A CASE STUDY EXPLORING THE "NEW LITERACIES" DURING A FIFTH-GRADE
ELECTRONIC READING WORKSHOP

by

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B.A., Kansas State University, 1992
B.S., Kansas State University, 1999
M.S., Kansas State University, 2003

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
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Abstract

In today's classrooms, literacy instruction is undergoing tremendous transformations as new technologies demand new literacies. The purpose of this qualitative case study was to examine how integration of technology supports the emergence of new literacies, within the context of an electronic reading workshop in a fifth-grade classroom.

The electronic reading workshop provided students multiple opportunities to response to e-books, both as readers and technology users. First, e-book tools allowed the participants to engage in a spontaneous response process as the plot unfolded. Second, students responded to teacher-constructed prompts in electronic literature response journals. Analysis of the journals revealed responses from three broad categories: 1) personal meaning making, 2) character and plot involvement, and 3) literary criticism.

Third, students engaged in conversational response while participating in asynchronous message board discussions. The students composed and posted their own response prompts. Analysis of the message board transcripts suggested five types of student-constructed prompts: 1) experiential prompts, 2) aesthetic prompts 3) cognitive prompts, 4) interpretive prompts, and 5) clarification prompts.

Virtual guide response projects provided a fourth opportunity for response to e-books. Working in groups, students created virtual guides to the literature in which they visually represented their personal interpretations of the e-books. The virtual guides were published as multi-modal PowerPoint presentations including sounds, images, animations, and hyperlinks. As

students conceptualized, researched, published and presented their virtual guides to the literature, they used new literacies to fully exploit the potential of the available technologies.

The electronic reading workshop provided a learning environment in which students interacted with each other as they made sense of and accessed the available information and communication technologies.   In particular, socially constructed learning occurred through threaded discussions on an electronic message board and development of virtual guide response projects.

Educators must be responsive to today's learners. This study illuminated the expanded possibilities for integrating technology and literacy within the context of an electronic reading workshop. Findings of the study suggest technology integration supports the emergence of new literacies, while the new literacies support students' utilization of available technologies.

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CHAPTER 1 - Introduction

As a sixth-grade teacher on the eve of the twenty-first century, I constantly asked myself how to best prepare my students for a world that is rapidly changing through new technologies and "new literacies." Teaching in a climate where literacy education had become increasingly influenced by the *No Child Left Behind Act* (U.S. Department of Education, 2001) with much attention placed on reading assessment and comprehension instruction, I searched for alternative ways to engage and motivate my students while preparing them for foundational literacies of paper and pencil, as well as the emerging new literacies that will define their futures. Inspired by what I had recently learned in a graduate course in which we had paired nonfiction and fiction literature with compatible websites, I embarked on a semester-long project involving integration of technology and children's nonfiction literature. The sixth graders read books, conducted research on the Internet, engaged in interactive online activities, and produced impressive multimedia projects while socially constructing knowledge within the new literacies. Reflecting upon the success of this project, I realized that the integration of technology had provided a foundation for student motivation and engagement along with increased literacy skills.

Encouraged by these insights, I began reading works like *Linking Literacy and Technology: A Guide for K-8 Classrooms* (Wepner, Valmont, & Thurlow, 2000), *Teaching with the Internet: Lessons from the Classroom* (Leu, & Leu, 2000); and *Handbook of Literacy and Technology: Transformation in a Post-Typographic World* (Reinking, McKenna, Labbo, & Keiffer, 1998). Motivated by these respected works of research, I gradually changed the way I viewed and taught literacy in my own classroom.

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While gaining skills and confidence in the field of instructional technology and the new literacies, I began sharing my newfound knowledge as a summer technology institute instructor. For three summers, I worked closely with teachers from diverse backgrounds with a wide range of skills, but with the common goal of improving their use of instructional technologies. Another commonality, it appeared, was their lack of understanding of integrating the new literacies and information and communication technologies (ICTs) into current instructional programs. Regardless of their own technological proficiencies, most teachers I encountered tended to view technology as an additional curricular area, rather than a vehicle through which curricular content could be taught and learned.

Over the past two years as a graduate teaching assistant at Kansas State University, my quest to support teachers in effective use of technology within the literacy curriculum has remained a focus. While teaching and supervising undergraduate students, I encourage them to integrate technology into their language-based lessons. However, much like the experienced teachers that I encountered during the summer institutes, the preservice teachers generally lack the notion of a truly integrated literacy curriculum although they acknowledge the need for using technology. To them, each technology-related activity appears an isolated incident with little connection to their literacy lessons.

As a result of rapidly emerging information and communication technologies (ICTs), students and teachers alike need new skills and new literacies. (Leu, Mallette, Karchmer, & Kara Soteriou, 2005). As a result, it becomes important to understand and foster the contemporary skills in reading, writing, and communication that these ICTs demand. Leu, et al. (2005) argued that the continuously emerging ICTs are more than a

technology issue – they are an important literacy issue – and it is essential to consider how to integrate these new literacies into the current language arts curriculum. Furthermore, as literacy educators, we have a responsibility to provide leadership in this area.

To help teachers who are hesitant to embrace technology or unfamiliar with integrating technology into their current curriculum, I feel compelled to explore ways in which new literacies can be intertwined with tried and true literacy practices. In this study, I present a framework for conceptualizing and integrating an electronic reading workshop in which aspects of technology are integrated within all components of a traditional reading workshop. Results from this study identify ways technology integration supports the emergence of new literacies within the electronic reading workshop in a fifth-grade classroom.

Overview of the Issues

In today's classrooms, teachers and students are faced with remarkable opportunities and challenges as new technologies provide exhilarating avenues for changing and enhancing literacy instruction. It is clear that the momentous growth and accessibility of instructional technology have significantly affected our schools and the daily lives of both teachers and students (Labbo, 1996; Leu, 2002; Valmont, & Wepner, 2000; Reinking, 1998). Reading instruction, along with the broader notion of literacy instruction, are undergoing tremendous transformations as new technologies demand new literacy skills to effectively employ their potentials.

The International Society for Technology in Education (ISTE) provides guidelines for students' and teachers' technology performances through the National Educational Technology Standards (NETS) for both students and teachers (see Appendixes A and B). Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students use the new literacies to achieve success in learning, communication, and life skills. Building on the NETS for Students, the NETS for Teachers define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings for inservice and preservice teachers.

As students and teachers turn to the Internet and other information and communication technologies, literacy practices are being redefined. Due to their inherent characteristic of change, there is no precise definition of what the "new literacies" are (Leu, 2000, 2002; Reinking 1998; Street, 2003). This makes theory development and systematic investigation difficult, if not impossible. In order to move forward in this area, Leu, Kinzer, Coiro, and Cammack (2004) have begun to conceptualize the following definition of the new literacies:

> The new literacies of the Internet and other ICTs include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICTs to identify important questions, locate information, critically evaluate the usefulness of that information,

synthesize information to answer those questions, and then communicate

the answers to others. (p. 1572)

In this study, I seek to learn how integration of technology supports the

emergence of "new literacies" within a fifth-grade classroom in which instruction

in literacy and technology are integrated through an electronic reading workshop.

The New Literacies

The new literacies change continuously as technology invites new possibilities for

communication and utilization of information (Coiro, 2003; International Reading

Association, 2002; Kinzer & Leander, 2003; Leu, et al., 2004). The International

Reading Association (2002) issued a position statement recognizing that current reading

and writing instruction are influenced by change in even more profound ways due to the

arrival of the new literacies. For example, the majority of this year's high-school

graduates began their schooling with the traditional literacies of paper, pencil, and print

texts. They are now, however, finding themselves familiar with new literacies required

by a wide variety of ICTs including word processors, World Wide Web browsers, e-mail,

chat rooms, Web logs (blogs), multi-modal texts, and presentation software. Because of

rapid and ongoing changes in technology, it is likely that students who are just entering

elementary schools will face even more profound transformations as they journey

through an ever-changing literacy landscape (International Reading Association, 2002;

Labbo & Reinking, 1999; Leu, et al., 2004).

Student Engagement and Social Interaction

Technology holds the potential for increasing student engagement in literacy learning. In a study of reading experts (Flippo, 2001), there was undeniable agreement on the importance of literacy motivation or engagement with text. The study revealed that access to reading materials, opportunities for self-selection, and social interactions about the text foster reading engagement among students. Technology may potentially enhance these three classroom characteristics in important ways.

Access to reading materials. The Internet has drastically increased access for students and teachers to informational texts, providing students opportunities to explore topics of interest with a touch of a button (Gambrell, 2006). Technology also supports electronic books. These appear in several formats ranging from toy-inspired books, online stories (accessed online), CD-ROM storybooks, electronic textbooks, or downloadable e-books. Studies of young children's interactions with electronic books imply that reading motivation was higher after children interacted with multi-modal texts, especially among children with reading difficulties (Glaskow, 1996/1997). Fasimpaur (2004) proposed that students find e-books to be "a new and unique medium" (p. 12) and, therefore, often read more when they have access to e-books.

Opportunities for self-selection. An important feature of technology in the literacy classroom is the opportunity for choice and self-selection of reading materials. Access to the Internet has dramatically increased the prospect for self-selection of topics, texts, and types of reading materials. When students have access to reading materials of interest, motivation and reading engagement are high (Gambrell, 2006).

