical issue at home. This student was unable to access the Internet on the network at his home. Although the student was able to complete his assignment on his mother's computer, he was unable to save the document to his *Google Drive* and did not have his assignment for class. In this instance, there appears to be a tension between the teacher's ability to understand if the student had actually completed the assignment or not as she seeks to speak with him more privately. In the second illustration, a student recounts that his least favorite experience with digital writing was encountering a problem with an individual website. He further attributes this problem to being something out of his control by saying,

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"That's just the Internet and how it works sometimes." Although the student did not mention specific troubleshooting skills required for this problem, his experience demonstrates the lack of skills required to handle this problem. Thus, these two scenarios represent specific issues in which the troubleshooting skills required for the class impacted the larger digital writing practices of the students in the classroom. Thus, both the procedural technology processes and the troubleshooting technology processes were found to impact students' digital writing practices. In the following section, the final factor found to impact students' digital writing practices is presented.

Students' Perceptions of the Purpose for Digital Writing Tasks

The final factor found to impact the digital writing practices of the classroom was the students' perceived purpose for participation in digital writing tasks. Focal students in the study reported a variety of reasons for participation in the digital writing tasks. Among these reasons, student responses ultimately reflected their perceptions of the purposes of the assignment. For example, some students reported that the assignment was "required" for class, while other students described the purpose of the assignment was for other reasons that were "interesting" to them. In the following illustrations, examples of how students perceived the purpose as a required assignment or as an assignment that was also of interest to them are supplied.

Required assignments. When asked to describe what they were doing in their classrooms with digital writing, students responded in a variety of ways. Ultimately, students responded differently in the way they described digital assignments that were not connected to tasks which they found personally engaging, relevant, or interesting to them. In the following examples, two focal students express their perceptions of digital tasks

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that they perceived were a required assignment in the class and not explicitly connected

to their expressed interests.

Brandon, Interview Two: "I said it was just for English class..."

So you're saying you don't have any time in class to do freelance?

Sometimes she [the teacher] assigns it for homework and then we post it. I got an email from the director of *Weebly* saying you haven't been on your website in a while. And if you want to delete your account that's fine, but they wanted to know if we had any problems.

Did you respond back?

I said it was just for English class and I haven't posted anything in a while. No problems, but thanks.

Andrew, Interview Two: "Just to make sure you have a paragraph or something done by Christmas"

How many times have you gotten to use freelance do you think?

A little bit. It's something she would put up for homework like now just to make sure you have a paragraph or something done by Christmas.

In the previous illustrations from interview sessions, focal students expressed

their perceptions of the writing purpose by attributing it as an assignment for class. The

student in the first illustration indicated that he only used his website as required by the

teacher. He further mentioned that his inactivity on the site prompted a response from the

blog's system administrator. The second student also mentioned the freelance writing as

something that was required by the teacher. He categorized the assignment as sometimes

being one of "homework" by the teacher and mentions the deadline associated with the

project. These two focal students both immediately describe the digital writing task as a

specific assignment from the teacher; however, in the following section, other focal

students continue to elaborate on the purpose of the assignment as one extending beyond the immediate assignment and requirements of the classroom.

　　　　Interesting assignments. Another way that students expressed their perceptions of the purpose of their digital writing tasks occurred when students related the activities to something which students were doing beyond the immediate assignment. For example, students who participated in the enrichment group talked about the task being one in which they would enter contests. Students also expressed interests in writing for other reasons including for personal entertainment as well as for a possible career. In the following, illustrations from several focal students are provided in relationship to their expressed interests in the digital writing tasks.

Franklin, Interview Three: "This is for me."

Tell about a time that you used technology and it brought about any emotion.

One time at school I was on Story Bird and my heart rate went from slow to beating fast and a smile broke out on my face and I thought "this is for me."

What would you say that was?

Exciting.

What was exciting about it?

My teacher had said there might be some contests and if you want to enter one feel free just come talk to me. So I wanted to enter and win this contest.

So you're working on a story right now on story bird. Is that the one you're entering?

Yes it is.

What is the story about?

The contest is about hope. So I'm writing about hope and belief in Santa Claus. That he's going to come and not bring coal and sticks, he's going to bring good presents.

How far along are you?

I haven't started.

Explain how Story Bird works.

You choose your own pictures made by various artists around the world and you choose a set of pictures and use them to create a story.

So you found the contest first?

I haven't found the pictures yet.

So you had the Santa idea first without the pictures now you're trying to go on Story Bird and find something related to progress through it.

Exactly.

Dylan, Interview Two: "In my contest, if you win, you get 50 dollars"

What kind of writing projects have you been doing in your classroom, Carlos?

Well I'm in the enrichment class and I passed out for it and I'm with three other people and we are doing a freelance writing and writing a story. There's days like start your story or start brainstorming. So that's what we're doing pretty much.

Tell me more about this freelancing.

In the beginning you choose the type of writing you want to do. I'm doing mystery. And if you're in the Enrichment program you enter a contest. You choose the contest and do the story then you see what place you're in. In my contest, if you win, you get 50 dollars.

Connor, Interview Three: "It's really fun making up little stories"

How do you approach those? Any emotions in those assignments?

Whenever I get to write I get really excited because it's really fun making up little stories.

You like doing those? Any writing you don't like?

I don't like essays. I like to make up stories.

Andrew, Interview Two: "You can just write a little story to make you feel better"

What do you think it means to be a writer?

I think it means a good way to do your best at creativity and be creative. And if you're feeling bad about something you can just write a little story to make you feel better. Or, you can write the story about what you did.

Franklin, Interview Two: "Dreamed about Becoming a Writer"

How do you think you're going to use your knowledge of digital tools in your writing one day?

I've sort of always dreamed about becoming a writer so I could use these skills now throughout my career if I can get one. If I write books, I could definitely use (our teacher's) writing skills and lessons to help me.

In the above illustrations, focal students expressed their desire to participate in the digital writing tasks for a variety of reasons beyond the initial assignment of the classroom. The first two students, Franklin and Dylan, expressed an interest in entering contests and receiving a prize. Excerpts from the next set of students, Connor and Andrew, demonstrate an expressed interest in writing for entertainment or for other reasons like "to make you feel better." Finally, the last student, Franklin, expressed an interest in the digital writing tasks because he said that it was a "dream" of his to become a writer one day. Thus, all of these expressions represent students' perceptions of the purposes for the digital writing tasks as ones above and beyond the immediate assignment in the classroom itself. In sum, the purpose of the digital writing task was the final factor found to impact the students' digital writing practices.

Finding 2: The digital writing products of the students varied by the level of peer interaction in the classroom.

As noted in the previous finding, a multiplicity of influences impacted the students' digital writing practices in the classroom. When looking specifically at the

creation of digital writing products within sustained digital writing tasks, peer interaction was found to impact the students' product in relationship to the degree in which students' interacted with other peers. Ultimately, students in the grouped digital tasks carried the writing task from idea conception to presentation in the classroom. The students in the individual digital tasks abandoned the digital writing task at various points and did not present their work to the classroom. Thus, the products varied according to the peer interaction of the students. In the following sections, illustrations are provided to discuss how the students' writing products were impacted by the level of peer interaction in the following stages of creating their digital products: 1) generation of writing ideas, 2) expansion of written work, and 3) improvement of product.

Generation of Ideas

The first way peer interaction influenced the product of the students was through the generation of ideas. For example, students working together in the grouped digital tasks were able to build ideas from their communication with one another. This communication occurred both in physical locations and in virtual locations as students worked side-by-side as well as digitally with each other. In the following two interview selections, one focal student shared how he initially decided upon his writing topic after working in the grouped digital writing task.

Ethan, Interview Two: "Actually a friend in my group said he had two really good ideas"

Can you talk to me about your story?

It's about a big group of naiads, which are in mythology, and are water people. They can go into human form but they swim really well and breathe under water. It's about their traveling to find out who their master will be.

So could you talk to me now about where you think this idea started?

Actually my friend in our group said he had two really good ideas. One was "my life as a minion" and the other was "a dream" and I kind of got "traveling to our master" out of "my life as a minion."

Ethan, Interview Three: "If I didn't have my friends, I wouldn't even have my story idea"

What do you think the experience of writing your story would have been like if you didn't have freelance writing to get your story started?

Different because if I didn't have my friends, I wouldn't even have my story idea.

How did that happen?

Well one of my friends had two ideas. He used one, and I used the other and I built off of it. One of them was "am I dreaming or am I not." The other was about being minions and the life of a minion.

In the hallway, is that where you first started talking about your ideas?

It was. That's where he came up with both of them. He came up with the *Despicable Me* first then I just built off of it with finding their master because they're minions at the end.

       As the above interview selections illustrate, the context of the communication within the grouped digital tasks occurred within the physical boundaries of the school including both space, i.e. the hallway, and time. Students also shared the task virtually through viewing information online from the classroom's learning management platform. Within this grouping, students were able to respond to the digital writing prompts together and further formulate ideas for their individual writing task with each other. By sharing ideas for writing prompts to each other, the ideas of other members of the group were also influenced. Thus, students in the grouped digital writing tasks were able to benefit from this mutual sharing of information during the initial stages of the digital writing task.

       In contrast, the students participating in the individual digital tasks did not share their initial ideas with each other as they worked independently on their writing projects.

These students reported difficulties in generating ideas from their digital writing prompts.

In the following illustrations, two separate focal students report difficulties with

generating ideas for their writing projects:

Brandon, Interview Two: "You might spend thirty minutes thinking of a topic"

What was the last thing you've written? Can you tell me something about that piece?

It was last week or two weeks ago. It was on Haiku and we have topics we can pick from and the one was "imagine you were stranded somewhere and you only had 20 dollars" and I said I would buy from the ninety-nine cent meal at Wendy's and find a cheap motel I could stay at. I would have done that maybe.

Was there anything that you liked about that writing prompt? What would you say were your most favorite parts about it?

Just getting to do your own thing and imagining what you want to imagine. Someone is not picking it for you. You can choose what you want to write.

Was there anything that you didn't like about that writing prompt? What would you say were your least favorite parts about it?

Probably the same thing. Having to come up with something exciting.

Why would you say that is the least favorite part for you?

It's just something that you might spend too much time on and you don't really realize. And you might spend thirty minutes thinking of a topic and you started at 5:00 and you're like whoa it's already 5:30. And so you can just run out of time a lot with that.

Andrew, Interview Two: "There were so many choices. I couldn't choose"

Have you been doing any writing in your classroom with technology?

In my classroom we do something called "freelance." You pick a topic off of the Haiku and you write about that topic, and when you're done, (our teacher) lets you present it in class.

Have you chosen to write about anything yet?

I've kind of been thinking about one but it's just not working, so I'm probably going to start over with a new one.

So which one were you thinking about writing?
I think it was "chores" but I can't remember exactly. I had a last one but I've kind of abandoned that last topic.

Do you remember that last one?

I think it was 'Kids in Charge' but there were just so many possibilities, I just couldn't choose.

What was hard about writing about if kids were in charge? What made you abandon it?

There were so many choices, I couldn't choose which one I liked better. I've also just seen a bunch of movies with kids in charge and if I think of ideas, movies come in and I don't want to take ideas from movies. I want to make it my own writing.

Have you seen any of your classmates writing with freelance?

Yes. (A student) presented his yesterday. He owned a joke store. Someone robbed it and took all the whoopee cushions and there was a bunch of murders from filling them up with gas.

Were you able to read that before he presented it? How did he share that writing with you?

At the end of yesterday, he put his laptop connected to the SMART board where everyone saw the writing. But he also stood on the side and read it from his computer.

In the above interview selections, students who were not grouped to work on their digital writing task expressed difficulties in the initial stage of generating ideas. In the first illustration, Brandon noted being outside of the classroom when he experiences these difficulties. He also mentioned "running out of time" as he tries to determine a topic. In the second illustration, Andrew expressed difficulty with limiting possible topics for writing when first contemplating ideas for his project. He further shared how he learned about other classmates' topic through their presentation of their finished product. Both of these examples illustrate the difficulties for focal students working independently on the initial stage of the writing process when first generating ideas.

Expansion of Written Work

Not only did peer interaction influence the product of the students through the generation of ideas, but it also influenced students while they were expanding their ideas. In the following focal illustration, two focal students in the grouped digital task share their experiences of building ideas with one another to other classmates during a break time discussion.

Dylan Reads Story to Class: November 6, 2013 (Field Observation Memo)

(10:00)

After Dylan finished reading his story to the class, students take an official "Maintenance and Me" (break from formal class time) and ask the teacher for snacks. Some students leave for another class, and the rest of the boys cluster around the back corner with the "bungee" chairs before the "Writer's Lab" time begins. Dylan tells the group that he made a second story stating, "Because you know how it ended, the clown was a ghost." Other students ask questions like, "If the shark died, how did he get back to life?" Another student explains that the whole time, the characters were playing pretend and all had costumes. During this exchange, four boys are bouncing on bungee chairs, eating "Goldfish" snack bags, with a [few] other boys either standing around this group or seated on the floor around them.

Dylan continues to elaborate on his future writing plans by telling the group that in his second story, the characters would travel to an abandoned island where they discover the clown is really a ghost. Here another focal student, Ethan, tells the group that he "came up with his ending." Another student asked, "What ending?" Dylan replies, "Where they take off their costumes, except for the clown, and he's a ghost."

Another student adds an alternative ending for Dylan's new story by stating, "In the lab, it should have a duplicating machine, and when it duplicates, it makes an evil clown."

This conversation is interrupted as the teacher announces that it is time to return to their seats for their "Writer's Lab" time.

In the above illustration, both Dylan and Ethan engaged in a conversation about how they expanded their work through their grouped time together. Ethan tells the other students that "he came up with his ending." By working together in groups, these two students were able to contribute ideas for the expansion of each other's work.

Additionally, this sharing provoked other students who were not in the grouped task to spontaneously contribute ideas for future writing tasks of which Dylan explained he had started to do. Thus, the conversation within the grouped digital writing experience as well as the conversation about the grouped digital writing experiences with other peers contributed to the expansion of the initial ideas of digital writing projects.

In contrast to the experiences of the grouped digital writing tasks, students who participated in the same digital writing tasks independently did not report the level of expansion of their product. Moreover, students working independently reported not being able to complete their story or even abandoning the initial task all together. Of the four students working independently on this assignment, two students changed their initial topic more than once and one student never completed a rough draft of the assignment. In the following two illustrations, focal students Andrew and Connor explained their digital writing progress during the final interview session.

Andrew, Interview Three: "I just got to a point where I wasn't really interested in this anymore"

Have you made any progress with freelance writing yet?

I haven't really started into it but I got one going but I wasn't really interested in how the story was going but I thought of a way to change the story to keep it going. I just got to a point where I wasn't really interested in this anymore. I'd much rather be interested in something like a book. Maybe like writing about just something I'm more interested in.

Connor, Interview Three: "I'm still working on that one"

What experiences have you had with writing and technology?

We do freelance writing. We get to write our own paragraphs about our choice of topics. We have to do writing for homework like reflection and spelling. That's all we do for writing.

How do you approach those? Do those make you feel any certain way?

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Whenever I get to write I get really excited because it's really fun making up little stories.

So it sounds like you like doing those. Any writing you don't like?

Well, I really don't like essays. I like to make up stories and stuff.

Did we talk about one of your writing pieces?

We did.

Have you finished that one?

I'm still working on that one.

Can you remind me what was in that one?

This kid goes to a camp and the kids are all robots and they try to kill him. He tries to run out and he climbs up a tree and eats a poison berry and turns into a wolf so the rest of the story he is trying to turn back to a human.

What point are you writing in this story?

I've written most of what I've just said.

Do you know how it's going to end?

Not yet.

So he's climbed the tree. He's had the berries, and he's turned into a wolf. What's happening now?

Well he fell out of the tree so now he's running around with wolves and he's got to do these three challenges to turn back to a human.

So you've got to think of the three challenges and that's where you're stuck?

Yes.

As noted in the above illustrations, the focal students who worked independently had not completed their stories at the time of the interview. Additionally, they both reported being at a point where they had halted in their progress. Andrew reported

"losing interest" and eventually abandoning his topic all together, while Connor reported not knowing how he would conclude his story. Thus, it appears that the instructional grouping coupled with the amount of time that the students had to interact with one another impacted their written products as evidenced through their difficulties in expanding their ideas.

Improvement of Product

The third way peer interaction impacted the student writing was through the improvement of the product itself. The focal students who participated in the grouped writing experience traded their writing with their peers in order to revise their work. These students logged higher instances of revisions on their initial version of the digital writing draft. In the following illustration, a focal student within the grouped writing task explains this process of revision. Following this illustration, a chart supplying the number of peer comments in comparison to the number of revisions demonstrates the connection of peer interaction to the outcome of the student product.

Ethan, Interview Three: "Me and three other friends are working"

I've been noticing you have been writing in the hallway during my visits. Can you talk to me about what you're doing with your writing?

Well right now since I tested out of the preposition unit, me and three other friends are working on our freelance writing. We had to finish our story last night so right now we are basically revising.

Can you talk to me more about how you're revising?

Basically we are trading off stories. I'll give mine to a friend, and he'll give his to another friend and they'll just comment on parts they think I could revise.

Have you gotten to share this with anyone else so far?

Well my mom has read it and I think that's it.

What did you and your mom talk about after she read it?

She just gave me some adjectives and advice on some things I needed to fix in it, but that's really it. She said she liked it.

Has your teacher gotten to read it yet?

I've shared it with her but I'm not sure if she has read it yet.

As indicated in this focal student's interview, students who participated in sustained writing with each other were able to "trade" stories and give each other feedback to improve their product. Although students who participated in periodic writing also exchanged their work with peers and received feedback from them, working collaboratively in sustained writing tasks afforded students more opportunities to work with each other in the improvement of their products. In the following charts, Dylan and Ethan worked with peers in a sustained writing task, while the other focal students worked on the same sustained writing task individually. Table 1 demonstrates the number of digital comments for the students working together in a sustained writing task, while Table 2 demonstrates how the number of peer comments ultimately impacted the improvement of the product of all of the focal students.

Table 1

Digital Comments by Peers

	Peer Comment #1	Peer Comment #2	Peer Comment #3
Andrew			
(0 Total)			
Brandon			
(0 Total)			
Connor			
(0 Total)			
Dylan	10/2/13	10/7/13	
(17 Total)	(8x)	(9x)	
Ethan	10/2/13	10/7/13	10/10/13
(29 Total)	(17x)	(11x)	(1x)
Franklin			
(0 Total)			

Table 2

Digital Revision History

	Revision Entry #1	Revision Entry #2	Revision Entry #3	Revision Entry #4	Revision Entry #5	**Totals:**
Andrew	11/06/13					
	(1x)					**(1x)**
Brandon	09/16/13					
	(3x)					**(3x)**
Connor	N/A					
	(0x)					**(0x)**
Dylan	10/02/13	10/07/13	10/09/13	10/14/13	10/22/13	
	(15x)	(11x)	(3x)	(15x)	(3x)	**(47x)**
Ethan	10/02/13	10/07/13	10/09/13			
	(10x)	(8x)	(4x)			**(22x)**
Franklin	10/22/13	11/22/13	12/04/13			
	(1x)	(1x)	(1x)			**(3x)**

As illustrated from the above scenario and revision history, students working in the sustained digital tasks together made more revisions to their product than their peers who worked independently. Thus, students' products were influenced at multiple points of the digital writing task. Collectively, students who participated in grouped digital writing assignments followed the task together from prompt to presentation, while students who worked independently abandoned the task at various points. In sum, the peer interaction within the digital writing assignment was found to influence student writing by helping students to generate writing ideas together from writing prompts, to expand their initial writing pieces through sharing their writing with one another, and to improve the product for the final presentation through peer revision.

Finding 3: Student perceptions of their identities as writers varied according to their confidence in participating in the digital writing experiences of the classroom.

According to the data, a variety of influences impacted students' confidence in participating in digital writing tasks in the classroom. Ultimately, students' confidence as writers were impacted by the following eight features: 1) ability to connect to the audience, 2) school reputation, 3) knowledge of writing skills, 4) expectations for responsible behavior, 5) relationships inside and outside of the classroom, 6) completion of product, 7) choice for individualizing writing, and 8) competence with technology. An overview of the student confidence features is provided in Figure 4. Additionally, each confidence feature is paired with a corresponding expression of confidence and expression of inadequacy. This graphic illustrates a continuum of student responses for quick reference. Admittedly, students did not use the terms verbatim, but rather this graphic is utilized to represent a spectrum of student responses in regards to their

confidence in participating in the digital writing tasks of the classroom. Following the

graphic, the student confidence features are discussed in relationship to student

perceptions of their identities as writers in the following sections. Each confidence

feature is explained and an example of a student's expression of confidence for that

particular feature is provided as an example. As these categories were developed across

the data, an additional section is provided at the end of this section to illustrate two

different focal students' experiences throughout the duration of the study.

Expressions of Inadequacy

- *I can not relate to my readership.*
- *People do not see me as competent.*
- *I do not understand good writing skills.*
- *I can not meet all requirements.*
- *I do not feel connected to others.*
- *I do not feel proud of what I have made.*
- *I can not express myself creatively.*
- *I can not use technology effectively.*

Confidence Features

- Audience
- Reputation
- Knowledge
- Expectations
- Relationships
- Products
- Individuality
- Technology

Expressions of Confidence

- *I can relate to my readership.*
- *Other people see me as competent.*
- *I understand good writing skills.*
- *I can meet all requirements.*
- *I feel connected to others.*
- *I feel proud of what I have made.*
- *I can express myself in creative ways.*
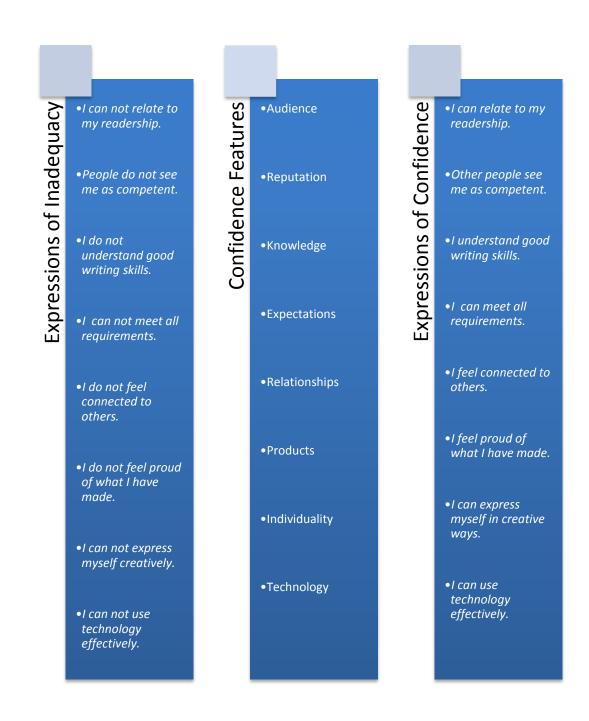- *I can use technology effectively.*

Figure 4. Levels of Student Confidence

Ability to Connect to the Audience

The first confidence feature related to student writing identity was the students' sense of audience. When talking about their digital writing experiences, some students reported a greater sense of connection to their audience than others. For example, some students explicitly mentioned their own perception of their writing ability in connection to being able to relate to their audience, while others did not. As one example of students connecting to their audience, some students reported that they were able to "grab the attention" of their peers. Other examples of connecting to the audience included students who reported that they felt that they were good at using "humor" and "making people laugh." The following example illustrates how one student connected his writing identity to his ability to relate to his audience through humorous entertainment.

Brandon, Interview Two: "To entertain…I think I'm kind of good at it."

What's a writer?

Somebody that comes up with stories or articles and he writes them down for people to persuade, inform, or entertain.

What qualities of a writer do you think you have?

Probably to entertain.

So is that something you like to do?

I think I'm kind of good at it. I'm not one of those guys who just think of hilarious stuff right off the bat. I have to kind of spend some time thinking about humorous things I can talk about.

How do you use the quality of humor while writing?

My stories aren't really based on humor; I just kind of throw it in there.

School Reputation

The second confidence feature found to impact student writing identity was the students' perception of their reputation as a model student. In particular, students reported the role of their reputation in their immediate school context as one where "you have to make good grades and be a nice kid." In the digital writing context, students were particularly cognizant when their "mistakes" or writing errors were pointed out to them when receiving feedback from peers and their teacher. Students reported that it was "embarrassing" to make mistakes online. The following illustration from one student further demonstrates how the students' perceptions of their reputation impacted their confidence in their abilities as writers.

Franklin, Interview One: "Some people actually look up to me…"

What are your least favorite things with writing?

I don't have a lot of least favorite parts. But some of them are misspelling a word and not realizing it until the end. Or making a mark on my work, I don't really like that.

Ok, what do you mean by making a mark? Your teacher or your friends?

My friends. I mean, that's sort of embarrassing. I'm not bragging but some people actually look up to me, and they like my work but that's kind of embarrassing.

Knowledge of Writing Skills

The third confidence feature found to impact student writing identity was their perception of their own knowledge about how to write. Students reported in a variety of ways concerning their perception of this knowledge. For example, students reported there were explicit writing skills in which they perceived that they "knew how to do" or which they were not as confident in implementing. Moreover, some students mentioned spelling specific words and elaborating on their ideas as specific skills in which they experienced

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difficulty. Some skills which students reported possessing were related to sentence structure such as using a variety of sentence patterns and punctuating them correctly. In the following example, a student attributes his knowledge of being a writer to the skills that he developed through reading.

Franklin, Interview Two: "I've extended my memory on bigger words…"

What qualities of a writer do you think you have?

I have the ability to extend sentences and be able to use a semicolon correctly. I can find words with context clues easier than some people can. I can see a word I don't know and look at the sentence before and the words around it and see what it looks like and I'll catch on to the meeting.

How have you used those qualities while writing?

I think I've been writing with bigger words than I did last year or this summer. I've extended my memory on bigger words because I'm reading seventh-grade level books.

Expectations for Responsible Behavior

The fourth confidence feature found to impact student writing identity was students' perceptions of expectations from the teachers and leaders in their school. Students in the study mentioned the importance of "being responsible" since they were now in the "fifth grade" and one of the "oldest" members of the school. Students discussed having their own computer to take home and a personal email account as one in which was a "privilege" given to them from their school. In addition to expectations on behavior regarding their use of the technology given to them, students also expressed that they perceived that they were expected to develop their academic skills through technology. In the following example, a student discusses his perceptions of school expectations for language use when writing with technology.

Ethan, Interview One: "They expect you to use bigger words than you know…"

What are you least favorite things about writing with technology?

I don't like that they expect you to use bigger words than you know because you have a dictionary and thesaurus on your computer so you can look up words a lot. We just wanna use words that we know.

So your teachers want you to use the bigger words? They like the bigger words?

Yes.

Relationships Inside and Outside the Classroom

The fifth confidence feature found to impact student writing identities was their relationships with other individuals. Students reported a connection to relationships both inside and outside of the classroom when talking about their own writing identities. In particular, students connected the comments from their relationships with others as an influence for evaluating their own perceptions of their writing abilities. In the following illustration, a student directly reported what his father said about his writing. Later in the same interview, the student responded that he believed that he possessed the same quality of a writer that his father had mentioned.

Dylan, Interview Two: "He thought it was really creative."

Have you had a chance to share your story with anyone else outside your classmates?

My dad.

What did he think about it?

He liked it. He thought it was really creative.

(…)

So what qualities of a writer do you think you have?

I still think the creativity…

Completion of the Product

The sixth confidence feature found to impact student writing identity was students' perception of their own writing products, particularly in regards to the completion of the product. Students reported differently concerning how they felt concerning their writing products. Some students reported feeling "proud" of their final product, stating, "it makes you feel like you can do anything" when you finally finish it. Other students reported feeling "frustrated" that they were unable to finish the product. In the following student illustration, a student comments about how he felt after he completed his product.

Ethan, Interview Three: "It made me feel better actually about my writing."

So now that you've finished writing, can you give me a brief summary of what your story was about?

It was about these naiads, which are these water mythological creatures, and they are trying to find someone to lead their group because they were lost and had nothing. They went through a whole bunch of places. The Himalayas, the desert. Those were two of the places they went.

So how did that make you feel writing that story?

It made me feel better actually about my writing when I finished.

Ability to Individualize Writing

The seventh confidence feature found to impact student writing identity was students' ability to personalize their writing to reflect their personal interests and style. Students reported the preference of being able to express themselves "creatively" with "uniqueness and spice" in their writing. Students also stressed their preference for writing what they wanted to write versus what somebody else wanted them to write. The following illustration demonstrates a student's perception of a writer's ability to choose.

Dylan, Interview Two: "Be you…maybe someone will like it…maybe someone won't"

What do you think it means to be a writer?

I think it means to have fun with your writing and write about what you want to write about and not what another person says you have to write about. And you know, just have fun with it and be you because maybe someone will like it and maybe someone won't. That's basically it.

Technology Competence

The final confidence feature found to impact student writing identity was the students' perception of their competence with technology. Students reported a variety of skills necessary for writing with technology. Some students perceived that they possessed the skills for typing including multi-tasking while typing, while others expressed concerns for not being able to type "fast" enough or not being able to both type and "think" at the same time. Some students also expressed confidence in embedding links for multi-modal components such pictures, videos, and sound files. Other students reported that they had trouble remembering passwords, managing files, and following instructions for online navigation across multiple steps. The following illustration demonstrates one students' lack of confidence with technology when he experienced difficulty in the classroom with navigating online across multiple steps for one of his assignments.

Brandon, Interview One: "I thought I was good with them until this happened…"

What kind of skills do you think are necessary to use digital writing?

Definitely be good with computers, you have to know a lot about them and know where to go. If the teacher says you have to pull up something on your toolbar or something, then you have to know where to go after that.

Have you used computers a lot? How do you feel about using computers?

I thought I was good with them until this happened and it wasn't as easy as I expected.

In the previous section, the eight confidence features that emerged from the study were presented with an example from the data to illustrate each feature. In the following section, two student vignettes illustrate the variety of student confidence features, particularly across two digital writing experiences: sustained digital writing individually and sustained digital writing with peers.