Social interactions about text. Flippo's (2001) study revealed that reading

experts viewed the role of social interaction in reading as essential. Specifically, there

was agreement that students should be encouraged to communicate about different kinds

of reading in a variety of ways. Internet technologies have fostered innovative techniques

for students to socially interact with others about texts. Online discussions (e-mail, chat

rooms, Web logs, Instant Messenger programs, and threaded discussions) are becoming

more common in elementary/middle schools as a means to encourage communication and

learner engagement (Hamilton, 2006; Wolsey, 2004). Results of early studies support

that online literature discussions have great potential for fostering literacy skills,

strengthening communication, and building a sense of community (Carico, Logan, &

Labbo, 2004; Grisham & Wolsey 2006; Wolsey, 2004).

New Digital Divides

The original idea of a "digital divide," a term first coined by Lloyd Stittett, former

president of the Markle Foundation, refers to a discrepancy in access to technology

resources among socioeconomic groups. Recent studies find that while children from all

income levels have greatly increased their Internet use, low-income students still lag

behind other students in both home and school access (Corporation for Public

Broadcasting, 2003). Recently, Hobbs (2006) argued that a different sort of digital divide

has emerged between teachers of different disciplines. Reading and language arts

teachers, on one hand, tend to prefer traditional print texts and more traditional literacies.

On the other hand, mathematics and science teachers seem to have adopted instructional

technologies to a greater extent. Hobbs (2006) hypothesized that literacy educators may

be reluctant to embrace technology because they view technology as a threat to the

tradition of print. They may also view the written expression of e-mail or online

discussions as suspicious and informal, or they may associate technology with popular

culture.

Current researchers also identify cultural and linguistic divides that inadvertently

limit the benefits of technology to English language learners or culturally diverse families

whose values have not embraced technology (Au, 2006; Bernhardt, 2006; Edwards,

2006). In contrast, Au (2006) found that technology can be used to close the literacy

achievement gap between students of diverse backgrounds and their mainstream peers if

employed effectively.

> Technology projects seem to work best when they present students of
>
> diverse backgrounds with challenging, generative tasks that require them
>
> to read, write, and think in new and demanding ways. The time, energy,
>
> and thought students devote to participate effectively in these projects
>
> suggest that they are readily able to take advantage of constructivist forms
>
> of instruction that give them the knowledge and strategies needed to
>
> engage with new forms of literacy and electronic media. (p. 366)

Leu, et al. (2004) suggested that social learning plays an important role in the

exchange of new skills and strategies needed to interact with the new technologies. Each

student, regardless of background, can contribute something unique and useful to others

in a community of literacy learners. Research needs to address how the implementation

of an electronic reading workshop may contribute to closing new digital divides as

literacy teachers embrace new literacies and engage students in meaningful literacy practices through socially constructed learning.

Statement of the Problem

While a precise definition of the new literacies may never be possible due to their important characteristic of change, teachers and researchers agree that today's students need and deserve the skills and strategies to successfully function in a world of rapidly evolving information and communication technologies (Leu, 2000, 2002; Reinking 1998; Street, 2003). Zammit and Downes (2002) argued that literacy "needs to be recognized as a social activity embedded within larger practices and changing technologies," (p. 24) rather than viewed as just a set of cognitive abilities or skills such as alphabetic script on paper. It is further emphasized that being literate in today's society means being multiliterate. Contemporary views of literacy must include a more complex set of texts and technologies. Reading and writing in a digital environment are very different from reading and writing paper-based texts only (Labbo & Reinking, 1999; Leu & Kinzer, 2000; Turbill & Murray, 2006).

Hobbs (2006) reported that a growing number of K-12 educators are using technologies to bring students access to online texts and other multimedia resources to help them build new literacy skills. According to the International Reading Association (2002), educators have a responsibility to effectively integrate technologies and new literacies into the current language curriculum in order to prepare students for the literacy futures they deserve. Furthermore, all students have the right to "teachers who are skilled in the effective use of ICT for teaching and learning" and "a literacy curriculum that

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integrates the new literacies of ICT into instructional programs" (International Reading Association, 2002, n.p.). However, in reality, there are relatively few instances in which teachers have actualized such effective use and implementation of the new literacies (McKenna, 2006). Researchers have found that hardware and software are frequently unused, confined to lab settings, or used to occupy children in mindless activity. Literacy instructors have been slow to embrace technology and integrate it into their instruction in meaningful ways (McKenna, 2006; Pflaum, 2004).

According to Turbill and Murray (2006), teachers should operate within the paradigm that "literacy is a set of skills to be mastered and technology is a tool to be used to master those skills" (p. 93). Even though many literacy teachers are skilled in using technology in their own personal and professional lives, they seem reluctant to integrate technology into their instructional practices. In many K-8 classrooms, teachers still view technology as something for students to "play" with during "free time" or use as a "reward" after their real "work" has been completed (Turbill & Murray, 2006, p. 93). Conceptualization and implementation of an electronic reading workshop in a fifth-grade classroom may provide a framework for teachers who wish to enhance their current literacy curriculum by integrating meaningful aspects of technology.

Purpose of the Study

The purpose of this study is to identify and describe ways integration of technology supports the emergence of new literacies within a reading workshop in a fifth-grade classroom. To make literacy education more reactive to today's learners, researchers and educators recognize the need to act in response to the new literacies and

multi-modal technologies used both within and outside the classroom (Hobbs, 2006).

Leu, et al. (2004) emphasized the importance of socially constructed learning within the

new literacies and the need for teachers to orchestrate learning environments in which

students can work collaboratively while participating in complex contexts for the new

literacies. Building on the concept of a traditional reading workshop (Atwell, 1987,

1998; Calkins 2001, Serafini, 2001), in which learning is socially constructed as students

explore and discuss literature with their peers, this study considers the conception of an

electronic reading workshop (ERW) by integrating aspects of technology into the

traditional reading workshop. Results of the study may identify the new literacies

students employ within the electronic reading workshop.

In this qualitative case study, I observe students as they engage in the new literacy

practices while reading electronic books and responding to the text using e-book tools,

writing in electronic response journals, participating in online literature discussions, and

engaging in technology-based response projects.   The study involves analysis of

electronic literature response journals, transcripts of online literature conversations, and

technology-based response projects in search of emerging trends within the new

literacies. It is anticipated that the findings from this study will provide valuable

information for teachers who wish to embed the new literacies and instructional

technologies within already meaningful literacy practices.

Research Questions

Teachers and researchers generally recognize that current reading and writing instruction is profoundly influenced by change due to the arrival of the new literacies (International Reading Association, 2002). Yet, there are relatively few instances in which teachers have actualized effective use and implementation of the new literacies within current literacy practices (McKenna, 2006). Researchers and reading experts agree that motivation is a key ingredient in engaging readers and that technology has the potential for motivating students (Flippo, 2001; Gambrell, 2006). Furthermore, researchers acknowledge that the continuous infiltration of technologies has the potential to narrow emerging aspects of digital divides if used effectively within the literacy classroom (Au, 2006; Bernhardt, 2006; Edwards, 2006; Hobbs, 2006). The following questions will guide the research and data analysis for this study:

How does the integration of technology within the context of a fifth-grade electronic reading workshop support the emergence of new literacies?

1. How do fifth-grade students interact with and perceive literature (e-books) in an electronic reading workshop?

2. What types of reader response emerge within an electronic reading workshop in a fifth-grade classroom?

3. How does an electronic reading workshop support socially constructed learning in a fifth-grade classroom?

Significance of the Study

This study seeks to provide valuable information for teachers and students who wish to embed new literacies and instructional technologies within already meaningful literacy practices. The rapid infiltration of technology continues to significantly affect how teachers and students view and learn literacy (Labbo, 1996; Leu, 2002; Reinking, 1998). "Traditional definitions of reading instruction will be insufficient if we seek to provide children with the futures they deserve" (Leu, 2002, p. 310). However, traditional elements of literacy will continue to be essential within the new literacies.

Leu and Kinzer (2000) argued that the ability to read text will become even more important because it allows learners to access information quickly and efficiently in a complex, networked learning environment. The ability to write text will also take on new significance as written text can be easily stored, organized, and published to generate new knowledge. In other words, the new literacies do not replace but enhance and extend established literacy practices. As reading and writing abilities become increasingly important in the new literacies, they will also undergo significant changes. Today's students are more engaged with multi-modal texts as they make reading a more interactive and creative process (Bearne, 2005). When used effectively, technology has the potential to open doors to teaching and learning literacy skills in ways not available from traditional print sources (Valmont & Wepner, 2000).

Teachers and researchers recognize the need to respond to the changing nature of the new literacies in order to make education more responsive to today's learners (Hobbs, 2006). Leu, et al. (2004) emphasized the importance of socially constructed learning within the new literacies and the need for teachers to orchestrate learning environments in

which students can work collaboratively while engaging in meaningful learning contexts in which the new literacies apply. Embedding aspects of technology into a traditional reading workshop may provide students with the opportunity to engage with new literacies while emphasizing valued traditional literacies of reading and responding to text. This study has the potential to contribute to the knowledge of students' literacy learning as it relates to the integration of traditional and new literacies.

Limitations of the Study

There are several limitations identified in this study. First, the sample size is small and limited to the context of one fifth-grade classroom. Data collection and analysis focus on only ten students which were purposefully selected to yield the most information for the research questions. Although unique in their own ways, the participating students are all considered highly proficient readers and familiar with technology. This study may help build knowledge and understanding of students' interaction and engagement with new literacies within an electronic reading workshop, but is not intended to produce results which can be applied universally.

The inherent logistics of technology use and accessibility within an elementary-school setting contribute to several limitations. The school houses a computer lab as well as a mobile cart with laptops. Student engagement in all components of the electronic reading workshop is influenced by the specific technologies available within the school, resulting in products or findings that may not always be applicable to other schools and contexts.