Two Student Vignettes of Confidence Features in Sustained Digital Writing Experiences

After the initial analysis, individual differences in confidence features were observed across the sustained digital writing tasks in the classroom. Of note, the two focal students who participated in the sustained digital writing experience with other students reported higher confidence features than the four focal students who participated in the same digital writing experience independently. To illustrate these differences, a student who participated in a sustained digital writing experience with peers as well as a student who did not participate with peers in a sustained digital writing experience is presented below. In the following student vignette, Andrew represents a student who worked independently on a sustained writing task.

Individual Sustained Writing Experience – Andrew. From the first interview session, Andrew was explicit in expressing his enjoyment of writing. He connected his enjoyment in writing to his interest in comic books, and, ultimately, his interest of extending the possibilities of reality by stating, "I like that, you know, the limit is not the sky. It's way higher." He further expressed that this type of writing was something in which he participated "at home" versus the classroom.

Andrew, Interview One: "I like that, you know, the limit is not the sky. It's way higher."

You mentioned that you enjoyed writing about your experiences in your writing reflection from class. What were your favorite parts about writing the reflection assignment?

Everything. I love writing.

What about writing do you like?

I like that, you know, the limit is not the sky. It's way higher. So you can do whatever you want in your story. Put whatever you want in it. I love creating characters. Like writing little comic books sometimes.

So do you do that at home?

Sometimes I do at home. I don't know about sixth grade or later in the year fifth grade, but so far we haven't written any comic books.

As illustrated in the above interview session, Andrew described his interest in writing and his favorite parts of the writing process. Although he later described himself as "creative," he does not explicitly mention why he believes that he is creative in the first interview session. Additionally, he does not credit his own sense of "creativity" to feedback from others, nor does he mention how being creative relates to a respective audience in a piece of writing. In the next interview session, Andrew continued to explain his interest in writing as he further connected it to his perceptions of his own ability as a writer.

Andrew, Interview Two: "It's more of just like when you feel like doing it."

What do you think it means to be a writer?

I think it means a good way to do your best at creativity and be creative. And if you're feeling bad about something you can just write a little story to make you feel better. Or, you can write the story about what you did.

What qualities of a writer do you think you have?

Biggest would be creativity. Things that would never happen in the real world if I am writing a fiction story.

Have you had a chance to use that quality in the classroom yet? To imagine?

Yes, with freelance.

How many times have you gotten to use freelance do you think?

A little bit. It's something she would put up for homework like now just to make sure you have a paragraph or something done by Christmas. It's more of just like when you feel like doing it.

As noted in the second interview, Andrew continued to express his interest in writing fiction. He added that the "biggest" quality of a writer that he possessed was his "creativity" because of his ability to write about "things that would never happen in the real word." Similar to the first interview session, Andrew did not explicitly mention why he perceived himself to be creative, nor did he make other connections concerning how his audience impacted his own writing identity. He further noted that although he was able to participate in the sustained writing experience of "freelance writing," he only did so "a little bit." He also added that it was "more of just like when you feel like doing it." Although the student had previously expressed his interest in writing, the infrequency of his participation in the writing task indicated a gap between his interest in writing and his actual participation in the task. In the final interview, Andrew further explained his experience in the sustained writing task in which he participated on an individual level as well his other experiences participating in periodic writing tasks with his peers.

Andrew, Interview Three: "I just got to a point where I wasn't really interested in this anymore."

Have you done any freelance writing yet?

I haven't really started into it but I got one going but I wasn't really interested in how the story was going but I thought of a way to change the story to keep it going. I

just got to a point where I wasn't really interested in this anymore. I'd much rather be interested in something like a book. Maybe like writing about just something I'm more interested in.

What was not interesting in that piece?

I think that I had seen a bunch of movies about that topic and every time I tried to write something those movies came into my head and I was like if I'm supposed to write when these movies come into my head how am I supposed to come up with something creative?

So trying to come up with something creative.

The topic was 'kids in charge'

So did you ever come up with a topic?

No. I didn't take the time to look at any of the big topics, but nothing really caught my mind.
So what about the other writing you've done this semester in class? Have you done anything else besides the travel journal?

There's one in reading where we had to come up with a figurative language. And an essay. My essay was about Alabama. It was a great weekend place.

What about that writing was interesting?

Probably just all the experiences I've had. I've gone to Alabama all the time and have a lot of family. I get to use my experience in my writing with a bunch of adjectives.

What part did you not like writing?

I can't think of one. I love it. Well, I kind of like it, but it was my least favorite. (When we were) checking each other's in a group of two and we would check each other's. I didn't get a lot of feedback.

How did you feel when you didn't get a lot of feedback?

It kind of worried me a little bit when I didn't get any. I got one or two things but they were like 'great essay.' It kind of worried me.

What do you mean by worried?

Suspenseful. I was hoping for more feedback, I didn't get what I expected to get.

The final interview with Andrew not only revealed how he had abandoned his sustained writing project, but it also revealed a previously unmentioned "worry" concerning his writing ability. During the first interview, student Andrew expressed his interest in writing, and in the second interview, he expressed his perception of his ability as a writer in connection to his own creative ability. In the final interview, however, Andrew reported that he had "lost interest" in his sustained writing project because he "wasn't really interested in writing anymore." Furthermore, when speaking about periodic writing assignments in the classroom, Andrew expressed that his least favorite part of the writing activity was that he did not receive much feedback. He further expressed that this was his least favorite activity because he was a little "nervous" about not receiving enough feedback in his writing. Thus, the lack of social support in the classroom, particularly in relationship to his experiences with the degree of peer interaction, not only impacted his completion of his product but also his confidence of his ability as a writer. In the following student vignette, Dylan offers a contrast to this experience as a student who participated in the sustained digital writing task with peer support.

Individual Sustained Digital Writing Experience – Dylan. As mentioned in the previous section, the experiences of the students who participated in the sustained digital writing task varied depending upon the level of peer interaction. Dylan represented one of the two focal students who participated in the sustained digital writing task from start to finish with his peers. In the first interview illustration, the student's perceptions concerning what it means to be a writer is presented.

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Dylan, Interview One: "I really don't know...I think my desire is not to be a writer when I grow up."

What do you think it means to be a writer?

A writer is someone who writes books. Not any types of books, but books that bring you in and make you want to read the book. And the title of the book is amazing so you're like 'ooh I wanna read that'! Then you start reading and you're like 'whoa'. It's like you're watching a movie but you can hold the movie. You can imagine what they see. You can imagine how horrible they were. You can imagine how ugly they were. You can imagine how happy he was. You can imagine everything in the book.

What qualities of a writer do you think you have?

I really don't know. I don't want to be bragging and stuff. I think my desire is not to be a writer when I grow up. (Our teacher) has been teaching me some good stuff on prepositions. I just took a test.

How have you used some of these qualities to write in your classroom? Or how do you think you will use what you're learning? How do you think you will use these skills in your own writing?

She's been teaching us prepositions like 'and', no 'and' isn't a preposition. After is a preposition! Before is a preposition. Instead of saying "Bob…", no you can't have a sentence without a preposition. Like, 'like' is a preposition. "I was behind the cash register". That tells you where you were. We are going to use that in our daily writing. In our college. In everything that has to do with writing and in our speaking.

In the first interview session, Dylan did not explicitly answer the question concerning his perception of his abilities as a writer. Instead, he addressed the question by explaining that his "desire" was not "to be a writer" in the future. He then proceeded to talk about the writing skills that he was learning from his teacher in his classroom, but he never explicitly mentioned these qualities as characteristics of his own writing identity. At this point in the study, the student had not begun the sustained digital writing task. During the following interview, Dylan continued to talk about his perceptions of himself as a writer while participating in the sustained digital writing task with his peers.

Dylan, Interview Two: "I don't want to be a writer when I grow up, but I like writing."

What do you think it means to be a writer?

To be creative in your writing. You just jot your ideas down and if it's bad you just delete it and figure out how to make it better. It's a lot of failure but sooner or later you'll get it. Let me give you an example. In Angry Birds, they took a while to become popular but now they're over the top popular.

So what do you mean by popular?

It's in the top ten. Each book has its own thing. One book could be horrible but at least one person will think it's great. More or less if it's horrible only one person out of a billion will like it. Unless it's a book that you have to read then you read it and you see what the writer means and on the back it tells how they became a writer. And sometimes it's like they thought and thought and then finally came up with a good idea and they think to themselves, "I could be a writer," and then they become one.

So what qualities of a writer do you think you have?

I don't want to be a writer when I grow up but I like writing. It's pretty fun. If I don't like a book, I won't like reading but if I like a book, I will like reading. I like fiction and magic and some terrifying stuff and some humor. I like humor a lot.

Have you used any of these qualities or things you like in your writing this semester?

I probably have but I don't know. The haunted house has some scary stuff like a headless man on a headless horse. And there's a huge black widow and a clown. Clowns scare me.

In the previous interview, Dylan once again did not explicitly address which qualities of a writer he possessed. Instead, he continued to express that he did not wish "to be a writer when he grows up," and added, "but I like writing." This interview represented a shift in the student's outlook from the first interview when he had yet to participate in the sustained writing task with peers as he differentiated the career of a writer from the interest or task of writing itself. Also different from the first interview, the student connected the ultimate success of writing to connecting to an audience. He demonstrated this connection by supplying the example of the makers of *Angry Birds* as

he said, "They took a while to be popular, but now they're over the top popular." He further extended this conversation by commenting to his own reading interests by adding, "If I don't like a book, I won't like reading but if I like a book, I will like reading." The student concluded this connection to reading what he liked by ultimately reporting that he also wrote about what he liked including "some terrifying stuff" in his digital writing. In the final interview, the student further developed the connection between his perceptions of writing and writing in connection to the interest of a readership.

Student D, Interview Three: "I think it means to be creative and make people want to read more."

Has anything changed over the past semester with what you used to do with your writing?

I was in enrichment last time and this time I'm not so this time I'm doing that thing where we had to describe the pictures in a sentence using sentence patterns and stuff.

Did you enjoy writing your story?

Yes I loved making stories because I can use my own ideas.

So now that you have written your own story, what do you think it means to be a writer?

I think it means to be creative and make people want to read more. Because I'm not really a reader and I don't do it a lot, but I need to start more. And it helps people feel that they can make whatever they want.

What qualities do you have or do you think you have learned this semester?

I think I'm better at sentence structure and things like that now.

As illustrated in the last student interview, Dylan shifted in his response over time to his perceptions of what it means to be a writer and what qualities of a writer that he thought that he possessed. In each interview, Dylan mentioned that being "creative" was an important quality of a writer, but in the last interview, Dylan extended his perception

to include the ability to "make people want to read more." This elaboration illustrates the student's developing understanding of writing in connection to audience. Finally, the last interview represented a shift in Dylan's response to the writing qualities which he possessed. During the first two interviews, Dylan did not explicitly comment about his skill level of writing, instead only mentioning the skills that were being taught in the classroom. In the final interview, however, he stated that, "I think I'm better at sentence structure and things like that now." Ultimately, Dylan expressed differing perceptions of his understanding of what it meant to be a writer and the qualities which he possessed as the semester progressed. This shift provides evidence of how his experience working with peers in a sustained digital writing project impacted his identity as a writer.

Confidence Features in Sustained Digital Writing Experiences

The student vignettes in the previous section represented two students who participated in the same digital writing task over a sustained, or prolonged, period. One student participated in this task independently while the other student participated in this task with other students. Across the three interview sessions, Andrew discussed working individually on the sustained digital writing project. Although the student reported previous experiences where he had received comments from his peers and family concerning his creative ability, the student reported that he felt "worried" when he did not receive feedback on his work. Additionally, even though the student reported interest in the assignment and his enjoyment of writing, he eventually reported that he "lost interest" in his project and abandoned his topic. In contrast, Dylan worked with other students on the same sustained digital writing project. Although initially this student reported that he did not want to be a writer, he persevered through the writing assignment, presented his

story to the class, and discussed his ideas for future writing. In the last interview, the student related the experience of writing to helping people feel as if "they can make whatever they want." Thus, the student vignettes illustrated the relationship between the students who participated in sustained digital writing tasks with a higher degree of peer interaction than students who participated in the same sustained digital writing tasks with less peer interaction.

Chapter Summary

This chapter presented the three findings discovered during the study. The first finding illustrated the complex nature of a digital writing environment. Ultimately, a multiplicity of influences were found to impact the digital writing practices including the following: a) digital writing tasks, b) degree of peer interaction, c) student interaction spaces, d) functionality and reliability of technology, and e) student perception for the purpose of the writing assignment. Not all members of the class had the same opportunity to fully participate in the digital writing experiences of the classroom. This created a practice where the students deemed "advanced" were able to share ideas for their writing projects and interact with their peers that in turn provided an additional scaffold for development of their writing skills. Additionally, when students were not seen as diligent in their "work habits," they were further restricted from social interactions of the classroom, limiting their exposure to the social resources of their peers in the classroom.

In the second finding, peer interaction within a sustained digital writing task was found to impact the product of the students. Sustained digital writing took place over more than three work sessions. Students who participated in sustained writing products with their peers in both digital and physical spaces were found to carry the digital writing

task from idea conception to presentation in the classroom, whereas students who worked on the same task individually did not do so in the same time period. Thus, the relationship between peer interaction and student product was found to be a critical component of the completion of the product. Specifically, peer interaction was found to impact students' digital writing products at the following points of development: a) generation of ideas, b) expansion of writing, and c) improvement of product.

In the third finding, student perceptions of their identities as writers varied according to their confidence in participating in the digital writing experiences of the classroom. Eight confidence features were found to impact student confidence including the following: 1) ability to connect to the audience, 2) school reputation, 3) knowledge of writing skills, 4) expectations for responsible behavior, 5) relationships inside and outside of the classroom, 6) completion of product, 7) choice for individualizing writing, and 8) competence with technology. Students who participated in sustained digital writing experiences with peers reported differently than students who had participated in the same sustained digital writings tasks without peer interaction. Ultimately, students who participated in sustained writing projects with their peers expressed higher levels of confidence across a variety of features than students who worked on the same sustained digital writing task independently.

Chapter 5

Discussions, Conclusions, and Implications

The previous chapters have supplied the rationale, scholarly context, research methods, and findings of this study. In the first chapter, the problem and significance of the study was introduced. In the second chapter, the theoretical perspective of the research and a scholarly review of the literature were provided. The literature review was comprised of an overview of writing research, current research of digital composition, and previous research on boys and writing. In the third chapter, the methodology of the study was described and included the methods for data collection and analysis. In the fourth chapter, the three major findings of the study were introduced including the influences impacting students' digital literacy practices, the significance of peer interaction to the digital writing product, and the relationship of eight confidence features to student perceptions of their identities as writers. In this chapter, the findings are discussed in comparison to the literature. Additionally, interpretations are offered through a model of social support for writing in the digital classroom. In the next section, the researcher's conclusions are offered. Finally, implications are provided with attention to the limitations of the study and recommended future research.

Discussions

Five major influences impacting the students' digital writing practices of the classroom emerged from this study. These five influences intersected each other in dynamic ways which both related to previous research and extended discussions regarding digital literacy practices. In the following section, an overview concerning the nature of digital literacy practices is presented. Following, the discussion is channeled

through the following five topic areas: 1) social writing and multi-modalities, 2) peer interaction and digital writing tasks, 3) degree of peer interaction and interaction spaces, 4) boys and social discourses of digital writing, and 5) boys and the digital learning environment.

Discussion

As utilized in the current study, the term literacy practice reflects the work of previous researchers. Such research concerning how literacy events related to social practices were found to be critical when describing a literate environment (Heath, 1983; Street, 1984; Barton, Hamilton, & Ivanic, 2005). Heath first defined a literacy event as "any occasion in which a piece of writing is integral to the nature of participants' interactions and their interpretive processes" (p. 93). Other researchers since have expanded discussions concerning the social nature of literacy to include larger social and cultural understandings of literacy practices. In particular, Street (2001) highlighted the difference between a literacy event and a literacy practice by defining a literacy practice as a "broader cultural conception of particular ways of thinking about and doing reading and writing in cultural contexts" (p. 17). Thus, discussions concerning literacy practices have more recently involved larger sociocultural perspectives that interact with the research context in complex ways. Similarly, this study supports the complex interaction of events by considering ways in which the digital literacy practices relate to previous research. The following discussion will explore the ways in which these influences both intersect with one another as well as connect to ongoing conversations within the sociocultural understandings of literacy practices. This discussion is presented through the first intersected topic, social writing and multi-modalities.

Social writing and multi-modalities. A growing body of research demonstrates the new ways in which students are participating in literacies outside of the classroom including gaming (Gee, 2007), fan fiction (Black, 2009), and blogging (Guzzetti & Gamboa, 2005). These activities are embedded social practices that occur over sustained periods of time and engage students in dynamic forms of multimodal production, often involving novel and creative representations for sharing. However, as Burnett and Merchant (2011) contend, the types of digital writing in the classroom often reflect views of technology as a presentation of risk to be monitored, especially with younger students, which ultimately hinders further integration of students' outside experiences into the classroom. Such disconnects between students' in-school and out-of-school digital literacy practices were most evident in this study when students discussed the ways that they communicated inside and outside of the classroom with technology. Although students reported participating in dynamic forms of communication outside of the classroom through video gaming systems or digital conferencing tools, their digital writing experiences in the classroom did not encompass the breadth of modalities of which they reported participating in contexts outside of school. For example, students in the study reported using *Snapchat* at home for communicating with text, video, and graphics; however, when discussing communication at school, students reported that such use of "chatting" with teachers or students was not considered appropriate communication for school. Thus, students reported a division of tasks that were "approved" for school versus tasks that were not, including communication across modalities. As student engagement continues to be connected to the increasingly social, multimodal environments, concerns for the role of such integration will likely continue to

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play a role in the educational decisions in the future (Clarke & Besnoy, 2010; Hutchison, Beschorner, & Schmidt-Crawford, 2012; Purcell, Buchanan, & Friedrich, 2013).

Peer interaction and digital writing tasks. Although research in engagement with digital technology (Jenkins, Clinton, Purushotma, Robinson, & Weigel, 2006) has been an ongoing area for discussion, and the role of peer interaction in student engagement has been an emerging topic of research (Alvermann & Hagood, 2000; Davis, 2012; Gee, 2011; Jenkins, 2006). The findings in the current study were particularly significant in that they suggested that engagement in digital tasks extended beyond the inclusion of "engaging" technology tools to include peer interaction as a significant factor for participation. Ultimately, this research added to previous conversations by considering how expressions of interests in the digital writing tasks alone did not necessarily mean a student would complete the task. For some students, the missing engagement factor appeared to be the social component, particularly noted in the lack of peer interaction.

Closely connected, this study related to previous research regarding the reader-writer relationship (Gillespie & Lerner, 2008; Gere, 1987; Moss, Nicholas, Highberg, & NetLibrary, 2004). In most of these studies, students favored their own needs as writers without considering the needs of their readers. Thus, helping students to connect to their audience (Gere, 1987) had been found to help students improve their writing skills. The current study illustrates ways in which students who worked together in sustained digital writing tasks were more successful than students who worked on the same tasks independently. These students were observed building connections with each other through participating in the digital writing experience together. Their comments to one

another helped them to not only generate ideas, but also make improvements to their product. These findings are consistent with traditional research on findings from peer interactions in writer's groups (Bruffee, Gillespie, & Lerner, 1999). In the following section, more discussion is presented concerning how peer interaction within the digital writing environment differs from traditional writing research.

Degree of peer interaction and interaction spaces. As previously eluded, writing groups, peer response groups, and writer's workshops (Bruffee, Gillespie, & Lerner, 1999; Gere, 1993; Moss, Nicholas, Highberg, & NetLibrary, 2004) are all bodies of research that have examined the role of peer interaction in traditional writing environments. In particular, these studies have discussed both benefits and challenges of student collaboration (Moss et al., 2004) in writing environments. Although peer collaboration has been shown to encourage student participation, challenges associated with peer collaboration have often been associated with the students' inability or lack of skills for constructing appropriate feedback (Keh, 1990) for their peers beyond either generic response or superficial suggestions for improvement. In the digital writing environment, however, research has supported modest gains of extended feedback from peers through digital tools (Ellis, 2011; Honeycutt, 2001). In fact, a recent study by the Pew Foundation has also contributed to this discussion by stating that although digital technologies "encourage greater collaboration among students," teachers still report that students lack the necessary skills for successful peer revision (Purcell et al., 2013a, p. 2). In the current study, the students who participated in sustained digital writing tasks in both physical and digital proximity of peers received more peer comments and made more revisions to their digital writing products than students who worked individually on

the same task. Although the students who worked individually could have "shared" their work with a peer in the digital space for peer revision and feedback, the students did not choose this option and expressed frustrations with the development of their ideas and digital writing products. This finding relates to previous studies concerning the nature of peer culture in physical negotiations of digital spaces (Aarsand, 2010). Thus, the nature of physical proximity and verbal feedback in digital writing environments, especially in the consideration for instructional design components, continue to be relevant topics of discussion. In the following section, more discussion is provided concerning research regarding considerations for boys and digital writing environments.

Boys, writing, and the navigation of social discourses. The discourses surrounding boys and writing continue to be a topic of discussion (Hartley & Sutton, 2011; Lee, 2013; Wilson, 2013). As the current study took place in a private school for boys, the discourses of the surrounding school context were noted in the students' connection to their perceptions' of their own abilities as writers. At times, it appeared that the perceptions of what it meant to be a "boy" from peer influences were juxtaposed against the individualities of the students. For example, focal student Andrew particularly noted the preponderance of his peers who played video games such as *Minecraft* but stated, "I'm not a video-game kind of guy." Such discussions concerning labeling boys as techno or game-centered could potentially lead educators to erroneously make assumptions about all boys. Additionally, although Andrew expressed an interest in writing and had composed a blog with the help of his family outside of the classroom, he did not complete the "Freelance Writing" opportunities as presented in class. Could his failure to complete the assignment have been connected to his perceptions regarding the

larger school culture and what was acceptable for "boys" to do? Such a question is difficult to answer from the scope of this research. However, the disconnect between his digital writing practices at home and his digital writing experiences in the classroom warrants future discussion. More specifically, questions concerning how the discourses of boys, particularly in regards to their digital writing practices, could potentially impact their literacy development and identity as writers is presented in the following section.

Boys, writing, and the digital learning environment. Not only did the current study provoke discussion concerning the social identities of students navigating between in-school and out-of-school digital spaces, but it also extended previous discussions concerning the approach of "boy-friendly" learning strategies to a digital writing context. For example, as previously noted in the literature review, King and Gurian (2006) have offered several considerations for approaching the learning environment of boys. These considerations included:

1) Increasing experiential and kinesthetic learning opportunities,

2) Supporting literacy through spatial-visual representations,

3) Letting boys choose topics that appeal to them,

4) Helping boys with homework,

5) Offering single-gender learning environments,

6) Making reading and writing purposeful,

7) Seeking out male role models, and

8) Getting serious about gender learning

(p. 2-4).

As the context of the study involved a single-gender learning environment with special attention to gender learning styles, this study provided discussion for such topics in relationship to the digital writing environment. In the following section, a discussion of how the considerations for "boy-friendly" strategies related to the current study is provided. These categories of discussion include the following: 1) role of choice in boys' writing tasks, 2) spatial-visual representation in boys' writing development, and 3) influence of male role-models in boys' perceptions of self as writers.

Role of choice in boys' writing tasks. According to King and Gurian (2006) previous studies have demonstrated the role of boys' topic choices as centered around topics which relate to their "aggression" with examples of such topic interests as "action" and "heroism" as motivating or engaging factors for boys to read or write (p. 2). Further, they claim that by allowing boys to choose such topics, they will not only be more likely to be interested in writing, but it will also present opportunities to teach appropriate social responses to such boy-centered aggressiveness as they add it provides, "numerous opportunities to teach lessons on character, nonviolence, and civility" (p. 2). In the current study, all students had choice of writing topics that reflected such interests. Some boys chose to write about topics that may arguably be considered as reflecting previous discourses of boys' interests. However, some students raised concern for the appropriateness of such topics. For example, one student in the study stated that he was "worried" about his friend's topic as it had "a lot of killing in it." Although the "killing" described in such an account was described as fictional with "ghosts" and "monsters" serving as the characters, discussions concerning how boys, or girls, are supported in their choice of writing as it relates to larger issues within society at large are particularly

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relevant. For example, how do teachers interpret such interests and where does the boundary between supporting a "boy's interest" and the appropriateness for the school context extend? Are "boys just being boys" when they choose to write about violent topics? What constitutes our perceptions of violence and how does it affect larger societal issues? Such questions concerning the role of choice for boys in writing topics demonstrate a few problems associated with such approaches as they reflect larger societal issues on boys and gendered discourses.

Spatial-visual representation in boys' writing development. Not only did this study raise questions concerning the nature of topic choice for boys in writing, but it also generated questions concerning the nature of spatial-visual representation as a tool for the writing development of boys. As argued by King and Guiran (2006), the use of storyboards for brainstorming are particularly helpful for boys as it caters to their "spatial-visual assets" to help boys write (p. 2). In the current study, students used the multi-modalities of digital composition to construct stories. Each writing prompt consisted of both a visual and a textual component. The students then constructed a story from the prompt and incorporated 1-2 pictures of their own to illustrate their story. As some of the students were successful in finishing the project while others were not, questions still remain regarding the role of multi-modalities and the writing development of boys. If simply incorporating "boy-friendly strategies" like multi-modal components that are suited to spatial-visual development of boys would have been adequate to engage students, would not more boys have finished the project? Or were perhaps the types of spatial-visual representations not clearly aligned to the out-of-school experiences of the boys such as their self-expressed interest in comic booking or online gaming? Aarsand

(2010) contends such activities are some of the most common activities for children of the Western world, and there is a need to further still understand how such experiences translate into the educational curriculum since "several of the knowledge domains that are known from the school curriculum are part of children's everyday lives, but these are used and framed differently in game play activities" (p. 50). Thus, considerations for integrating multi-modal components for digital writing will likely be more fruitful when attempts have been made to understand how students, both boys and girls alike, operate within multi-modal environments including exploring more about students' interests, peer relationships, and out-of-school experiences within their immediate contexts.

Influence of male role-models in boys' perceptions of self as writers. As a final point of consideration for the role of "boy-friendly" strategies in the digital writing environment, discussion involving the line between supporting boys in their development as writers and further perpetuating the success of male-dominated spheres is provided. As Mead (2006) provides evidence that although women are now completing undergraduate degrees more than men, women are still paid less for their services in similar careers and more men complete degrees for higher-paying jobs than women. In the current study, the researcher observed the teacher and students discussing author visits. Author visits during the time of the study consisted of male athletes or coaches who had written memoirs about their experiences or fictional authors who may have been solicited in a response to represent the interests of boys. Although women authors may have been invited to speak as well, it was not observed during the time of the study. Not only were male authors invited to speak to the boys, but the researcher also observed books written by males as they were promoted at the front of the classroom. Interestingly, however, when the

researcher observed borrowed books from the library on the students' desks or books students were reading for their own interests, popular culture books written by women with female protagonists such as the *Hunger Games* series were also observed. Thus, understanding the development of boys' identity as writers involved exploring the social context of the study as well. As one student discussed in describing his identity as a writer, "Being a good writer is about knowing what will be popular." Such a response demonstrates how perception of self as writer was reflected through what others thought of his writing, making it relevant to ask several questions to address the influence of what is "popular" and accepted in the lives of boys, including male role-models on the writing identity of males. At what point does the promotion of male accomplishments help boys to become successful writers? Do such representations skew students' view of women such as women writers? How does these impact future opportunities for males or females? As Mead (2006) contends, "we need to look carefully at the messages that pop culture, peer culture, and the adults who are involved in young people's lives send to boys," and "make sure that these messages are conveying accurate information to young men" (p. 19). Thus, the boy-centered strategies observed throughout the study demonstrate a complicated understanding of the role of gender in the digital learning environment.

In sum, six areas of discussion were offered for consideration including the nature of social writing and the communicative features of multi-modalities, peer interaction in relationship to digital writing tasks, degree of peer interaction in relationship to the interaction spaces of the classroom, and discourses on boys, writing, and digital learning. In the following section, interpretations of the study are offered through the presentation

of a model that reflects the previous points of discussion. It should be noted that although the discussion explored particular issues concerning the discourses surrounding boys and digital writing as it related to the context of the study, the researcher's interpretations reflect an approach which reflect larger considerations for digital writing environments regardless of student gender.

Interpretations

Considering the complex nature of the digital writing environment, interpretations of the study are particularly relevant for understanding the teaching of writing in a digital context. In the following section, a model of social interaction in the digital writing context is presented. The overview of the model in Figure 5 highlights the social nature of the digital writing environment as it occurred in the context of the study. Particularly, it demonstrates how each quadrant impacted the other quadrants through providing different tools of social support to the students in the study. Thus, this model is presented as a tool to show what happens when students write in digital contexts with the appropriate social support. The following four quadrants are presented: 1) peer relationships, 2) technology competences, 3) writing skills, and 4) student interests.
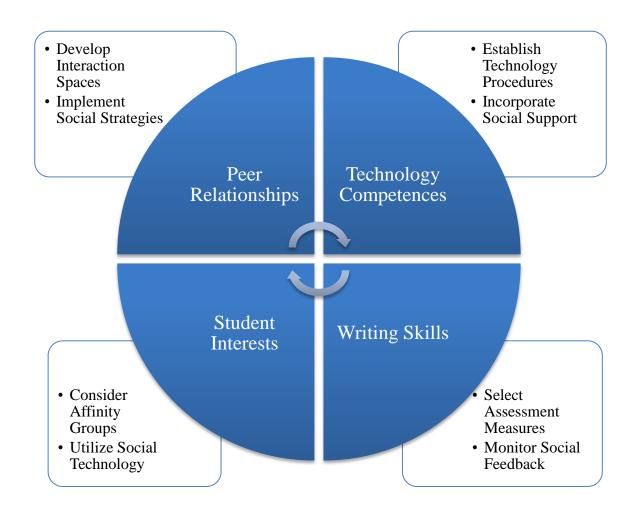
Figure 5. A Model of Social Support for Writing in a Digital Classroom

Peer Relationships. The first quadrant of the model addresses the role of social support for writing with particular attention to the development of peer relationships in the digital writing environment. As peer interaction was a major finding in terms of the students' digital writing practices and the completion of their products, this quadrant represents a particularly salient finding from the research. Additionally, it relates to studies that incorporate understandings of negotiations of peer culture when participating in digital activities (Aarsand, 2010; Burnett, Dickinson, Merchant, & Myers, 2006). In the following sections, considerations for developing interaction spaces and implementing social strategies to provide social support for writing in the digital classroom are presented.