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Although a key component of a reading workshop is choice (Serafini, 2001) and an important feature of technology in the literacy classroom is the opportunity for self-selection of reading materials (Gambrell, 2006), the e-books used in this study are teacher selected. The selection of e-books are rather limited due to the restricted availability of appropriate e-book titles, as well as the logistics of downloading, storing, and accessing these titles on the school's computers.

Researcher bias is another limitation in this study. I am an avid proponent of technology with extensive classroom experience involving instructional technologies and the new literacies. To minimize the effects of the researcher's bias, the delivery of instruction to the fifth-grade students became the primary responsibility of the classroom teacher. Furthermore, weekly meetings with the classroom teacher throughout the duration of the study provided an additional perspective on the study and its progress in the classroom.

Definition of Terms

The following terms have been defined for the purpose of clarity in the presentation of this study.

Asynchronous discussion – Electronic discussion where postings/threads accumulate over time (Grisham & Wolsey, 2006).

Blog (Web log) – A website in which journal entries are posted on a regular basis; commonly consists of hypertext, digital images, and hyperlinks (Kajder & Bull, 2004).

Digital divide – Economic, cultural, linguistic, or attitudinal divides that inadvertently limit the access and/or benefits of technology (McKenna, 2006).

Dimensions of literacy – Interrelated aspects of literacy that are utilized as readers and writers construct meaning through written language. Literacy includes linguistic, cognitive, sociocultural, and developmental dimensions (Kucer, 2005).

Electronic books (e-books) - Digital chapter or picture books which can be viewed on desktop computers, laptops, or handheld devices (PDAs), and may employ multi-modal features including animation, sound, music, video, and hyperlinks (Weber & Cavanaugh, 2006).

Electronic reading workshop – A reading workshop in which aspects of technology have been integrated throughout all of its components (Term designed for the purpose of this study).

Hyperlink – Links, or connections, which allow the reader to move to another text; these texts can be sounds, images, video, as well as familiar printed texts (Bruce, 2003)

Information and communication technologies (ICTs) – Technologies that provide possibilities for and access to communication and information: Web logs (blogs), word processors, video editors, World Wide Web browsers, Web editors, e-mail, spreadsheets, presentation software, instant messaging, plug-ins for Web resources, listservs, bulletin boards, virtual worlds, and many others. (Leu, et al., 2004)

Multiliteracies – A set if open-ended and flexible multiple literacies required to function in diverse contexts and communities. (New London Group, 2000)

Message board – A computer system set up to allow notices to be posted and viewed by

anyone who has access to the network; also referred to as a bulletin board

(Roblyer, 2004)

Multimedia – Computer-based technology that integrates text, graphics, animation,

audio, and video (Meskill & Swan, 1995).

Multi-modal – The integration of multiple ways of knowing and multiple modes of

communication including text, images, art, music, drama, and technologies

(National Council of Teachers of English, 2005).

New literacies – The new literacies of the Internet and ICTs include the skills, strategies,

and dispositions necessary to successfully use and adapt to the rapidly changing

information and communication technologies and contexts that continuously

emerge in the world (Leu, et al., 2004).

Post – The act of posting a message on an online message board; a message posted on an

online message board (Wolsey, 2004).

Reading venue – The preferred location and position chosen by a reader (Term designed

for the purpose of this study).

Reading workshop – A single block of time dedicated to the exploration of literature

and the development of children's reading processes (Serafini, 2001). Commonly

comprised of four components: 1) literature selection, 2) literature response

journals, 3) project response options, and 4) literature conversations (Atwell,

1987; Hancock, 2007).

Synchronous discussion – Simultaneous electronic discussion, where posts occur in

"real time" (Grisham & Wolsey, 2006).

Threaded discussion – An asynchronous discussion or conversation which takes place

      on an online message board which allows participants to read each other's

      messages and reply to those messages (Wolsey, 2004).

Organization of the Study

      This chapter introduced the study exploring the integration of technology and emergence of new literacies within the context of a fifth-grade electronic reading workshop. The chapter included an overview of the issues, statement of the problem, purpose of the study, research questions, significance of the study, limitations of the study, definition of terms, and organization of the study. Chapter 2 provides a review of the literature, including a theoretical framework focusing on constructivist theory, reader response theory, and an emergent theory of the new literacies. Chapter 2 also provides research of issues surrounding the concepts and components of a reading workshop and an electronic reading workshop.

      Chapter 3 describes the methodology through a description of the case study methodology and research design. An overview of a pilot study that informs the proposed study and a description of the selected research site and its participants are also included. In addition, the role of the researcher, the role of the teacher, and the procedures for data collection and data analysis are discussed. Through rich description and visual representations Chapter 4 presents the results of the study. Finally, Chapter 5 summarizes the findings, discusses implications for educational implications, and offers recommendations for further research.

CHAPTER 2 - Review of the Literature

The purpose of this chapter is to provide an extensive review of the literature as it relates to the overall structure of integration of literacy and technology within the context of a reading workshop. First, the theoretical foundations for the study are discussed, including cognitive developmental and sociocultural perspectives of constructivist theory, reader response theory, and an emergent theory of the new literacies. Next, an overview of the literature concerning the principles and key components of a reading workshop are provided. Third, current practices and applications of the new literacies and technology integration as they relate to each component of a reading workshop are examined, providing a framework for an electronic reading workshop. This study is designed to explore and identify how the integration of technology supports the emergence of new literacies within the context of an electronic reading workshop in a fifth-grade classroom. The theoretical underpinnings, review of existing reading workshop practices, and a thorough examination of the integration of literacy and technology will provide a framework for understanding the concept of an electronic reading workshop, the methodology and data collection involved in the study, and, ultimately, the analysis of findings obtained from the study.

Theoretical Foundations

Constructivist theory and transactional theory of reader response provide the underpinnings for this study. Both theories support the belief that meaning is constructed

by the learner and is unique to the context and individual experiences. With the advent of the "new literacies," there is a profound need for new theoretical perspectives and frameworks to help researchers and educators understand the new literacies and to direct a critical future research agenda. Recognizing that it is too early to define a comprehensive theory of new literacies, principles on which such emerging theory should be built will be identified and discussed within this chapter.

Constructivist Theory

Constructivism is a theory about knowledge and learning in which knowledge is unique to the individual learner and the resulting facet of the individual's engagement in the cognitive learning process (Kozulin, 1998). Savery and Duffy (1996) described constructivism as a "philosophical view on how to come to understand and know" (p. 31). To help decipher the many presupposed literacy parameters of constructivism, Cambourne (2002) offered three simplified theoretical propositions of constructivism:

1. What is learned cannot be separated from the context in which it is learned.

2. The purposes or goals that the learner brings to the learning situation are central to what is learned.

3. Knowledge and meaning are socially constructed through the processes of negotiation, evaluation, and transformation. (p. 26)

These propositions suggest that the contexts and experiences in which students learn to read are critical to each student's understanding of reading; literacy teachers must offer learning environments in which students engage in multiple encounters with

literacy; and, educators impose socially constructed meaning on the real world in which

social interaction is the primary vehicle as individual learners develop knowledge and

understanding (Cambourne, 2002). Richardson (1997) further emphasized the role of the

teacher by pointing out that constructivists' approaches in general consider students'

prior knowledge fundamental, but the teacher's subscription to such prior knowledge

varies greatly. Piaget's (1969) cognitive developmental perspective views the meaning-

making process as individualistic, with the purpose of teaching being to lead toward

higher levels of understanding and analytic capabilities. Vygotsky's (1986) sociocultural

perspective views social aspects as instrumental, if not essential, in both the construction

and appropriation of knowledge.

A Cognitive Developmental Perspective

Piaget (1969) recognized that children naturally explore and discover the world

around them to build new knowledge, as they are intrinsically curious about their

surroundings and active and motivated learners. As a developmentalist, Piaget (1952)

described four major stages of development: sensorimotor from birth to 18-24 months;

preoperational from 18-24 months to 7 years; concrete operational from 7 years to 12

years; and formal operational from 12 years on. Piaget explained that these stages

allowed the child to develop and prosper in response to the learning environment. He

further theorized that children build cognitive structures during all developmental states

as they assimilate and accommodate new experiences and information.

In the contexts of educational technology, Papert (1980, 1999) adapted Piaget's

perspective and applied it to children engaged in utilizing technology, resulting in the

development of Logo, a graphical programming language. Using popular LEGO

building blocks, children construct machines which they connect to computers and write

computer programs, using Logo programming language, to control the machines

(Sargent, Resnick, Martin, & Silvermann, 1996; Resnick, Ocko, & Papert, 1988).

Building on Piaget's work and constructivist learning theory, the National Association for

the Education of Young Children (2003) declared that software for young children should

be employed as an active agent for learning and extending children's learning abilities.

Similarly, the National Council of Teachers of English (2005) issued a position statement

addressing multi-modal literacies, stating that even young children are sophisticated

readers and producers of multi-modal work and should be invited to frequently engage in

these new literacies. For example, CD-ROM storybooks may help children construct

meaning by making connections between the story's plot and characters (represented

vividly on the screen) and real-life people and situations (DeJong & Bus, 2004).

Asynchronous online literature discussions may also help students construct meaning as

they make connections between the text, their personal responses and interpretations, and

the responses by their peers (Wolsey, 2004).

A Sociocultural Perspective

According to Vygotsky (1986), children construct knowledge by using the

experiences and objects that are available to them as members of a particular culture and

learning environment. Vygotsky (1978) further believed that social interactions provide

the basis for higher mental processes, or thinking. Cognitive ability is not a natural entity

but a sociocultural construct that emerges from a child's interaction with the

environment. Besides learning through interaction and collaboration with peers,

Vygotsky (1986) proposed that adults play a major part in moving children to a more

advanced level of knowledge. Vygotsky (1978) differentiated between children's

"actual development level" and their "level of potential development." The distance

between these two levels is known as "the zone of proximal development" and explains

the distance between a child's independent capabilities and the potential abilities under

the assistance or guidance of others. In other words, children learn within a social

context what they cannot achieve in isolation. As children develop as literacy learners,

they constantly test hypotheses about how language works as they actively talk, read,

listen, and interpret the information that surrounds them in the classroom. Vygotsky

(1986) explained:

> In learning to speak, as in learning school subjects, imitation is
>
> indispensable. What the child can do in cooperation today he can do alone
>
> tomorrow. Therefore the only good kind of instruction is that which
>
> marches ahead of development and leads it; it must be aimed not so much
>
> at the ripe as at the ripening functions. It remains necessary to determine
>
> the lowest threshold at which instruction in, say, arithmetic may begin,
>
> since a certain minimal ripeness of function is required. But we must
>
> consider the upper threshold as well; instruction must be oriented toward
>
> the future, not the past. (pp. 188-189)

Vygotsky (1978) viewed reading and writing as higher order, socially-constructed

psychological functions. As children engage in authentic literacy practices, including

reader response (Rosenblatt, 1938/1995) and literature conversations (Cambourne, 2002;

Serafini, 2001), in which they receive knowledge, guidance, and feedback from more

experienced members of the learning community (teachers, capable peers, visiting adults), they develop such psychological functions.

Kucer (2005) examined the sociocultural dimension of literacy, including both texts and literacy users within the contexts in which they take place. As Vygotsky (1978) observed, humans are social beings and their minds are embedded within society. Each social group has its own rules and guidelines that frame its members' behaviors as well as literacy habits. Literacy behaviors in schools, for example, may be quite different from those represented in students' home environments or social groups.

No single definition of "family literacy" can do justice to the complexity of families and the multiple literacies that are part of their lives (Taylor, 1997). As personal computers and the Internet have become increasingly present in the "average" household, family literacy is rapidly changing. Educators and researchers recognize the "digital divide" which separate students from households with computer technology from those without such access. However, as more young people have access to computer technology and/or other means of electronic communication and/or multi media (cell phones, iPods, digital cameras, etc.), the sociocultural dimensions of literacy are rapidly changing in the world of young people (Reinking, 1998).

The theory of constructivism may provide a framework for children's learning experiences with computers as they seek to make meaning through social interactions and environmental objects (Carroll, 2004; Shamir & Korat, 2006). Through further application of the concept of the zone of proximal development to children's experiences with multi-modal literacies, using computers and applicable software in particular, researchers have revealed that such scaffolding processes can move children to master

skills they may not have been able to do on their own (Carroll, 2004; Klein & Nir Gal, 1992; Sheingold, 1986).

Kuhn and Stahl (2006) promoted the use of computer-assisted technology in phonics and decoding instruction in primary grades. "Bundled" software programs allow for both decoding activities and practice for targeted skills. To maximize the potential of computer technology, Kuhn and Stahl stressed the importance of not teaching words in isolation, but rather use of the software to enhance and extend already sound literacy instruction. For example, if a teacher is introducing the short "a" sound using *The Cat in the Hat* (Seuss, 1957), the student then spends time on the computer practicing the short "a" sound by making a series of consonant-vowel-consonant words. The lesson should conclude with the teacher reading another story emphasizing the short vowel sound.

Transactional Theory of Reader Response

Louise Rosenblatt's transactional theory of reader response (1938/1995, 1978) supported that readers "make sense" of new situations, or reading experiences, as they apply, reorganize, revisit, or extend encounters with text and personal experiences. Central to this theory is the interaction of the reader and the text as the reader breathes life into the text through personal meaning making and prior experiences. Rosenblatt encouraged readers to transact with literature, emphasizing that meaning does not necessarily exist in a prefabricated state within the text or within the reader, but takes form during the transaction between reader and text.

Terms such as *the reader* are somewhat misleading, though convenient fictions. There is no such thing as a generic reader or a generic literary

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work; there are in reality only the potential millions of individual readers

of individual literary works . . . . The reading of any work of literature is,

of necessity, an individual and unique occurrence involving the mind and

emotions of some particular reader. (Rosenblatt, 2005, p. 1)

In other words, different readers may construct drastically different meanings

from the same texts based on their understandings of the world, their personal

experiences, and their current knowledge of language. Rosenblatt (1978) argued that

reading is understanding what one reads, not simply the ability to read words aloud or

identifying words within a text.

"Texts" designates a set of series of signs interpretable as linguistic

symbols… Thus in a reading situation 'the text' may be thought of as the

printed signs in their capacity to serve as symbols. . . . "Poems"

presupposes a reader actively involved with a text and refers to what he

makes of his responses to the particular set of verbal symbols. (Rosenblatt,

1978, p. 12)

Rosenblatt (1978) argued that the reader performs different activities or

transactions during aesthetic and efferent readings, primarily due to the difference in the

reader's focus of attention during various reading events. In efferent reading, the reader's

attention is primarily focused on the aftermath of the reading event – the information to

be obtained and the actions to be taken as a result of reading for information. In aesthetic

reading, the reader's primary concern is with what happens throughout the reading

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experience. Aesthetic reading focuses on the feelings and personal thoughts that involve the reader while emerged in the reading experience. The aesthetic stance emphasizes the sensuous, emotional, and personal meaning-making of texts, while the efferent stance pays attention to the factual, cognitive, and public aspects of meaning. In reality, most readers, during most reading experiences, oscillate to-and-fro between the efferent and aesthetic extremes on the efferent-aesthetic continuum (Rosenblatt, 2005).

Rosenblatt's theory of reader response (1938/1995, 1978) generally refers to the transaction between the reader and printed texts. Although she did not specifically address possible transactions between readers and digital or multi-modal texts, Rosenblatt (2004) did, however, discuss linguistic transactions in which face-to-face conversation takes place between two people, as well as the transactional writing process that occurs when a writer moves from facing a blank page to creating a purposeful composition. It may be argued that the electronic reading experience is altered due to the simple presence of a cursor, which visually reminds the reader that he or she is part of the text and possesses the physical means of inserting text (Landow, 1997; Lanham, 1993). Lanham (1993) further suggested that because electronic text is not trapped between traditional book covers, it induces the reader to actively engage with and come close to the text each time he or she opens or retrieves the text from a hard drive, server, or disk.

Patterson (2000), an eighth-grade language arts teacher, conducted research on students developing reading strategies in order to conduct meaning from electronic text. The study expanded Lanham's observations and compared them to Rosenblatt's transactional theory as readers engaged with the electronic texts. The researcher concluded that, because of its interactive nature, hypertext makes us aware of the

obscuring of the roles of both reader and author: "Book technology seems to fix our notion of authorship, while hypertext challenges us to rethink that role and the role of the reader" (Patterson, 2000, p. 76). In other words, readers of digital texts may blur their role with that of the author. Furthermore, each time readers enter a hypertext they may create a new text and, consequently, new meaning, which is not necessarily the text planned by the author (Landow, 1997; Lanham, 1993; Murray, 1997; Patterson, 2000). In this study, the concepts of reader response theory will be applied to explore possible transactions between readers and digital texts when analyzing students' interactions with electronic books.

Toward a Theory of New Literacies

In today's classrooms, literacy instruction is changing in profound ways as new technologies provide opportunities to enhance and extend current literacy practices. Over the past two decades, the rapid infiltration of technology has significantly affected our schools and the daily lives of both teachers and students of all ages (Labbo, 1996; Reinking, 1998; Leu, 2002; Valmont & Wepner, 2000). In addition to the more traditional literacies of paper, pencil, and literature, today's students encounter and interact with new digital literacies, including electronic storybooks, Internet-based reading and writing, and online communication experiences. Leu (2002) addressed the importance of recognizing the constant changes that take place within the literacy classroom.

The essence of both reading and reading instruction has always been change. Reading a book changes us forever; we return form the worlds we

inhabit during our reading journeys with new insights about ourselves and

our surroundings. Teaching a child to read is also a transforming

experiences it opens new windows to the world, creating a life-time of

opportunities for that child. Change has always defined our work as

literacy educators. By teaching a child to read, we change the world. (p.

310)

With the advent of the "new literacies," today's reading and writing instruction

are influenced by change in even more profound ways (International Reading

Association, 2002). Although a precise definition of the "new literacies" may never be

possible due to their inherent characteristic of change, teachers and researchers agree that

today's students need and deserve the skills, strategies, and insights to successfully

exploit the rapidly changing information and communication technologies that

continuously emerge in our world (Leu, 2000, 2002; Reinking 1998; Street, 2003). Leu,

Kinzer, Coiro, and Cammack (2004) argued for the appearance of new theoretical

perspectives and frameworks to help researchers and educators understand the new

literacies and to direct a critical future research agenda. They also suggested that because

of the changing nature of the new literacies, such theoretical perspectives must "emerge

from the new literacies engendered by the requirements and possibilities of new

technologies" (p. 1572).

Central Principles of New Literacies

While it is acknowledged that a plethora of new literacies are rapidly emerging,

Leu, et al. (2004) suggested that those centered around the Internet and other information

and communication technologies (ICTs) are the most essential for schools to consider as they seek to prepare their students for the new literacies. Recognizing that it is too early to define a comprehensive theory of new literacies, Leu, et al. (2004) identified ten principles on which this emerging theory should be built. Each of these will be fully explained below.