Developing interaction spaces. As students were presented with digital tasks in their classrooms, attention to peer relationships was noted in the variety of locations in which students interacted with one another, including both physical and digital spaces. First, physical interaction spaces were observed throughout the course of the study. For example, the teacher in the study allowed the students to design their own classroom at the beginning of the school year with particular attention to developing areas for particular functions. Students were observed throughout the study holding both formal and informal conversations concerning their writing in these physical interaction spaces. This finding correlates to Aarsand's (2010) description of "handsoff game activities" which include "talk about digital games, imitations of activities that take place in games, or the creation of play environments and objects that can be explicitly related to digital games" (p. 45). In short, the potential for talk about digital experiences, whether about gaming or creating digital writing products, hinges upon physical interaction spaces in

which these conversations can take place. Additionally relevant, the opportunities for students to engage with other students through prolonged periods of time further suggests the role of time and instructional decisions such as grouping as a component of developing appropriate interaction spaces for students to interact with one another. As students who were not grouped to work together in interaction spaces on sustained digital writing products were not as successful as students who were grouped together, the development of physical interaction space was one such factor of the type of peer relationship in which students could build.

Not only were physical interaction spaces observed in the study, but digital interaction spaces were also observed in this study as well. In particular, the students in the study utilized commenting features of *Google Docs* to communicate about their writing. Students also reported using email and discussion boards on their learning management system, *Haiku,* as spaces where they communicated with their peers. Although digital interactions were observed, it should be noted that the students in the study were cognizant of the regulation of their online communications with peers. As one student stated, "I think it is interesting that they can always see what you are doing online." Additionally, some students even reported their perceptions concerning the differences between "chatting" and communicating about class assignments, suggesting larger digital communication practices of which students were not able to utilize in their classroom context. Thus, students were not fully able to take advantage of larger digital interaction spaces as it was not reflected in the social infrastructure of the classroom. Although research on the potential for utilizing larger digital spaces such as social networking sites for fostering literacy development is limited (Beach, Hull, & O'Brien,

2011), this model supports the value of peer relationships for writing in the digital context. In the following section, another consideration for developing peer relationships is provided through discussing the role of social strategies in the digital writing environment.

   Implementing social strategies. Another consideration for developing peer relationships in digital writing environments is the implementation of social strategies. Social strategies include ways in which students are able to build relationships with peers in their classroom and mirror sociocultural learning theories (Vygotsky, 1986; Wertsch, 1991). Teachers can consider multiple ways in which students are assigned to work together beyond student ability level or previous connections in the classroom. In this study, the teacher used a problem-based learning task of arranging the room on the first day of school to introduce students to each other and foster a tone of collaboration and team building. In the digital writing environment, teachers can help students to develop online "profiles" of which thy can personalize and share with one another as a way of building social identity (Buck, 2012; Davies, 2012). Teachers can also consider ways to encourage students to interact with all members of the classroom through online social strategies. For example, teachers can choose a students' blog to highlight for the week and encourage all students in the class to post a response to a different student's blog each week. Such strategies highlight the importance of helping students to digitally connect to their peers by encouraging them to participate with all members of the classroom. In the following section, considerations for the impact of social components of digital competences are presented.

Technology competences. The second quadrant of the model addresses the role of social support for writing with particular attention to the development of technology competences in the digital writing environment. Students' proficiency with technology was found to impact both their participation in the digital writing environment and their confidence in their writing ability. Although previous research has demonstrated increased confidence levels for boys participating in digital writing tasks with technologies such as computers (Clark & Dugdale, 2009), this study demonstrated that even boys who initially thought they were "good" at technology struggled at various points during the study, and as such, warrants the need for additional considerations for supporting students while they work through digital writing tasks. In the following sections, considerations of the impact of establishing technology procedures and incorporating social support are provided.

Establishing technology procedures for the classroom. As students inevitably face new technical difficulties when writing with technology (Palloff & Pratt, 2013), two particular considerations for establishing technology procedures was deemed particularly useful when considering the social aspects of the classroom including providing opportunities for students to help one another with both procedural and troubleshooting demands. First, providing opportunities for students to help one another with the procedural processes is discussed. In the study, the teacher was observed incorporating daily procedural processes into the classroom, such as saving a file or organizing a folder. When students had difficulties with these technology competences, however, no formal plan to incorporate social support for the classroom was observed. One consideration for addressing such issues is to provide instructional time for students to check each other's

development of their technology competence. Other considerations include the development of a social plan or system for helping students remind each other of the procedures for managing files or navigating websites. By explicitly sharing such plans with the class and building classroom time for students' to help one another with these processes, teachers can provide help to foster technology competences in their students.

Additionally, teachers can help to build technology competence by providing a team approach to troubleshooting skills in the classroom. Troubleshooting skills include the ability for students to quickly assess technology problems, determine what type of action is necessary, and understand how to resolve the problem effectively. Teachers can support troubleshooting skills by developing the same social procedural responses to daily instructional tasks. For example, teachers can provide opportunities for students to talk about technology problems such as students being unable to access a site due to maintenance issues. Students can then work together to learn how to respond when a variety of technical challenges arise. By helping students to determine the problem and address it systematically together, teachers can help students to develop technology competence through a social approach to developing both procedural and troubleshooting responses in the classroom. In the following section more attention to how teachers can help foster technology competence by helping students to resolve technology issues outside of the classroom is provided.

Incorporating social support for outside the classroom. Another consideration for developing students' technology competence in digital writing environments is for teachers to incorporate social support for students experiencing technical difficulties (Diziol, Walker, Rummel, & Koedinger, 2010) outside of the classroom. In this study, the

teacher allowed students to answer each other's questions or to consult the technology support staff of the school. Some students even reported having social support outside of the classroom to help address technology issues. However, as all students may not have the same technology expertise, attend a school that possesses technical support, or reside where such assistance is not available at home, other considerations for social support may need to be considered. For example, teachers can consider using peer "experts" outside of the students' grade level to assist each other or seek outside partnerships to troubleshoot as problems arise. Additionally, online or physical support systems such as afterschool technology labs or 24/7 technology advice may also be beneficial in developing social support for outside of the classroom. Teachers can also consider using collaborative partnerships with other members of the school or outside members of the school to support students. Thus, teachers implementing writing in a digital environment can consider a variety of ways in which they can incorporate social support more effectively. Following, considerations of the development of writing skills through social support are provided by exploring the next quadrant of the model.

Writing skills. The third quadrant of the model addresses the role of social support for writing with particular attention to the development of writing skills in the digital writing environment. As students' perceptions about their writing skills varied in this study, considerations for how to address the development of students writing were deemed a meaningful component of the model. In the following sections,

Selecting assessment measures. One consideration for developing students' writing skills in digital writing environments is the carefully selection of assessments. The teacher in the study utilized constructive response to online writing exercises, such as

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the ones provided in the discussion of periodic writing tasks, and online quizzes as a form of formative assessment to inform instructional decisions. In addition, she implemented assessments throughout the year that modeled their school's summative writing assessment that considered factors such as the role of typing and time. Other recommendations for assessing student growth include the use of more social measures of students' writing such as electronic portfolios (Abrami, Venkatesh, Meyer, & Wade, 2013; Bures, Barclary, Abrami, & Meyer, 2013; Yancey, McElroy, & Powers, 2013). Electronic portfolios can encourage the development of writing skills through both formative and summative assessment over time. Such portfolios can be utilized for students to share their writing over time with various audiences. In this way, factors such as students' technology ability, writing skills and relationships to others both inside and outside of the classroom is both considered and supported by such assessments. In the following section, more attention to incorporating social measures of students' writing such as the role of monitoring feedback is presented.

Monitoring social feedback. Another consideration for helping to develop students' writing skills in digital writing environments is the role of online social feedback. Social feedback can be used to support the development of student writing skills by helping students to direct their attention to areas for improvement. In this study, students sometimes needed more guidance on areas to improve their product. Students reported that assistive technologies such as tools for checking spelling or looking up new vocabulary words were not always helpful in improving their writing skills. As students also reported that working with partners or peers was beneficial for helping them to improve their product, recommendations for structuring and monitoring feedback from

peers is also an important consideration. Additionally, the public nature of social feedback also requires careful consideration in a digital writing environment (Ponzio, 2013) as the students in this study were sometimes embarrassed by being perceived as less competent when receiving feedback. Building a culture of constructive criticism while balancing ethical considerations for student feedback are only a few ways of exploring the ways social feedback is monitored in the digital classroom environment. In the following section, the last quadrant of the model, student interests, is presented.

Student interests. The fourth quadrant of the model addresses the role of social support for writing with particular attention to the development of student interests in the digital writing environment. As students' participation and confidence in digital writing impacted their ability to express their interests to others, considerations for how to encourage student interests in the digital writing environment was deemed especially significant. In particular, research considering issues of participatory culture (Alvermann, 2002, 2008; Jenkins, 2006) in digital learning environments was utilized in this section. The following two considerations are presented for supporting student interests through social support: implementing affinity groups and utilizing social technology.

Implementing affinity groups. One consideration for incorporating students' interest in digital writing environments is for teachers to implement affinity groups. Affinity groups (Ito et al., 2013) include both physical and online groupings of students that match student interests versus abilities. As the students in this study participated in sustained digital writing tasks with peers based on ability level, students who had particular interest in the same activities were not always fully supported in their creative endeavors. By connecting students to each other as well as connecting students to others

who share the same interests and passions outside of the classroom, teachers can help support all of their students in pursuing more of their choices for writing. One consideration for teachers in implementing affinity groups is to first survey students' interests outside of the classroom by making efforts to discuss student interests in entertainment and leisure. Teachers can then use this information to encourage relationships both within the classroom and outside the classroom.

Utilizing social technology. Another recommendation for considering students' interest in digital writing environments is for teachers to utilize social technologies. Social technologies are particularly useful for digital writing as it facilitates student exploration of their interests while connecting to an authentic audience. As students encounter peers and other individuals with similar interests, they are further able to build their knowledge base for writing. Although consideration for social technologies is sometimes limited for classroom use (Beach, 2012), teachers can explore "safe" ways to encourage students to make connections to larger disciplines and persons. For example, teachers can connect to other classrooms in their school or across the globe by utilizing the privacy features of social technologies such as *Twitter, Facebook, Google Circles, or WikiSpaces*. Other problems teachers and students may encounter such as cyber-bullying (Kowalski, Giumetii, Schoroeder, & Lattanner, 2014) can also be addressed by explicit instruction on digital citizenship skills (Searson et al., 2013).

In sum, the model of social support for writing in the digital classroom offers considerations for helping students to build peer relationships, develop technology competence, improve their writing skills, and pursue their writing interests. All of these interpretations were contingent upon a sociocultural understanding of literacy

development with particular attention to the development of writing in a digital context. In the following section, conclusions for the study are provided.

Conclusions

In addition to providing discussions and interpretations for the chapter, the researcher also offers conclusions concerning the nature of digital writing practices and the development of writing skills in digital contexts. Considering the relationship between the findings and literature related to a sociocultural perspective of literacy (Vygotsky, 1986; Wertsch, 1991), this study demonstrates the value of social interaction in the development of literacy skills. In particular, research in New Literacies further supports the social nature of learning in digital environments, emphasizing the greater importance of such connections (Gee, 2007; Kress, 2003; Leu, 2006). Thus, the connection to social interactions such as peer interactions to writing development was the predominant consideration for developing the conclusions from the study. In the following section, further attention to the role of social strategies for writing instruction in the digital context is offered.

Social Strategies for Writing in the Digital Context

As the influence of peer interaction was found to be major finding of the study, particular attention to the development of social strategies (Gee, 2007; Kress, 2003; Leu, 2006) in the digital context was determined as an important conclusion of the study. Social strategies were considered in light of the ways in which students were able to build relationships with peers in their classroom through the larger instructional decisions of the classroom. For example, the teacher used a problem-based learning task of arranging the room on the first day of school to introduce students to each other, foster a tone of

collaboration, and create spaces for interaction. Additionally, students were allowed opportunities to work together in a variety of physical and digital arrangements. These represent successful social strategies as they considered the role of peer interaction as a means of social support for writing and yielded results at times for the students who participated in such social strategies. At other times, however, these strategies sometimes lacked further considerations regarding the social nature of such strategies. For example, as some students in the study expressed sensitivities regarding the comments made by their peers, helping students to feel comfortable with constructive feedback from peers was an important consideration for implementing appropriate social strategies in the digital writing context. Thus, social strategies that help students to facilitate appropriate feedback in a variety of spaces and frequencies, including opportunities for students to provide both verbal and digital feedback to each other's writing over sustained periods of time, are presented as important considerations for the digital writing environment. Moreover, the implementation of social strategies to foster peer relationships to aid writing development through both physical and digital contexts represents the significance of such a conclusion from the study. In the following section, more attention to how students connect through social technologies is provided.

Social Technologies for Communication in the Digital Context

A second conclusion from the study relates to the nature of digital writing and composition in relationship to social technologies. As studies in New Literacies extend the definition of traditional literacies, reading and writing is viewed as an increasingly collaborative, social practice that requires new skills for interpreting information from communication technologies (Kress, 2003; Lankshear, Knobel, & Curran, 2013; Leu,

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2006). Additionally, it extends the definition of literacies to include multi-modal forms of production such as pictures, graphics, and video to share with other individuals. Thus, the implementation of social technologies is particularly useful for digital writing as it facilitates connections to authentic audiences with embedded meanings in a variety of modalities. As the students in this student reported differences between some of their in-school and out-of-school communications, such as *Snapchat*, one conclusion of the study is the implementation of social technologies, although potentially relevant or meaningful for students, continues to be ignored or resisted by teachers and schools. In considering how students who were better able to make connections to peers were more successful in their writing attempts, social technologies offer potential for helping students improve their writing through incorporating a variety of modalities such as speech and visual components. Such conclusions warrant further exploration to consider how the various communication features of social technologies benefit writing development for elementary students as well as how or why these forms of integration are either supported or resisted in their school contexts. In the following section, conclusions regarding how the technologies which were incorporated into the classroom are presented.

Social Support for Technology Competence in the Digital Writing Context

Finally, the role of developing technology competence through social support is presented as the final conclusion of the study. As students experienced difficulties with processing multiple steps for technology instruction, consideration for how to support students with the demands of technology was deemed particularly relevant (Amiel, 2006; MacArthur, 2006; Palloff & Pratt, 2013; Shrivastav & Hiltz, 2013). For example, some students experienced a variety of frustrations with understanding the steps for the

assignment. Other students also experienced consequences when they were unable to meet the expectations of the digital activities such as saving files in the appropriate folders for the teacher's review. Although the teacher incorporated a variety of techniques for helping students meet the challenges of digital writing such as modeling techniques, recorded video demonstrations, and hands-on simulations, students experienced technology difficulties outside of the classroom of which they reported that they did not always know how to address. Although students were observed providing assistance to each other when they encountered problems in the classroom or at times were allowed to consult the technology consultant of the school, a more formal system for social support was not observed for when students experienced difficulties both inside and outside of the classroom. Thus, the researcher concludes that the lack of a developed social support plan for building technology competence contributed to some of the problems of which the students experienced with technology. By further considering the social aspect of technology support, perhaps teachers and school leaders can provide another tool for helping students to develop both competence and confidence with technology.