1. The Internet and other ICTs are central technologies for literacy within a global community in an information age.

2. The Internet and other ICTs require new literacies to fully access their potential.

3. New literacies are deictic.

4. The relationship between literacy and technology is transactional.

5. New literacies are multiple in nature.

6. Critical literacies are central to the new literacies.

7. New forms of strategic knowledge are central to the new literacies.

8. Speed counts in important ways within the new literacies.

9. Learning often is socially constructed within the new literacies.

10. Teachers become more important, though their role changes, within new literacy classrooms.

These principles will guide the methodology and procedures in this study as they may be especially informative in the understanding of the evolving changes in reading instruction and learning, as well as the broader notions of literacy. However, given the profound changes that constantly take place in technology and its contexts, any conclusions must be framed cautiously (Bruce, 2003).

What follows is a brief explanation of each of these principles as described by Leu, et al. (2004).

       1. The Internet and other ICTs are central technologies for literacy within a global community in an information age. Literacy theory, research, and practice must recognize that the central technologies for a global community in an information age are shifting from the book and the printing press to the Internet and other ICTs. These technologies are promptly defining the new, future literacies. Because new skills and strategies are required in the context of Internet reading, researchers and educators must broaden the definition of reading comprehension. Coiro (2003) emphasized that reading comprehension is substantially different on the Internet.

       2. The Internet and other ICTs require new literacies to fully access their potential. To use the Internet and other ICTs effectively, readers need specific skills and strategies of the new literacies. Examples of the new literacies include using a search engine effectively; communicating electronically, including e-mail and list serves; evaluating the accuracy and utility of information; and, using a word processor effectively, including checking spelling accuracy and formatting text. Rather than replacing foundational literacies, the new literacies build on them, and, in fact, it could be argued that the foundational literacies will become even more important as reading and writing evolve in an information age. Researchers have argued that while foundational literacies increase in importance, they will eventually become insufficient as readers fully utilize the Internet and other ICTs (Coiro, 2003; IRA 2002; Sutherland-Smith, 2002).

       3. New literacies are deictic. Literacy is deictic and changes regularly over time. In the past, technological changes happened slowly, allowing literacy to change over an

extended period of time. Today, with rapidly changing technologies, the deictic nature of literacy is limited by the human ability to adapt, rather than technology itself. Teachers and researchers must keep up with these new technologies as the changing edifice of literacy will require preparing students for a very different notion of what it means to be literate.

4. *The relationship between literacy and technology is transactional.* As technology is used in new ways, new literacies are created in the process. Reinking (1998) argued that technology transforms the forms and functions of literacy, but literacy also transforms the forms and functions of technology. Consequently, there is a transactional relationship between literacy and technology. When users of technology turn to the Internet and other ICTs for information and communication, the use of new literacies are required to fully exploit the potential of such electronic resources. When technology is used in new ways, the user transforms the technology itself, hence creating additional new literacies in the process. In the literacy classroom, teachers construct new curricular resources with Internet technologies and then share their work with others. In turn, such resources require additional new literacies for their effective use.

5. *New literacies are multiple in nature.* Scholars are beginning to recognize that changes in literacy are too complex to be captured by the singular label, literacy. Multiliteracies, as defined by The New London Group (2000), is a set of open ended and flexible multiple literacies required to function in diverse contexts and communities. The Internet and other ICTs require a methodical understanding of the multiple literacies that exist within these many different contexts. Such multiplicity of new literacies is apparent

on at least three levels and have important implications for educators preparing students

to critically understand and interpret the meaning of what they encounter on the Internet.

- *Meaning is typically represented with multiple media forms.* While traditional texts are comprised by only two types of media, print and two-dimensional graphics, Internet texts integrate a range of symbols, animations, video, audio, hyperlinks, and interactive features. Internet technologies compel literacy educators to broaden their definitions of literacy to encompass these new, multifaceted forms of Internet literacies.

- *The Internet and other ICTs offer multiple tools for constructing multiple forms of communication.* Literate individuals will need to know how to search for relevant information through the hierarchical categories of information indexed by many search engines. Similarly, in order to communicate with others asynchronously, Internet users should be literate in tools such as e-mail, listservs, and discussion boards. When seeking real-time forms of information and communication, the literate Internet user must know how to access instant messaging technologies, participate in video conferences or chat rooms, and enter other virtual environments. The proficient Internet user must also know how to construct, design, and upload his or her own information to add to the constantly evolving body of knowledge that defines the Internet.

- *The new literacies of Internet technologies include new skills demanded by our students as they more frequently encounter information in different social contexts.* The global sharing of information permitted by the Internet brings new opportunities and new challenges for students who are now expected to interpret

and respond to information from multiple social and cultural contexts. It is critical that students who communicate ideas with individuals from across the globe understand that each idea is not an isolated piece of information, but rather is influenced by the social and cultural contexts in which each participant exists.

6. Critical literacies are central to the new literacies. Because the Internet permits anyone to publish anything, educators must assist students in becoming "critical consumers of the information they encounter" (Leu, et al., 2004, p. 1595). Although traditional literacy curricula have always included critical thinking and separating fact from fiction, the proficient Internet user requires richer and more complex analysis skills.

7. New forms of strategic knowledge are central to the new literacies. Each form of technology contains different contexts and resources for constructing meanings and requires different strategies for doing so (Mayer, 1997). Although the new literacies will demand many types of knowledge, they will undoubtedly include new forms of strategic knowledge needed to effectively locate, evaluate, and use the resources available within the Internet.

8. Speed counts in important ways within the new literacies. As the new literacies emerge, the speed it takes to acquire information will become an increasingly important measure of success. Educators will need to consider how to teach their students to quickly locate, evaluate, use, and communicate information. Slow readers and writers are hindered within traditional literacies; within the new literacies, these learners will be left far behind. "The gap between highly literate and literacy challenged individuals will be exacerbated by the new literacies of the Internet" (Leu, et al., 2004, p. 1597). Highly

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literate Internet users will skim Web pages and sift through large amounts of information in a relatively short amount of time.

9. *Learning often is socially constructed within the new literacies*. Today, it is simply impossible for one teacher to know all the new literacies and teach these directly to his or her students. In fact, many young students hold higher skills in the new literacies than most adults. As a result, rich learning experiences will depend on the teacher's ability to orchestrate learning opportunities in which students seek and share knowledge and expertise in the new literacies within a community of learners. Social learning is not only important for how information is shared, but further plays a vital role in how information is constructed. For example, much of the Internet is built on the social knowledge construction of others (e.g., threaded discussions, interactive chats, and collaborative databases), thus allowing users to take advantage of the collective expertise of others. Teachers should support students who are unfamiliar or ineffective with social learning situations, as those who are better at independent learning experiences will likely be disadvantaged in the new literacy classroom.

10. *Teachers become more important, though their role changes, within new literacy classrooms.* As the new literacies become more prevalent, the teacher's role will change in a fundamental way. Since the teacher will no longer always be the most literate person in the classroom, he or she will assume the role of orchestrating and facilitating complex contexts for literacy learning rather than simply dispensing literacy skills. Students may arrive with higher skills in the new literacies than their teachers, resulting in occasional role reversal between students and teachers. Skilled teachers will construct learning situations in which they take advantage of students' literacy skills and

support students in exchanging ideas and sharing their expertise. "Students with teachers who make thoughtful decisions about what needs to be learned and how it should be learned in new literacies will be privileged; those with teachers who have not yet figured these things out will be disadvantaged, perhaps even more so than with foundational literacies" (Leu, et al., 2004, p. 1599).

The Reading Workshop

The reading workshop is a common literature-based approach for teaching reading in the intermediate and middle-level grades (Atwell, 1998; Serafini, 2001). According to Serafini (2001), the reading workshop is a "single block of time dedicated to the exploration of literature and the development of children's reading processes" (p. 4). During this block of time, reading workshop provides students opportunities to experience and discuss quality pieces of literature, while working independently, in small groups, or as a whole class, under the watchful eye of a knowledgeable teacher.

Principles of a Reading Workshop

Based on years of experience as a classroom teacher, Serafini (2001) has developed a set of guiding principles for the reading workshop, which he uses to make decisions about the experiences and activities he introduces in reading workshop. These principles include: 1) opportunity, 2) choice, 3) response, 4) relevance/authenticity, 5) space, 6) faith, and 7) uncertainty.

Opportunity. Children need countless opportunities to flourish as readers, including time, access to a plethora of quality literature, and a supportive classroom environment.

Choice. In order for children to assume responsibility for their development as readers they need to make choices about what they read and how to respond to their readings. Atwell (1998) further explains that "if we want our students to grow to appreciate literature, we need to give them a say in decisions about the literature they will read" (p. 36).

Response. Not only do students need to receive feedback and responses from their peers and the teacher, they need opportunities to respond to what they have read. A common mode for students to respond individually to their reading experiences is the literature response journal (Hancock, 1993a). Another response option includes literature circles (Daniels, 2002), in which students respond to their readings through conversation with a small group of peers.

Relevance/Authenticity. The experiences teachers provide their students in school should have close relevance to students' authentic experiences outside of the classroom.

Space. The space provided for reading workshop considers both physical and psychological aspects. Students need a comfortable, physical space in which they can read, but also the psychological space in which they can take risks and try out new ideas without fear of reprisal.

Faith. "We need to have faith in our children as 'makers of meaning,' and ourselves as 'responders' to their efforts (Serafini, 2001, p. 13). When teachers jump in and start asking questions, they are not showing faith in their students' ability to respond

and react to the story at a deeper level. Similarly, when administrators adopt commercial programs that teachers must follow, they are not showing faith in teachers as professional educators. Engaging in reading workshop shows faith in teachers as professionals and faith in children as learners if given the opportunity.