In sum, the benefits of implementing social strategies, considering additional social technologies, and incorporating social support for technology are all conclusions of the study for developing digital literacy practices for classroom writing. Additionally, as all of the conclusions involved peer interaction as a significant social factor for the participants in the study, it should be noted that peer interaction was a particularly salient finding across the data. In the following section, potential implications are offered with a

special emphasis on the social nature of writing and peer interactions within the digital writing environment.

Implications

Although this qualitative study represents a contextual case study, considerations for how this research could potentially inform the decisions of teachers, teacher educators, school administrators, and policy makers are particularly timely. These implications are informed by sociocultural perspectives of literacy and include considerations for the development of standards, curricular resources, and assessments that reflect social approaches to writing. In the following sections, implications for consideration are supplied which address such concerns within the following categories: 1) knowledge of outside school literacies, 2) considerations for digital writing in the classroom, and 3) connection of students to larger communities.

Knowledge of Out-of-School Literacies

First, implications for teachers and leaders to learn more about students' experiences outside of the classroom are presented. When teachers are faced with making instructional decisions concerning digital writing, considerations for how students are already participating in the larger digital culture outside of the classroom are particularly relevant (Alvermann, 2008; Anderson, 2010; Jenkins, 2003). For example, students in the study were expected to have digital access at both home and school, and although this context represented students who had such access, there were still occasions where students reported difficulties with the reliability and functionality of technology. When thinking about other educational contexts, it is important to recognize the technology experiences of students who may not only have had reliability difficulties with technology, but also problems with accessing technology as well. Thus, an increased

attention to out-of-school experiences in teacher education and training is one way to help address this disconnect. In particular, preparing teachers to think critically about their own digital literacy practices as well as their students' digital literacy practices are important implications as it relates to the experiences of the students in their classroom contexts. Thus, helping teachers to consider the ways in which they learn about their students, validate their experiences outside of the classroom, and make connections to these experiences are some means of addressing these implications.

Considerations for Developing Socially Supported Digital Spaces

Additionally, considerations for developing socially supported digital spaces are offered as implications for teacher practice. In particular, supporting the role of peer interaction within the classroom is a particular important implication for teacher practice. Teachers in digital contexts are faced with additional instructional decisions such as how to create a classroom culture in both physical and digital spaces with attention to issues such as cyberbullying (Kowalski & Limber, 2007) and Internet safety (Berson & Berson, 2004) topics. Thus, topics to help teachers make decisions concerning which digital tools support safe, positive peer spaces are particular relevant. For example, teacher training in helping students to create "digital" profiles to both protect their online identity while also supporting collaboration is also meaningful. Other topics for teacher training include helping students to connect with each other through their interests, developing platforms for learning about students who have different interests and supporting greater collaboration in the classroom.

Considerations for Understanding Technology Competence

Next, implications for technology competence when making instructional decisions in the classroom are presented. In particular, considerations for how to balance students' processing demands (Shrivastav & Hiltz, 2013) while gradually scaffolding digital support and instruction are necessary components for instructional decisions in digital writing environments. Teachers who experience digital environments for the first time may not understand the extra processing demands required for students when both writing digitally and managing technical aspects. Thus, helping to support teachers in broadening their understandings of the uses and limitations of technology is a particularly timely implication. Additionally, such considerations are not only important for teachers and teacher educators to consider, but also for policy makers and assessment administrators such as the Partnership for Assessment of Readiness for College and Careers (PARCC) who are undergoing the development of assessments with technology (Herman, Linn, & Moss, 2013). On the road to assessing deeper learning: The status of smarter balanced and PARCC assessment consortia.. Thus, teacher training in how to help students meet the demands of digital assessment as well as informed decisions considering the practical and ethical implementation of such assessments are implications that connect to the larger political context.

Connection of Students to Larger Communities

Finally, implications for how teachers and schools approach connecting students to larger communities are presented. As students are increasingly participating in the larger digital culture, considerations for how to meaningful connect students to this larger social context is a conversation in which teachers and school leaders are presented. Some

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teachers are considering ways in which they can extend the activities of students actively

involved in "participatory cultures" (Jenkins, 2013; Jenkins et al., 2006) into the

classroom. Participatory culture is a social phenomenon in which students participate

with the larger digital community in producing creative works such as textual

commentary on pictures through applications such as *Instagram* or *Snapchat* as well as

other platforms for video commentary on topics of interest through social media such as

You Tube, *Facebook*, or *Twitter*. Thus, such models and strategies for incorporating these

digital literacies into the classroom continue to be topics of discussion for teachers and

teacher educators. Other models for connecting students to larger digital communities

consider concepts of "connected learning" (Ito et al., 2013) to help connect students to

other peers and experts outside of their immediate geographic domain to extend previous

"ecological" perspectives of education (Bronfenbrenner, 1976) to larger digital spaces.

Such a model uses the school site as a source of facilitation for connection to larger social

capitals of which students may or may not have had previous exposure in order to

connect students to others who share similar interests.

While teachers and school leaders continue to consider these models for the

classroom, concerns for incorporating such measures are also raised. For example, the

dangers of the Internet and potential threat for cyberbullying in the classroom are often

discussed. Such issues of concern create a need for addressing larger issues of digital

citizenship (Mossberger et al., 2008; Shelley et al., 2004) such as helping students and

teachers to participate both safely and effectively. Additionally, concerns for how to

connect English Language Learners (Toohey, Dagenais, & Schulze, 2012) who may need

additional language support for establishing connections warrant for teacher training.

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Thus, teacher training addressing issues of connectivity are important implications from this study. In the following section, recommendations for future research are presented through addressing the limitations of the study and recommending research for both student-centered and teacher-centered approaches

Recommended Research

As previously discussed, the complex nature of the digital writing environment requires careful consideration of a variety of social experiences for effective, efficient, and ethical implementation. This research focused on a single, all-boy environment, but as Mead (2006) contends,

> Although there are hosts of statistics about how boys and girls perform in school, we actually know very little about why these differences exist or how important they are. There are many things—including biological, developmental, cultural, and educational factors—that affect how boys and girls do in school. But untangling these different influences is incredibly difficult. (p. 15)

In light of these complexities, recommendations for future research are made. Ultimately, these recommendations reflect the limitations of the study as research exploring a variety of contexts is needed to inform the complex interactions of social subjects.

Limitations of Study

Before offering recommendations for future research, it must be mentioned that this study is limited in scope and is not generalizable to other bodies of research. This study took place in a private school for boys in the Mid-South. The students in the study had access to digital technologies both inside and outside of the classroom. Additionally, the participants of the study constituted of a homogeneous grouping which were similar

in gender, race, and socio-economic status. Furthermore, this study largely explored the digital writing experiences of the students in the classroom. Thus, this study was also limited as it did not also explore the perceptions of the teacher or the nature of student-teacher interaction. By discussing these limitations, the researcher suggests future research for further exploration. Recommendations for future research are presented based upon student-centered research approaches as well as instructional-centered research approaches.

Research needed with student-centered approaches. First, more student-centered approaches to research are needed to explore a variety of student experiences with digital writing across gender, race, and socio-economic status. As this study represented students with largely similar experiences with technology, more research is needed to explore how students from a variety of experiences both interact in their immediate contexts as well as how students interact in digital spaces together in classroom experiences. In the following sections, specific attention to recommended research across gender, race, and socio-economic status is suggested.

Gender. Given statistics for the economic opportunities for women (Wilson, 2013), more studies are needed to explore how education shapes the perceptions of girls to pursue a variety of career paths, including the pursuit of careers in which they have been underrepresented. Particularly, research exploring how discourses about gender both limit and extend possibilities for women in larger digital spaces is needed. By tracing the traditional development of such discourses (Foucault, 1970), future research offers potential for exploring new ways in which women participate in digital circles, further elucidating how girls in a variety of educational contexts are shaped or supported. Thus, a

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variety of questions for future research are recommended: How do girls participate in digital writing environments both inside and outside of school? What differences are perceived between the ways in which girls and boys participate in digital writing? How do girls interact with peers? In other words, studies exploring how girls participate in digital writing environments, perceive themselves as writers in digital environments, and how these experiences and perceptions both shape and support their realities are recommended.

Race. As discussed in the literature review, previous research has shown that isolating gender alone for gaps in writing skills has contributed to misunderstandings as such a gap represents a complex social phenomenon (Collins et al., 2000; Mead, 2006). Researchers such as Tatum (2006, 2008) have further added to this discussion by exploring the experiences of African American males as readers and writers of cultural texts. Such studies warrant discussion of how the continually shifting digital context reflect or prohibit cultural practices. Other researchers have contributed to this discussion by exploring the intersections of race, language, and technology such as discussions concerning English Language Learners from a variety of backgrounds (AbuSeileek & Qatawneh, 2013). As more and more educational contexts are integrating technology into classroom practice, more research exploring contexts in which students of various racial, ethnic, and cultural backgrounds participate in digital experiences both inside and outside the classroom is needed. Furthermore, research exploring how students from diverse backgrounds perceive their own identities in relationship to their peers as well as how they participate with one another in digital interactions is recommended.

Socio-economic status. Finally, more research investigating students possessing various forms of social, cultural, and material capital in digital writing contexts is needed (Bourdieu, 1970; Grenfell et al., 2013) Particular questions recommended for further exploration include the following: What are the experiences of students who have had less exposure to digital technologies when they encounter digital writing environments in their classrooms? How do the background experiences of students, particularly in regards to their social and material capitals, benefit or exclude student participation in digital writing classrooms? Additionally, investigations into exploratory programs which are addressing both material and skills gap in digital participation are particularly timely and relevant.

Research needed on instructional decisions, teacher perceptions, and teacher practices. As this study was largely focused on the student experiences in a digital writing context, more research is needed to inform how the role of the teacher impacts the digital writing environment. In particular, more studies concerning how teachers perceive students in their classrooms and how these perceptions shape digital practices are recommended. Additionally, given the complex digital environment, more research on the role of teacher education and preparation for digital writing environments is particularly relevant. The following two sections further discuss these issues through the following: 1) research on the role of the teacher in the digital writing environment, and 2) research on the role of teaching training for the digital writing environment.

Research on the role of the teacher in digital writing environments. This study found peer interaction as a significant engagement factor for students participating in digital writing environments, influencing both their perceptions of themselves as writers

as well as their digital writing products. However, more research is needed to explore the role of the teacher in the digital writing environment. For example, as some have contended, the perceptions of the teacher (Ertmer, 2005; Gorder, 2008) regarding the use of out-of-school digital literacies could potentially hold the key for understanding why there is a disconnect between in-school and out-of-school digital literacies. Particular questions recommended for further exploration include the following: How do teachers make decisions governing the instructional practices of the digital writing environment? How do these instructional decisions impact student writing in digital writing environments? How do teacher perceptions of themselves and their students impact decisions in a digital writing environment? All of these questions are both timely and relevant to the field.

   Research on the role of teacher training for the digital writing environment. Not only is more research needed to understand the role of the teacher in the digital writing environment, but more research is needed to explore the ways in which teacher training (Jung, 2005; Nussbaum & Diaz, 2013) can support teachers in the digital writing contexts. Particularly, the following questions are recommended for further exploration: What models for teacher training in digital writing are currently being implemented? Which teacher-training models do teachers perceive as supportive? How do teacher-training models impact teacher instructional decisions in the digital writing environment? These questions address the need for more understanding concerning the training of teachers for digital writing contexts and address the recommendations for future research.

Chapter Summary

This study explored the digital writing practices of one classroom of fifth-grade boys. The three major findings of the study included a multiplicity of influences impacting digital literacy practices, the significance of peer interaction to the digital writing product, and the relationship of eight confidence features to student perceptions of their identities as writers. These findings were similar to the scholarly context to social learning theories and New Literacies studies as it emphasized the social nature of digital writing with a particularly salient finding of the significance of peer interaction within digital writing experiences. Although the findings are not generalizable as they represent a specific school context, they present significance through providing a detailed picture of one classroom of students who are currently using digital tools for writing inside and outside of the classroom. Drawing upon both the review of the literature and the findings of the study, recommendations for future research include continued exploration of the social nature of digital writing both as students experience it outside of their school contexts and within it.

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Example of Researcher's Expanded Field Observation Memo

10/21/13

(1:05)

As I walked into the classroom, the "C schedule" is flipped beside the door. I notice there are students in varying apparel from hooded sweatshirts and jackets to short sleeves and shorts. Some of the boys are wearing [polo] style shirts with colors with varying logos including a [Polo] horse, whale, and [Nike] swoosh. I also notice at the back of the room some of the boys are gathered by a table with what appears to be 7-8 bags of candy. As I am observing the students enter the room, one boy welcomes me back. Another boy tells me that he forgot to study for his test today.

On the board, I read the following:

Command, Shift 4

1) Study for test
2) Word Voyage
3) 15 sequencing/1 chronological order (hw)
4) Work on spelling 5 (work ahead)

At this point, the teacher enters the room wearing a [blue] long-sleeved shirt (which is [loose] fitting on her arms as it drapes and also gathers at the bottom.) She is wearing a {knee-length} skirt with a [blue] [checked] pattern and open-toed shoes with [black] straps and a [wooden] platform. She tells the students to open "Haiku" (here this is the learning management platform where the teacher uses the calendar feature in particular to embed links for the students to follow each day). She expresses to the students that she has a feeling that they were not prepared for the test due to the weekend (Here I wonder how she has gathered this information. How did previous classes perform? Was this her experience in past years?)

As the students are starting their computers and opening their browsers, the teacher tells me hello as she also sits and works at her computer. As the class is [informally] chatting, I [quickly] tell her that I will have to share some photographs from my son's birthday party from the break at a later point. Here students continuing to start their computers, and a few students ask questions like: "What if you don't finish in sixty minutes?" The teacher replies to this question, " You will." At this point, the teacher connects the projector screen and instructs students to focus their attention to the front of the room and says, "Shh" to the group. Before the teacher was able to begin her instructions, a man

with what appears to be a fifth grade boy gives a piece of chocolate to the teacher (Here the man appears to be the father or caregiver of the child, and I wonder if this is the same family that returned from Ireland of which the group had Skyped the following week.) Teacher says, "Is that for me?" and takes the chocolate and says a [few] more words before returning to the screen.

Here the teacher explains the grading scale of the test. (This portion of the explanation was a little confusing to me, but it appeared as if the teacher and/or the students were fairly familiar with this system of grading. It would be beneficial for me to follow-up on this aspect at a later point with the teacher.) Teacher says to group, "No different than last year, except you will get a number grade."

At this point, the teacher scrolls to each portion of the test to explain the directions to the students.

Section One:

Fill in the blank with the appropriate prepositional phrase. Teacher says, "Read carefully," before moving to the next section.

Section Two:

Usage of preposition in context. Here the teacher instructs the students that they will only use each of the ten prepositions listed once. Therefore, she told them they could get a piece of paper to cross them off as they encountered each one.

Section Three:

Identifying prepositional phrase in context. The teacher instructed the students to type them into the following box as she demonstrated how to expand the box.

Section Four:

Adjective and Adverb Phrases. The teacher instructed the students to type the phrase, which of the two types, and what it modified.

Here the teacher stopped to ask, "Any questions? Do you know how to follow the instructions that I've given?"