Uncertainty. Because reading is a complex event, it cannot be reduced to a particular formula or commercial reading program. Teachers must become reflective practitioners who continually question and reevaluate their practice. However, being a reflective practitioner often involves some degree of uncertainty as teachers need to be able to act on their beliefs without closing their minds to new possibilities.

Similarly, Five and Egawa (1998) advocated for large blocks of time, predictable structure and routines, student ownership and choice, and plenty of response opportunities within the reading workshop. By demonstrating respect for students' diverse backgrounds and trusting that students' individual responses are meaningful, even though they may not always seem to make sense, teachers can establish a safe learning environment in which all students can be successful.

> In valuing who our students are, as well as their ideas, we work to
> establish a sense of community that encourages different points of view
> and respectful interaction, including students' responses to each other, as
> well as our responses to students. . . . It's this kind of environment that
> allows us to identify and to build upon students' interests and strengths.
> (Five and Egawa, 1998, p. 2)

Implementation of a reading workshop requires a time commitment of at least an hour a day (Atwell, 1998; Hancock, 2007; Routman, 2003; Serafini, 2001). During the reading workshop, participants engage in a variety of language-based activities. Teachers often begin by spending five to ten minutes sparking children's interest in reading by introducing new genres, reading aloud, sharing quality books, and introducing favorite authors. Time is also spent on reading strategy lessons, or minilessons, during which the teacher presents a brief lesson relating to a specific reading strategy or concept as it relates to the literature used within reading workshop (Serafini, 2001). "Minilessons are the best forum teachers have for pulling the classroom community together to take on a problem" (Calkins, 2001, p. 82). Rather than being an independent composition, the topic of the minilesson weaves its way into the shared and independent reading work conducted within the reading workshop. The largest block of time within the reading workshop, however, is spent reading and responding to literature (Hancock, 2007). Teachers often allot time to conduct reading conferences with individual students while others read and respond on their own. The last five to ten minutes of the reading workshop is generally reserved for sharing of texts, experiences, or discoveries among students (Hancock, 2007).

Key Components of a Reading Workshop

Although the structure of the reading workshop may vary to suit unique needs and contexts of teachers and students, there are four key components of a reading workshop: 1) literature selection, 2) literature response journals, 3) literature conversations, and 4) project response options (Atwell, 1987, 1989; Hancock, 2007).

Literature Selection

Students and teachers select from a wide range of fiction and nonfiction picture books or novels. Books with depth, emotion, strong characters, and intriguing plot lend themselves particularly well to a workshop approach. Serafini (2001) recognizes the daunting task of choosing among the thousands of books published each year and suggests that teachers build a literature collection surrounding the Caldecott and Newbery Award-winning books. He also advocates for letting students influence the choices for classroom selections. "If the books I choose don't make a strong connection to my students, whether they are award-winning books or not, they won't help invite children into the world of literature" (pp. 63-64). Kiefer, Hepler, and Hickman (2007) pointed out that that not all award-winning books are popular with children. Popularity of a book is not necessarily a mark of distinctive writing or artistic excellence. However, children's preference and reactions to books are important and many awards, particularly state awards, are voted on by children.

Keeping in mind that a key principle of the reading workshop is choice, teachers should carefully consider matching literature and students' personal interests (Atwell, 1998; Calkins, 2001; Serafini, 2001). Hinton and Dickinson (2004) argued that there are many ways teachers and school library media specialists can collaborate to "narrow the gap" between readers and books by promoting quality literature with multicultural characters, settings, and themes to which students can relate. "Simply owning materials that appeal to middle-schoolers is not enough. In order to increase reading, and therefore increase reading achievement, books and other print resources must be displayed, promoted, and used in classroom libraries" (p. 19). Bean (2002) emphasized that while

recreational reading can increase reading abilities and academic achievements in school, teachers must first provide students with books that both address the curriculum and appeal to students. "If educators are serious about developing students' lifelong love of reading, they need to incorporate in the curriculum literature that is captivating and issue-based" (p. 37).

Besides offering books that satisfy students' interests, teachers also keep students' reading levels in mind. Calkins (2001) urged teachers to avoid ability-based reading groups, but supported the idea of providing students with range of appropriate texts to choose from. Because many children have grown accustomed to reading at a level of frustration, they have not yet developed an internal sense of what reading should feel like. However, as pointed out by Calkins (2001), "there is a fine line between leveling books and leveling children" (p. 120) and the goal of any leveled reading program must be to garner the benefits and avoid the risks. Dzaldov and Peterson (2005) cautioned that many teachers organize their classroom literature collections only by readability level rather than genre, author, or theme. Consequently, situations wherein students may have an unreasonably limited selection of books to choose from are created. Conducting a small-scale study of first-grade students in Canada, the researchers found that teachers' knowledge of students' backgrounds, interests, and sociocultural identities is equally important in selecting appropriate books for students as are predetermined readability levels. Teachers may unintentionally dampen students' motivation and willingness to read by limiting reading selections to books based on sentence or word length.

Literature Response Journals

Supported by Rosenblatt's transactional theory of reader response (1938/1995, 1978), individual readers commonly respond to the reading itself through a literature response journal in which the reader's emotional and personal involvement with the text is captured. Hancock (1993a) studied sixth-grade students' literature response journal entries and recognized that the students' responses generally fall into three broad categories including personal meaning making, character and plot involvement, and literary criticism. Students' personal meaning making responses serve as a gateway to understanding and comprehension. In these responses, students move beyond summary as they unfold the plot and get to know the characters, make inferences, make and validate predictions, and express wonder or confusion. Responses related to character and plot involvement involve a deeper level of understanding on the part of the reader as they encourage interaction and reaction to the story's characters. Hancock observed the absence of such responses in initial journal entries as readers moved toward greater understanding of the text and more comprehensive responses. The third type of response, literacy criticism, recognizes students' personal literary tastes and preferences as they express individual assessments of the book and author's craft.

Hancock (1993b) further emphasized that "the classroom teacher can awaken and expand natural response by encouraging an even deeper interaction on the reader's literary journey" (p. 468) by making students aware of various types of responses as well as offering quality response prompts. For the less experienced responder, structured response journals provide a framework in which teachers create an open-ended prompt, or probe, that invites each reader to respond in a unique fashion. Well-composed

prompts encourage "diverse response" at four levels of interaction with literature: 1)

experiential prompts, 2) aesthetic prompts, 3) cognitive prompts, and 4) interpretive

prompts (Hancock, 2004). Experiential prompts focus on what the reader brings to the

reading experience through prior knowledge and experiences. Aesthetic prompts

encourage emotional interactions with the literature as they elicit feelings, empathy, and

character identification. Students respond to cognitive prompts by making predictions,

solving problems, and making inferences regarding the plot and characters. Interpretive

prompts call for an even higher level of reasoning as they ask readers to contemplate

personal consideration of meaning or message, morals or values, and personal judgment

of characters or situations.

Because reader response is a developmental process that requires a certain amount

of practice and risk taking, teachers should carefully consider the types of responses and

journals to be best suitable for their students (Hancock, 2004). Dialogue journals have

become a common form of reader response as they serve the dual purpose of capturing

the reader's reactions to the text and providing an active conversation between the

teacher and student about reading (Atwell, 1987; Staton, 1980). Graves (1989) suggested

that written dialogue between student and teacher invite children into the world of adult

readers. "Letters to teachers offer children one more important dimension in

understanding the literacy of adults" (p. 779). Atwell (1987, 1998) emphasized the need

to address each reader's questions, tastes, opinions, backgrounds, and experiences in

personal and contextual replies to her students' literature letters. The letters can serve as

a dialogue journal between two readers, in which they exchange opinions, thoughts,

ideas, and emotions as they relate to the literature.

Werderich (2002) built on Atwell's concept of literature letters and explored the use of dialogue journals as a means of differentiating reading instruction for individual seventh-grade students. In particular, the study examined how teachers responded to dialogue journals and how the journals could be used to promote personalized learning for seventh-grade students. The study revealed four response patterns through which the teacher promoted personalized reading instructions: student interests, personal discoveries, setting challenges, and teaching strategies in which teachers provided explicit instructional examples targeting individual students. Awareness of such categories of teacher response may guide teachers and students in further development of reading and responding. It was also revealed that individual students reading the same novel engaged with the literature in different ways. The one-on-one written dialogues allowed the teacher to keep close documentation of each reader's progress, discover the unique qualities of each student, and individualize instruction.

Literature Conversations

As Vygotsky (1978) observed, learners are social beings whose minds are embedded in society. Often referred to as literature circles (Daniels, 2002), grand conversations (Peterson & Eeds, 1990), book talks (Calkins, 2001), and book clubs (McMahon & Raphael, 1997; Calkins 2001), small groups of two to six students meet to explore and discuss insights and perspectives of a common selection of literature within the reading workshop. Calkins (2001) proposed that teachers should "trust in conversation as a way to support deeper comprehension" (p. 305), while emphasizing the importance of keeping children accountable for listening to each other as a springboard to carrying on thoughtful and meaningful conversations about literature.   Groups should be

formed based on students' desire to read the same text rather than students' reading

levels, ability grouping, curriculum mandates, or the teacher's agenda, and different

groups should read different reading materials based on interest and availability (Daniels,

2002). Students come to their discussion groups prepared with notes and/or questions, as

they meet on a regular basis to discuss their reading experiences (Calkins, 2001; Daniels,

2002; Serafini, 2001).