Section Five:

What type of prepositional phrase - clarifying prepositional phrase.

Here again the teacher pauses to ask questions, "Do you have to follow the directions?" "Do I need to read the directions?" "Eyeballs up here." "Every year that I give directions, that part is left off, and unfortunately, I have to count off." (Here I gathered that the

teacher was concerned that the students were not paying attention to her instructions. I wondered what made her cognizant of this aspect from this class in particular or if she was relying on past experiences.) (Also, this particular point of clarification dealt with students underlining the answer. At some points in my observations, I have noticed the teacher didn't seem to be as concerned with things like grammar, but sometimes there were particular points. I wondered what is the function of underlining. Was this solely for teacher ease or was it also to help students learn directions or another alternative?)

Section Six:

Adverb or Preposition. The teacher instructed students to write the same phrase in their constructed sentence, but they needed to modify it for both types of phrases.

Section Seven:

Knowledge of prepositions. True or False.

Section Eight:

Writing sentences to match sentence patterns. Here the teacher reminded students that they had seen this assignment in their travel journals as practice. (Here I wondered if this was the only time or assignment that the students had practiced this particular skill. I also remembered the teacher talking about how much the exam would be worth. I remembered that I needed to ask the teacher more about the grading procedures, particularly the point values of the assignments.)

At this point, the teacher asked the students how many of them felt prepared, and I observed about [two-thirds] of the hands in the classroom raised. The teacher replied to the students, "You should feel confident" followed by "I have a timer on this test. You should not be finished in ten minutes." Also the teacher told the students that they would be writing their reflections, and those that made below 70% would do the reflection. (Here I need to clarify with the teacher if all students had to do the reflections, or just the students who made below 70%). The teacher also showed the students the board of their assignments for the day if they finished the exam, and then she explained the sequencing assignment as one student asked, "What is sequencing?" The teacher explained sequencing was "where you put events in the order in which they occurred."

(1:20)

Here the teacher shows the actual assignment to the students on the overhead projector. She told them that this was supposed to help them with their ERB's (here I assume this is the school's data measurement assessment, but again, I need to ask more from the teacher). In the example shown to the class, the teacher asks the students to place the order of the events of brushing your teeth. After they checked their answer a picture

appeared of a car. The teacher then instructed the students to take a screenshot by clicking "Command, Shift, 4" and instructed them to drag and drop the picture into the folder. The teacher asked, "Do you know how to do that?" One student replied, "Uh, I think not." Here the teacher demonstrated the process and added about the assignment, "If you don't get it right, its okay, remember its for practice" and "It won't give you a grade like WPA online; remember last year when it graded it for you online? (Here I vaguely remember the teacher talking about this program from a previous conversation prior to the students, and, if my memory serves me correctly, WPA is a paid subscription service that provides computerized feedback for student writing.)

At this point, the students begin their tests. Teacher comes to me with chocolate candy (I think this is the same candy the boy and the man gave to the teacher earlier) and says, "Here is a nice little welcome-back treat" and gives the chocolate and laughs a [little] laugh. (Here I am struck by this idea of returning back to school as the student had welcomed me back prior to class, and now the teacher was doing the same. Also, the candy at the back of the room, and the teacher giving me candy made me wonder if perhaps there was an abundance of candy and/or treats upon the return to school)

Here the teacher tells the students to "Square your laptops" and "You can get up and get paper at the back, but "fish" (here I don't know exactly the term) your laptops if you do."

Also, the teacher addresses me and says, "Ms. Mitchell, you will see a different group come in because we are on a different schedule because of grandparent's day. The class is an hour long." (Here I wonder if this is perhaps the reason for the treats?)

(1:30)

Three boys on the table nearest me out of six have paper and are writing as they work on the test. A boy brings his laptop to the teacher and asked a question. Another students [whispers] in question in [low] tones that I couldn't hear, but the teacher says, "Just say o.k." Another student asks about capitalizing, while another student brings a question to the teachers attention and she replies, "Don't worry about that. It's probably two separate words." Then the teacher addresses the group and says, "Please know...the most you can get is probably 40 or 50 and the rest of the grade will come from me. So you won't know until later what your final results are." (Here this concept of immediate feedback is fascinating to me, especially with computerized assessment and the way this shapes classroom expectations and procedures.)

A student close to me lets air escape through his mouth (Perhaps a sigh? I wonder why?) Another student squints his eyes at the screen and mouths as if he is reading silently or recalling words from memory. I can also hear students typing at different paces.

(1:37)

Here the teacher gets up and a student asked if he can use the restroom, and the teacher also leaves the room (here I wasn't sure if she had initially planned to leave the room or if the student prompted her to do so). After she leaves, I hear a cough in the room which sound likes it originates from the far corner. I hear a whisper and then I hear a student (seemingly in the middle of the room) "Anyone know where Mrs. T went?" I then hear another whisper of which I cannot hear what is said, but then the boy sitting closest to me who had sighed earlier points to me and says, "Doesn't matter, we have someone in here." (Here I am reminded how my presence affects the dynamic of the classroom like the proverbial 'If a tree falls in the woods with nobody to hear it, does it make a sound?' adage. I wonder if the students had planned to cheat or something else had I not been there.)

As the teacher enters the room, two more students get up to ask questions. The teacher says you can ask questions from your seat, and the student replied, "I didn't know if it would give away answers."

Teacher says to group, "You have thirty more minutes."

(1:40)

Boy with [striped] socks pulled to his knee and a maroon hooded sweatshirt and [athletic, mess-like] shorts from the back/middle of the room raises his hand. I look at the teacher and notices she has a [bright, neon pink] cover, which appears to be an iPhone. She is looking at the screen and appears to be typing with her thumbs. When I look back to the student, his hand is no longer raised.

One student asks to go to the bathroom, while another asks a question which I could not hear, but I heard the teacher reply, "Five after two; keep going." (Here I assume the student was concerned with the time.) Here the boy [quickly] returns to his desk with a bit [brisker] of a pace than simply walking, but seemingly [slower] than jogging or running. (At any rate, I note the sense of urgency in his steps.) He hops over a bag as he rounds the corner to the desk, and it does not appear that his action disrupts the other students. (Here I wonder if the students are too engrossed in their own tests or if this is a familiar action of the students as it seemed oddly out of place to me, but did not seem to affect the other students' attention through audible laughter or comments.)

At this point, I hear a sneeze at the table closest to me, but I do not hear another student give a response. (Here I am fascinated by what triggers group response and what students ignore. I wonder again if the test and the time limit catches their attention so that their hearing is selectively screening stimuli for relevance.)

(1:45)

Another laptop is brought to the teacher. The teacher returns to her phone after answering, "Underline the prepositional phrase that represents spatial time." Here again, the boy with the striped socks asked a question to the teacher and she responds, "I will be fair, I usually look for application of skill and not all about spelling." Another student asked what to do f he had more than one prepositional phrase, and the teacher informed him to underline the appropriate one. At this point, the student who did not have to take the test because he had "tested out" was capturing screen shots for his assignment and brought his laptop to the teacher for help to place it into his folder online. Another student asked a question and the teacher responded, "I can't discuss that-that's a test question" and the asked, "Can you shut that door for me?" as the student returned to his desk.

Here the teacher addresses the group again and says, "Guys, I realize…" and explains that they would not be able to do the reflection until tomorrow when she had them all graded. A student replied, "We don't have you tomorrow." Teacher says, "I know, but it doesn't mean you still don't have homework." Here the teacher told the students that she would send them a reminder announcement on Haiku.

From across the room a student says, "Mrs. T. I don't know if I can finish all of the test."

(1:56)

Teacher, "Yes, you can you still have 15-20 minutes." Here the teacher then addresses the group and says, "When you finish you can begin your homework." A student then asked, "What does pending mean?" Teacher explained it meant that she would need to finish grading it later.

Teacher asked students to pull their computers forward so that they were not in view of each other. A student here asked, "How do you underline?" and [immediately] students responded "press 'command u'' and "There's that 'u' with the underline…" and [several] other comments replied at once that I could not hear. (Here I was struck by how the question prompted an almost communal-like response.)

(2:00)

Teacher walks around the room and answers questions from students and says, "There's about six minutes left. Students say things like, "What am I going to do?" and "I only have six questions left!" At this point, I can also start to hear voices outside and the slam of lockers.

(2:03)

Student asked, "What happens if you don't finish?"

Teacher replies, "Stay until you do."

Teacher at this point walks around the room and tells students what students can go.

(2:05)

Now I can see students are waiting at the door.

She tells the students who are leaving to "leave on silence, please" and instructs others to "stay until you finish."

Here a student asked a question to the teacher that I couldn't hear, and she responds, "You must have started before I asked you to. We didn't get started until 25 after." (Here I wonder if the time limit expired for the student.)

(2:08)

Four boys are left as teacher instructs new group to enter. She tells those boys to "enter on silence" and instructs boys still working to "move to back."

(As she instructs new group through giving similar instructions, I notice a few differences as I stay a little longer to see how the situation with the boys who did not finish is resolved.)

Teacher steps out of room and returns to say, "Guys in the back, you can stay until you've finished. Mrs. K said that would be fine." By 2:15 one of the four leaves, by 2:20 two others leave, and the boy with the time issue stood and waited for the teacher to assist him as she instructed him to stay and wait until she finished giving instructions to the next group.

(2:28)

"Here's what you are going to do. Take my laptop and finish on a piece of paper." (Here I wondered if she was unable to restore the time session, or if she distrusted the student to give answers by cheating. I didn't understand the rationale, and I thought that I would follow-up later as it was time to leave.)

Appendix B

Example of Researcher's Analytical Memos

9/23/13

As I continue to observe in the classroom, there are several areas of topic that I am noticing that I want to reflect upon and further refine in my research. First, I must remember that the purpose of my student is to explore the digital writing experiences as they impact students' perceptions of themselves as writers. To this end, I need to think about the way the classroom environment could possibly influence students' perceptions. For example, for the first time last week, I noticed the teacher calling a group of students to her table. I wondered at the time if those students needed extra or special help or if they were advanced and needed additional challenge. Later, the teacher told me that this was her "high" group and that in the past she had tried to reach these students by giving extra assignments without thinking about how they perceive the type of work they are doing. I remembered that one boy in class had asked if they "had" to test out of a unit if they had scored high. At the time, I had wondered why the boy would not want to participate in activities on his level. Was it perhaps a social or peer stigma? The teacher hypothesized that this was because the students were not motivated to do the extra work and that it was ultimately a "work ethic" issue. She said this year she was having them do activities that in the past, her students had begged to do more like freelance writing. She described these activities as more "application-based" than the activities that the other students would be doing. I wonder if this means that only the "high" performing students will think of themselves as writers? I wonder if they will truly think of this as a reward and enjoy this activity? This is something that I need to ask the teacher more about as far as which of my focal students is in which group, and I think I need to be careful to watch how the individualized instructional activities affects what students think of their writing abilities.

Additionally, I know that I cannot ignore other contextual factors such as the students' background experiences. This could include everything from their previous experiences with writing and technology in the home to the way they interact with their teachers and peers in the schools context. This is particularly something that I need to spend some time before the next interview reviewing each focal student's response as I didn't appear to get much information from them, and I want to follow-up on those responses in the next interview as well look more at what they say and how they interact in the classroom.

Appendix C

Student Interview Questions

Research Question #1: How do elementary boys participate in digital writing tasks?

Sub-question #1: What experiences do elementary boys bring with them into the classroom concerning the use of digital tools?

Corresponding Interview Questions:

i. How have you used technology at home or other places besides school?
ii. How have you used technology at school?
iii. What are your favorite experiences with digital writing tools? What are your least favorite experiences?

Sub-question #2: How do students individually interact with digital tools throughout digital writing tasks in the classroom?

Corresponding Interview Questions:

iv. If you had a friend outside of your classroom, what would you tell him or her about what you have been learning or doing when you are writing online?
v. What did you do when you first got online for this particular project?
vi. Can you walk me through exactly what you did online for this assignment? What were your favorite parts about this assignment? What were your least favorite parts about this assignment?

Sub-question #3: How do students interact with teachers, classmates, and others throughout digital writing tasks in the classroom?

Corresponding Interview Questions:

vii. Tell me a little bit about what you and your classmates do together online. How do you work together with your classmates when writing online?
viii. Tell me a little bit about what your teacher does while you are working online. How do you communicate or work with your teacher when you are writing online?

ix. Tell me a little bit more about how you

interact with parents or other people online. How do you communicate or work with people other than your classmates or your teacher online?

Research Question #2: What writing products do elementary boys create using digital tools?

> **Sub-question #1:** What are the characteristics of these writing products?
> > **Corresponding Interview Questions:**
> > > i. Here I have an example of something you have written in class. Can you describe this piece of writing for me?
> > > ii. What are your favorite parts about this piece of writing?
> > > iii. What are your least favorite parts about this piece of writing?

> **Sub-question #2**: How do digital writing tools shape these writing products?
> > **Corresponding Interview Questions:**
> > > iv. Can you tell me about the particular digital tools that were used to create this piece of writing?
> > > v. How did you use those tools to create this piece of writing?
> > > vi. If someone did not know how to use these digital tools, what would you tell them about how you can use them to create this piece of writing?

> **Sub-question #3**: How do these digital writing products differ from traditional pen and paper products?
> > **Corresponding Interview Questions:**
> > > vii. How do you think this piece of writing would look different if it were on pen and paper?
> > > viii. What do you think is different about using these digital tools to create this piece of writing than using paper and pencil to write?
> > > ix. What do you like to do better: writing with pen and paper or writing online? Can you tell me why?

Research Question #3: What are elementary boys' perceptions of themselves as writers when using digital tools?

> **Sub-question #1**: What perceptions does the student express concerning his abilities as a writer?
> > **Corresponding Interview Questions:**
> > > i. What do you think it means to be a writer?
> > > ii. What qualities of a writer do you have?
> > > iii. How have you used these qualities this semester to write in your classroom?
>
> **Sub-question #2**: What perceptions does the student express concerning their abilities as digital composers?
> > **Corresponding Interview Questions:**
> > > iv. What skills do you think are necessary to use digital writing tools?
> > > v. What qualities for using digital writing tools do you have?
> > > vi. How have you used these qualities this semester to write using digital tools in your classroom?
>
> **Sub-question #3:** What perceptions does the student express concerning the relevance for himself of using digital tools for writing?
> > **Corresponding Interview Questions:**
> > > vii. Why do you think people use technology to write?
> > > viii. What do you think writing would be like if you didn't have these digital tools?
> > > ix. How do you think you will you use the knowledge that you have learned about writing with these digital tools in your future?