To encourage collaborative literacy learning activities with culturally and

linguistically diverse fourth- and fifth-grade students, Kong and Fitch (2002/2003)

implemented year-long book clubs. Students participated in reading, writing, and

conversations about literature; they engaged in literature response and related the

readings to their own experiences. They sought out context clues to increase personal

meaning making and overall reading comprehension. During the group discussions,

opinions were raised, knowledge was shared, thoughts and interpretations were

introduced and challenged, while meanings were constructed within the community of

learners.

To examine the role of the teacher within literature circles, Short, Kaufman,

Kaser, Kahn, and Crawford (1999) compared students' use of strategies and conversation

within literature circles in which teachers were present to those in which teachers did not

partake. The participating students consisted of four classrooms of intermediate, multi-

age students (ages 9-11). All participants joined a small group of four to five students to

read and discuss a picture book. The findings revealed that literature circles without the

presence of a teacher functioned smoothly with students working diligently, raising

significant issues, and completing assigned tasks. Although the groups in which a

45

teacher was present tended to discuss more topics due to the teacher's introduction of a wider range of issues, no qualitative differences were noted based on the presence, or absence, of the teacher. Groups without a teacher spent a longer time discussing a specific topic and details, historical facts in particular. The researchers explained that such behaviors may be caused by the fact that students had to solve their own problems rather than rely on the teacher's clarification of plot and historical details. In conclusion, Short, et al. (1999) stated that the presence or absence of a teacher in literature circles provided different but equally valuable potential for meaning-making and social interaction. Both types of groups are essential to students' growth as thinkers and readers.

In the article *What's the Next Big Thing with Literature Circles?,* Harvey Daniels (2006) recently shared new trends and refinements of literature conversations. Daniels suggested that teachers abolish the role sheets, which assign students jobs like Questioner, Connector, Illustrator, Word Wizard, and Literary Luminary as a way of showing students how effective readers think (connecting, visualizing, inferring, etc.). Instead participants can capture their responses in reading logs, on sticky notes, on student-created bookmarks, or through artistic or written expression. Moving from strictly assigned roles to alternative response options would allow students more flexibility and choice. Teachers should also spend more time on explicit reading strategy instruction to illustrate and model how readers comprehend and make meaning. Using instructional models like think-alouds, teachers should model proficient-reader strategies such as questioning, connecting, inferring, visualizing, determining importance, and so

on. In addition to teaching reading skills, Daniels (2006) advocated for more explicit instruction in social skills.

> We now realize that peer-led reading groups need much more than a good launching; they require constant coaching and training by a very active teacher who uses minilessons and debriefings to help kids hone skills like active listening, asking follow-up questions, disagreeing agreeably, dealing with "slackers," and more… Most of us teachers seem to want to believe that if we have "a golden gut" and "a heart for the kids," that they will collaborate skillfully (and magically) with each other in small groups. Oh, so wrong. (p. 13)

Daniels (2006) also suggested that while traditional literature circles have used sets of novels, today's teachers recognize the need to extend into nonfiction. Middle-level/secondary students should be reading many of the same trade books that members of the adult community are reading and discussing. Heller (2006/2007) recognized that even first graders can participate in nonfiction book clubs as a way of extending children's reading interests beyond narratives. Heller observed four first-grade girls as they read and responded to informational literature and found that seventy percent of the girls' conversations were expository telling and retelling of facts. The study concluded that nonfiction book clubs may "enable teachers to support the process of constructing meaning in a way that may have significant effects on a child's lifelong love of reading and writing" (p. 368).

According to Daniels (2006), another trend in literature circles includes adding more written conversations to prepare students for verbal discussions with peers. These conversations can take place while sitting side-by-side passing notes, or in letter form. "When everyone is 'discussing' with a partner in writing, then potentially everyone is engaged and acting upon the subject matter" (p. 14). Atwell (1998) frequently engaged middle-school students in literature letter writing as a means of literature response. Within their response journals, the students write letters to converse with their teacher or classmates about literature and reading. Atwell noted that these written conversations "affirm, change, or extend" the response of the reader (p. 283).

Project Response Options

As teachers recognize their students' distinct learning needs, they plan opportunities for diverse response options that enhance children's delight in books, encourage further reading, and cause students to think more deeply about what they have read (Kiefer et al., 2007). Students may work individually, in small groups, or as a whole class to respond to the reading experience through art, research, writing, drama, music, and multimedia (Hancock, 2007; Kiefer et al., 2007). Daniels (2006) advocated that teachers deviate from assigning a prescribed project, such as a book report, and move toward using response projects as a "special way of celebrating and advertising great books, not because we need something to grade" (p. 14). Kiefer, et al. (2007) noted that children are no longer required to write book reports in most schools, but teachers should encourage students to write about their reading experiences in other ways. Quality children's literature may serve as models for student writing and the incentive of student-authored books. Heller (2006/2007) reported that open-ended questions encouraged first-

grade girls participating in a nonfiction book club to generate creative responses to the literature, in the form of written and illustrated stories, nonfiction, and poetry. For example, after reading Seymour Simon's *Planets Around the Sun,* questions such as, "What did you think about the book?" and "Did *Planets Around the Sun* give you any ideas for writing and drawing?" were asked, resulting in a student-created fictional narrative about Mr. Solar System.

When students are given the opportunity to respond to literature through the visual arts, they become confident creators (Kiefer, et al., 2007). Possibilities for visual responses to literature include the creation of murals, dioramas, paintings, sculptures, crafts, and graphic organizers (Hancock, 2007; Kiefer, et al., 2007). First-grade teacher, Kim Huber, engaged her students in artistic endeavors as a means of responding to critical literature dealing with tough social issues such as homelessness, racism, and war (Leland, Harste, & Huber, 2005). The teacher noted that rather than just drawing to get an assignment done, the critical texts compelled the students to refer back to the book's illustrations and text, and a considerable amount of time and effort was put into the drawing. Huber hypothesized that the students put so much detail into artistically expressing their thoughts and feelings because they responded to topics and issues that seem "adult" (p. 262) and important to them.

Kiefer, et al. (2007) stated that "books become more real to children as they identify with the characters through creative drama" (p. 686). Children can revisit the world of a book through structured playmaking and script writing, or more impromptu dramatic play. Creative drama activities range from interpretation to improvisation, including pantomime, story dramatization, puppetry, and readers' theater. Kiefer, et al.

(2007) further suggested that teachers who are hesitant to incorporate drama as a response option to literature begin with readers' theatre, which involves a group of children reading a play, often adapted from a children's book. Doherty and Coggshall (2005) turned to readers' theater as a way to meet the needs of both regular education students and special education students as they engaged in and responded to literature in an seventh-grade classroom. They found readers' theater to be a "powerful strategy for engaging students and supporting comprehension" (p. 37), and it proved to be a key concept in the inclusion of their diverse students.

> One of the biggest benefits of reader's theater is something I never would have predicted: ADHD boys love it. I'm talking those can't-sit-still-for-5-minutes-of-a-movie boys. They not only enjoyed participating in reader's theater, they enjoyed the books as well. They identified with the characters and begged me each day, "Please can I read today?" (pp. 37-38)

Kornfeld and Leyden (2005) used drama to engage first-grade students with literature surrounding the theme of African American history. The classroom teacher read several different books that addressed the African American experiences and perspectives. Following the reading and discussion of each book, the teacher introduced a response activity intended to promote deeper thought and understanding of the themes and issues addressed in each particular book. In addition to several writing, art, and sewing projects, the students role-played scenes from the literature. Eventually, the first graders conducted research, developed scripts, and took care of responsibilities (sound, props, backdrops, etc.) related to the production of fully developed plays. The

researchers reported that participation in the play production allowed students to engage in the search for meaning and "experience the excitement and joy that literacy can bring to life" (p. 235).

Pearman, Camp, and Hurst (2004) suggested using "literacy mystery boxes" as an expression of response in the literacy classroom. A literacy mystery box "contains items that are referenced in a book, story, or any piece of text" (p. 766) and can be used by students as an alternative to book reports. After reading a story, students can decorate a mystery box to reflect the theme of the book, include items that depict the story's plot, and use the box as a prop while sharing the reading experience with their peers. Presented in this manner, literacy mystery boxes serve as book commercials that tempt students to read books recommended by their classmates. Pearman, et al. (2004) also suggested using the mystery boxes as informal assessment tools as teachers observe children's responses to the reading selection and determine whether their selected artifacts reflect the events and characters of the story. Similarly, Kiefer, et al. (2007) advocated for the use of jackdaws, or collections of artifacts related to a story or historical event. Teacher-created jackdaws may include resource materials, such as timelines, relevant articles or documents, information about the author, and so on. Basically, teachers may include anything that will assist in discussions and response activities relating to a particular book. Students may create their own jackdaws as an alternative response option to a favorite book.

There are endless possibilities for project response that engage students in purposeful activities that relate to the literature. A common goal of each response project

should be its meaningful connections to the book that reflect emotion, comprehension, and interaction with the text (Hancock, 2007).

The reading workshop is a common literature-based approach for teaching reading in the intermediate and middle-level grades (Atwell, 1998; Serafini, 2001). The structure of the reading workshop may vary, but generally consists of four key components including literature selection, literature response journals, literature conversations, and project response options. In this study, these components will be integrated with aspects of technology and incorporated into an electronic reading workshop. What follows is a review of the literature as it relates to the integration of literacy and technology in general and to the four key components of the electronic reading workshop in particular.