Student Interview Schedule

Interview Key:
Student A - Pseudonym: Andrew
Student B - Pseudonym: Brandon
Student C - Pseudonym: Connor
Student D - Pseudonym: Dylan
Student E - Pseudonym: Ethan
Student F - Pseudonym: Franklin

Interview One Dates and Lengths:
Student A: September 9, 2013 (30 minutes, 48 seconds)
Student B: September 9, 2013 (19 minutes, 24 seconds)
Student C: September 9, 2013 (11 minutes, 06 seconds)
Student D: September 16, 2013 (30 minutes, 24 seconds)
Student E: September 16, 2013 (16 minutes, 06 seconds)
Student F: September 16, 2013 (17 minutes, 48 seconds)

Interview Two Dates and Lengths:
Student A: October 22, 2013 (14 minutes, 16 seconds)
Student B: October 30, 2013 (24 minutes, 50 seconds)
Student C: October 22, 2013 (11 minutes, 06 seconds)
Student D: October 2, 2013 (24 minutes, 28 seconds)
Student E: October 2, 2013 (13 minutes, 06 seconds)
Student F: October 2, 2013 (18 minutes, 28 seconds)

Interview Three Dates and Lengths
Student A: December 10, 2013 (30 minutes, 59 seconds)
Student B: December 3, 2013 (25 minutes, 46 seconds)
Student C: December 3, 2013 (21 minutes, 48 seconds)
Student D: December 3, 2013 (27 minutes, 10 seconds)
Student E: December 3, 2013 (21 minutes, 38 seconds)
Student F: December 3, 2013 (27 minutes, 40 seconds)

Appendix E

Example of Student Artifact Collection

Key:
Focal Student "Dylan"
Freelance Writing Draft Version
First Post: September 24, 2013 (1:37 pm)
Last Post: October 9, 2013 (8:49 am)

The genre from which I am writing is: Fiction

The contest in which I am participating is: Adventure Writers

The link to the writing contest is: http://adventurewrite.com/kids/contest.html

The skill(s) from my unit test in which I still need practice is:

> **Brainstorm** ideas here (the box will get larger if you need more space): Setting:
> Frightening night. Characters: Me, man with no head, vampire, clown, shark with legs
> and arms, ogre, black widow. Title: The Frightening Night in Scaryville.

Draft your ideas here:

<u>The Frightening Night in Scaryville</u>

So there I was, reading my great uncle's diary in my bed. This is what I read, "One
Halloween night I was in the neighborhood of Scaryville. I was about to enter the sc-"

"Honey," my mom said, "time for breakfast."

"I'm coming Mom," I said to her. I was in the middle of reading my great uncle's diary
that he gave to me before he died. I was reading about what my great uncle was telling
me when I visited him in the hospital. On my way downstairs, I was thinking about what
I read this morning. Where was he going, I thought to myself. After I had my breakfast
burrito, I went to school. All that day, I was thinking about his diary. Maybe, he was
about to enter the Scaddadle Taco House, or maybe it wasn't a taco house, maybe it was
a Chinese restaurant, but I wasn't going to stop reading till I find out.

After school, I immediately did my homework, and when I finished it, I went to my bed and read the part where I left off. I read, "I was about to enter the scariest house in the neighborhood. It was all decorated for Halloween. When I walked inside the house, there were live monsters. I was as scared as a little boy that was afraid of the dark." When I finished reading the diary, I went to sleep.

Two months later, it was Halloween! My costume was dead Elvis. I started Trick or Treating at 6:00. Not knowing where I was going, I entered Scaryville. I found the most horrifying house in Scaryville and it was as frightening as Friday the 13th. When I walked in, I saw something that would scar me for my entire life.

I saw a headless man on a headless horse. They were gushing out blood like Niagara Falls. Then I saw a clown that looked like someone who had just finished throwing up, and that means he was revolting. After that, I saw the biggest black widow that looked like a giant on a pair of 18 foot stilts. It looked like the cast from Supernatural, but it was for real this time.

All of them tried to kill me, but before they could, the house grew legs and arms and ran away. Believe it or not, the monsters and I were still in the moving house of doom. The clown still tried to kill me, but when he actually saw my costume, he ran away and told all the other monsters to not kill me because I was the "King of Rock." Then they all said, "Your wish is our command. We will do anything for you."

As soon as they finished talking I asked them, "Are there any more scary houses on this street?"

"Yes there is," they replied, "it is right next door to us. We will take you there right now." As soon as the house went to its original spot, they took me to the other house. It looked like a castle that got destroyed except the house's roof was still on. When I walked inside the house, I saw more frightening monsters. I saw an ogre with a stake in his hand. It looked as if it was a giant ball of mucus. There was also a vampire with teeth of the great white shark, and surprisingly, there was a great white shark with legs and arms. Now that was the weirdest thing I saw today.

They all were astonished that the "King of Rock" was in their house. When they saw me they said, "Your wish is our comma-"

"He is ours," the first monsters that I met yelled, "We found him first so that makes him ours! Now shut up!"

"You can't tell us to shut up," the shark replied in a very loud voice that would make your eardrums blow out of your head, "but if we are going to have an argument, then we will have a war!"

"So be it," the clown yelled, and the clown and the rest of them took me back to their house. When we got there, we found some weapons. There was a cannon from World

War 1! The clown said that that was the cannon that he used before he retired and became a clown. The next weapons that we found were swords and shields. We also found pistols. When we finished finding our weapons, we went to their house to start the battle with a surprise attack.

When we got to the house, we knocked down the door and started to fight. The shark had so many grenades that you couldn't even count them. The ogre used his stake, and the vampire used his teeth, which was obvious because he was a vampire, I mean come on. The clown tried to use his cannon, but the only thing that the cannon did was destroy the walls, (or whatever the house still had). The only weapons that worked so far were the sword and the rifle, but the spider, (even though he didn't have a weapon), helped a lot with the traps that we used to try and catch them. The battle was brutal, but we still never gave up.

When the spider finally caught the shark, the headless man on the headless horse killed the shark with the sword. The ogre got so mad at the headless man that he broke off one of the legs of the black widow, but at least the spider still had seven legs. The spider fought back and ate the ogre whole. The last monster that we had to kill was the vampire. That was easy enough, all we had to do was take off the roof of the house. The clown used the cannon to destroy the roof.
As soon as the vampire saw the sun, he disintegrated. The clown yelled with joy, "We won!"

"Yay," the monsters and I screamed. After the battle, they took me home. When I got home, I took off my costume. It felt great to finally be home. I went to my mom's room and told her everything that happened to me. Then I looked out my window, and all the monsters, (even the ones that "died"), took their costumes off and went home. I saw nine people go out of the spider and seven of them were holding stilts, but for some odd reason, the clown was the only one who didn't take off his costume.

Appendix F

IRB Approval Letter

The University of Memphis Institutional Review Board, FWA00006815, has reviewed and approved your submission in accordance with all applicable statuses and regulations as well as ethical principles.

PI NAME: Jessica Mitchell
PROJECT TITLE: Writing in the digital age: A case study of elementary boys
FACULTY ADVISOR NAME (if applicable): Rebecca Anderson
IRB ID: #2736
APPROVAL DATE: 6/14/2013
EXPIRATION DATE:
LEVEL OF REVIEW: Full Board

Please Note: Modifications do not extend the expiration of the original approval

Approval of this project is given with the following obligations:

1. If this IRB approval has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human consent form(s) and recruiting material(s) are no longer valid and any research activities involving human subjects must stop.

2. When the project is finished or terminated, a completion form must be completed and sent to the board.

3. No change may be made in the approved protocol without prior board approval, whether the approved protocol was reviewed at the Exempt, Exedited or Full Board level.

4. Exempt approval are considered to have no expiration date and no further review is necessary unless the protocol needs modification.
Approval of this project is given with the following special obligations:

Thank you,
Ronnie Priest, PhD
Institutional Review Board Chair
The University of Memphis.

Note: Review outcomes will be communicated to the email address on file. This email should be considered an official communication from the UM IRB. Consent Forms are no longer being stamped as well. Please contact the IRB at IRB@memphis.edu if a letter on IRB letterhead is required.

Appendix G

Parental Consent Form

**University of Memphis Institutional Review Board
Parental Informed Consent Document for Research**

Principal Investigator: Jessica S. Mitchell
Title of Study: Writing in the digital age: A case study of elementary boys
Institution: The University of Memphis

Name of student participant: _____ Age: _____

The following information is provided to inform you about the research project and your child's participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given below. You will be given an opportunity to ask questions, and your questions will be answered. Also, you will be given a copy of this consent form.

Your child's participation in this research study is voluntary. He is also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study.

For additional information about giving consent or your rights as a participant in this study, please feel free to contact the IRB at 901-678-2533.

Purpose of the study:

Your child is being asked to participate in a research study because the purpose of this study is to explore the digital writing experiences of one classroom of elementary student boys and its impact on the students' perceptions of themselves as writers. Your child is currently experiencing digital writing experiences in the classroom; thus, the researcher is inviting him to participate in the study to learn more about his perceptions of these experiences.

Description of procedures to be followed and approximate duration of the study:

The study will last over the next 15 weeks. Copies of classroom artifacts from your child will be collected; however, your child's name will be removed from these documents. Additionally, your child may be invited to participate in an interview to discuss his perceptions of writing with digital tools in the classroom. This selection process is random, and, if your child is selected, he will have the opportunity to decide whether or not he would like to participate by signing an additional interview consent form prior to the interview. If your child is selected for interviews, (3)

twenty-thirty minute interviews will be conducted throughout the semester to understand your child's experiences with each stage of the writing process directly after it occurs in the classroom.

Expected costs:

None.

Description of the discomforts, inconveniences, and/or possible risks that can be reasonably expected as a result of participation in this study:

Your child may feel uncomfortable sharing his writing products or discussing his viewpoints of himself as a writer. However, you or your child may discontinue the study at any point. Also, the student will receive a pseudonym for any data collected from him.

Compensation in case of study-related injury:

The University of Memphis does not have a fund set aside for compensation in the case of study related injury.

Anticipated benefits from this study:

Potential benefits to your child include the opportunity to voice his or her opinions about his viewpoints and also to learn more about the process and value of conducting research.

The potential benefit to science and humankind that may result from this study is that other teachers will learn how students use technology, giving them an opportunity to improve their own teaching.

Alternative treatments available:

Not applicable to this study.

Compensation for participation:

To thank your child for his contribution, the researcher will share the findings of the research project so he will understand his contribution to the work.

Circumstances under which the Principal Investigator may withdraw you from study participation:

There are none.

What happens if you choose to withdraw from study participation?

If at any time you would like your child to stop participating in the study, you may inform the teacher or anyone listed below and your child's contributions will be removed from the data.

Contact Information.

If you should have any questions about this research study or possible injury, please feel free to contact the lead investigator, Jessica Mitchell, at (205-454-7381) or her academic advisor overseeing her work, Dr. Rebecca S. Anderson at (901-678-3977). Questions regarding the research subjects' rights, the Chair of the Institutional Review Board for the Protection of Human Subjects at the University of Memphis should be contacted at (901-678-2533).

Confidentiality.

All efforts, within the limits allowed by, will be made to keep the personal information in your child's research record private but total privacy cannot be promised. For publication purposes, your child will be assigned a pseudonym, meaning their name will not be used. Your information may be shared with the University of Memphis or the government, such as the University of Memphis Institutional Review Board, Federal Government's Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

STATEMENT BY PERSON AGREEING FOR CONSENT TO PARTICIPATE IN THIS STUDY:

I have read this informed consent document and the material contained in it has been explained to me verbally. I understand each part of the document, all my questions have been answered, and I give permission for my child to participate in the study.

_____

Signature of Parent   Printed Name   Date

Consent Obtained By:

_____

Signature   Printed Name and Title   Date

Appendix H

Student Assent Form

University of Memphis Institutional Review Board
Assent Document for Research Study

Principal Investigator: Jessica S. Mitchell
Title of Study: Writing in the digital age: A case study of elementary boys
Institution: The University of Memphis

This assent document applies to: <u>students ages 10-12</u>

Name of participant _____Age_____

Below are the answers to some of the questions you may have. If you have any questions about what is written below or have any other questions about this research, please ask them. You will be given a copy of this consent form.

Why are you being asked to take part in this research?

The purpose of this study is to explore your thoughts about the use of digital tools in the elementary writing classroom. Since you are experiencing this currently in your classroom, you are being asked to participate.

What will I do and how long will it take?

The study will last this semester for 15 weeks total. The researcher will collect copies of your classroom assignments, and you may also be invited to participate in an interview to talk about your writing as well. If so, you will be asked to sign an additional interview consent form.

Do I have to be in this research study and can I stop if I want to?

Your participation is voluntary and you can stop at any time.

Could it make me sick [or sicker]?

No.

Will anyone know that I am in this research study?

All efforts, within reason, will be made to keep the data in your research record private but we cannot promise total privacy. For publication purposes, you will be assigned a pseudonym, meaning your name will not be used. The data we collect on

you may be shared with others (for example, it may be shared with the College of Education, or if you or someone else is in danger or if we have to do so by law).

How will this research help me or other people?

a) Potential benefits to you include the opportunity to voice your opinions about how you view yourself as a writer.
b) The potential benefit to science and humankind that may result from this study is that other teachers will learn how students use technology, giving them an opportunity to improve their own teaching.

Can I do something else instead of this research?

This is not applicable to this study.

Who do I talk to if I have questions?

If you should have any questions about this research study or possible injury, please feel free to contact investigator, Jessica Mitchell at 205-454-7381, or her academic advisor, Dr. Rebecca Anderson at 901-678-3977. Questions regarding the research subjects' rights, the Chair of the Institutional Review Board for the Protection of Human Subjects should be contacted at 678-2533.

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY:

I have read this informed consent document and the material contained in it has been explained to me verbally. I understand each part of the document, all my questions have been answered, and I freely and voluntarily choose to participate in this study.

_____
Signature of Student Volunteer Participant   Printed Name   Date

Consent Obtained By:

_____
Signature   Printed Name and Title   Date

Appendix I

Interview Assent Form

University of Memphis Institutional Review Board
Informed Consent Document for Interviews

Principal Investigator: Jessica S. Mitchell
Title of Study: Writing in the digital age: A case study of elementary boys
Institution: The University of Memphis

Name of participant: _____ Age: _____

The following information is provided to inform you about the interview and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this interview and the information given below. You will be given an opportunity to ask questions, and your questions will be answered. Also, you will be given a copy of this consent form. Your participation is voluntary and you are also free to withdraw at any time.

You are being asked to participate in this interview because of your experiences with technology and writing. Your responses will be audio taped. These audiotapes will be kept until transcription is completed and then erased.

This interview is designed to last 20-30 minutes. You may get emotional when sharing your experiences. We can pause to rest at any time during the interview or stop if you choose to do so. However, this is an opportunity to share your story, helping to preserve the past and hopefully enjoy yourself as well. To thank you for your contribution, I will share the findings of the project with you so that you will understand your contribution to the work.

When this material becomes available, it may be read, quoted, or cited for educational or scholarly purposes. All efforts, within reason, will be made to keep the personal information in your research record private, but total privacy cannot be promised. For publication purposes, you will be assigned a pseudonym, meaning your name will not be used. Your information may be shared with the University of Memphis Institutional Review Board or the Office of Human Research Protections if you or someone else is in danger or if we are required to do so by law. U of M does not have a fund set aside for compensation in the case of study related injury.

If you should have any questions about this interview please feel free to contact the lead investigator, Jessica Mitchell at 205-454-7381, or her academic advisor, Dr. Rebecca S. Anderson, at 901-678-3977. Questions regarding the research subjects' rights, the Chair of the Institutional Review Board for the Protection of Human Subjects should be contacted at 678-2533.

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS INTERVIEW:

I have read this informed consent document and the material contained in it has been explained to me verbally. I understand each part of the document, all my questions have been answered, and I freely and voluntarily choose to participate in this interview.

Signature of Interviewee   Printed Name   Date

Consent Obtained By:

Signature of Interviewer   Printed Name and Title   Date