The Electronic Reading Workshop

Researchers and educators recognize the need to respond to the changing array of media technologies and resources used both within and outside the classroom in order to make education more responsive to today's learners (Hobbs, 2006). Leu, et al. (2004) emphasized the importance of socially constructed learning within the new literacies and the need for teachers to orchestrate learning environments in which students can work collaboratively while participating in complex contexts for the new literacies. Building on the concept of a traditional reading workshop, in which students collaborate with peers to explore and discuss quality pieces of literature, the proposed study will consider the conception of an electronic reading workshop (ERW) by integrating new literacies and aspects of technology into the traditional reading workshop. Table 2.1 compares the

traditional reading workshop to the electronic reading workshop as it applies to this

study.

Table 2.1 The Traditional Reading Workshop Versus the Electronic Reading Workshop

	Traditional Reading Workshop	**Electronic Reading Workshop**
Literature Selection	Print texts: novels, picture books, magazine articles, etc.	e-books, online reading materials, hypertexts
Literature Response Journals	Literature response journals	Electronic journals, blogs
Literature Conversations	Literature discussions, literature circles, book clubs	Synchronous or asynchronous online discussions (threaded discussion groups, chat rooms)
Project Response Options	Book reports, posters, readers' theater, etc.	Technology-based projects (Internet, publishing, multimedia, etc.)

Key Components of an Electronic Reading Workshop (ERW)

In this study, multiple dimensions of literacy will be considered as aspects of

technology are incorporated into the four key components of a reading workshop (Atwell,

1987, 1998; Hancock, 2007). Although a review of literature found no current studies

discussing the simultaneous integration of technology within all four components of a

reading workshop, as discussed below, some field-based research and clinical studies

have addressed each issue separately.

ERW Literature Selection

Contemporary transformations in digital technology have prompted a

reassessment of what literacy means; hence, the definition of what constitutes a "text" is

rapidly changing (Bearne, 2005). Traditionally, a text was seen as "a passage of print of

a slice of speech, or an image" (Lankshear, Gee, Knobel, & Searel, C., 2002, p. 45).

Thus, texts were perceived as written down messages and symbols in the forms of books,

magazines, and newspapers. Today, texts are perceived as much more than written words

or images. Evans (2005) described a text as "a unit of communication that may take the

form of something written down but also a chunk of discourse, for example speech, a

conversation, a radio program, a TV advert, text messaging, a photo in a newspaper, and

so on" (p. 8). Bearne (2005) expressed the need to redefine the idea of a text and

remember that multi-modal texts present multiple dimensions to representation and

communication.

> There are now a vast range of texts available to young readers in different
>
> combinations of modes and media so that *text* has come to include not
>
> only words-plus-images but moving images, with their associated sound
>
> tracks, too. Digital technology has increased the number and type of
>
> screen-based texts; 3D animations, websites, DVDs, PlayStation games,
>
> hypertextual narratives, chat sites, virtual reality representations. Many of
>
> these combine words with moving images, sound, color, a range of
>
> photographic, drawn or digitally created visuals; some are interactive,
>
> encouraging the reader to compose, represent, and communicate through
>
> the several dimensions offered by the technology. (pp. 13-14)

Bearne (2005) further argued that today's children are immersed in multi-modal

experiences, and, therefore, have a keen awareness of the possibility of combining modes

and media to create a message. This awareness results in an urgent need for teachers and

researchers to address the discrepancy between the types of literacy experiences students encounter at school, and those they practice in their daily lives outside the school environment. "Particularly, how do we acknowledge and respond to children's increasingly frequent choice of using multi-modal texts to represent their meaning?" (p. 17).

According to Shamir and Korat (2006), electronic books, or e-books, have been available for over a decade, but researchers are only recently beginning to evaluate the quality, benefits, and possibilities for use of this form of multi-modal reading. Electronic books come in several formats ranging from toy-inspired books, online stories (accessed online), CD-ROM storybooks, electronic textbooks, or downloadable e-books, including both picture and chapter books. Much like traditional books, the electronic versions embrace text and illustrations, but can be viewed on desktop computers, laptops, or handheld devices (PDAs), and may employ multi-modal features including animation, sound, music, video, and hyperlinks (Johnson & Harroff, 2006; Weber & Cavanaugh, 2006).

Although studies examining the use of this medium are still few and often in their infancy, available results appear promising in supporting electronic texts as a means to foster children's literacy development. In a quantitative study with Dutch kindergartners, deJong and Bus (2004) reported that students improved in word recognition as they frequently listened to and interacted with CD-ROM storybooks (compared to listening to adults read the book version of the same story aloud). Other studies produced conflicting results when assessing students' reading comprehension as they read electronic storybooks versus traditional print storybooks. For example, studies by Casteel

(1988/1989) and deJong and Bus (2002) found no significant difference in students'

comprehension when comparing the results to those reading the print version of the same

book, while other studies suggested that the multi-modal features of interactive books

(such as animations, sounds, etc.) may potentially distract children as they read and make

sense of the story (Burell & Trushell, 1997; Matthew, 1996).

　　Other studies of young children's interactions with this medium imply that

reading motivation was higher after children interacted with multi-modal texts, especially

among children with reading difficulties (Glaskow, 1996/1997). Fasimpaur (2004)

proposed that students find e-books to be "a new and unique medium" (p. 12) and,

therefore, often read more using e-books. The study also suggested that since e-books

can be presented in an individualized format, students with special needs (ELL, visually

impaired, struggling readers) may benefit from the additional text support available

through the use of electronic texts.

　　Meskill and Swan's (1995) findings also implied that special education students,

ESL students, and children with reading difficulties may feel empowered as they

experience some direct, visible reaction to a physical action, i.e., visual animation or

audio sequence as a result of clicking the mouse. "Enthusiasm and reactions to what

happens in the story and on the screen could be capitalized on by instructors by

encouraging discourse otherwise not possible with less verbal children" (Meskill &

Swan, 1995, p. 20).

　　Electronic books, with their potential for multi-modal texts and multidimensional

representations of a message, challenge the linear, right-to-left and top-down processing

that was the norm for most written texts (Leu, 2002; Reinking, 1998). So, what roles can

hypertext play in teaching literacy skills and reading comprehension? According to

Duke, Schmar-Dobler, & Zhang (2006), hypertexts can be useful as a tool for teaching

comprehension, and hypertext is one specific and increasingly important text that

children need to learn to comprehend. Although much more research is needed, it

appears that hypertexts provide opportunities to scaffold the reading experience through

vocabulary definitions, video clips, and speech supported texts, thus aiding students in

the comprehension process (Reinking, 1998).

It is obviously difficult for some teachers to accept that emerging forms of

electronic reading and writing may be just as informative and aesthetically engaging as

printed text. To consider that electronic forms of text may, in some instances, even be

superior to traditional texts, is undoubtedly even more difficult (McKenna, 2006;

McKenna, Labbo, & Reinking, 2003). Unfortunately, base on a search of the literature,

there is limited research that looks at the use of digital texts in general within the context

of a classroom, and how to teach children to comprehend hypertexts in particular. Studies

in the reading of hypertexts have found that readers do need specific instruction in the use

of hypertext resources accompanied with more general comprehension strategies (Duke,

et al., 2006). However, issues concerning *how* to best teach such resources/strategies and

who should provide such instruction (teacher, reading specialist, media/technology

person) are still debated (McKenna, Labbo, & Reinking, 2003).

ERW Literature Response Journals

Rosenblatt (1978) suggested that the transactional reader connected him/herself to

his/her personal experiences, the text, and to other members of the reading community.

Within such context, the reader engages in active reflection throughout the reading

experience and commonly records his/her thoughts and emotions in a literature response journal (Hancock, 2004). Although using paper and a writing instrument was the primary mode for journaling in the past, the increased use of technology and changing nature of today's students have brought a plethora of innovative approaches to journaling, including e-mail, web logs (blogs), or electronic discussion boards (King, 2006).

Ray (2006) found that innovative uses for blogs in education, often called "edublogs," are rapidly growing as teachers think of creative ways to immerse this new technology into current curricula and to promote literacy, including literature response journals. Researchers Kajder and Bull (2004) studied how blogs were used in a seventh-grade classroom to allow student authors "to come into their own" (p. 32). The teacher set up individual blogging accounts using a free blog site (Blogger.com) and received immediate journaling spaces during which students addressed class content, particularly literacy events, and reader response. Initially, the teacher provided open-ended prompts to support students in reflecting on their reading processes and exploration of the literature including certain themes of essential questions. The blogs also provided an opportunity to record personal interpretations of and interactions with the text, as well as a space to reflect on literature circle discussions. The results indicated that students were enticed by this type of journaling and they found the blogs to be a quick way to communicate with their teacher. The researchers concluded that students wrote longer responses when using blogs, as this mode of journaling prevented writer's block by reducing the intimidation of staring at a blank page (Kajder & Bull, 2004).

After examining the roles of multi-media in the response-based literature classroom, and reviewing 49 language arts-related software programs, Meskill and Swan

(1995) concluded that technology can support response-based practices including written

responses, similar to the use of response journals. They further argued that technology,

multi-modal computer software in particular, can support the reader's ability to make

connections between the text and his or her own personal experiences by allowing the use

of multimedia tools and visual linking on the screen (video, audio, graphics, text, or any

combination). Results of the study revealed, however, that only a few of the 49 reviewed

multimedia software, systematically enticed students to make connections between the

texts and their personal lives. To encourage ongoing literature response while interacting

with electronic texts, Meskill and Swan (1995) suggested arranging classroom computers

so students can work with an electronic book and a word processor at the same time.

Such responses might be printed out or kept in an on-line file which could potentially be

accessed by others who might add feedback or additional responses. Field-based

reviewers found that the idea of a "centralized computer station, one that children could

use to reflect as individuals and respond as a community, was a very attractive concept"

(Meskill & Swan, 1995, p. 21).

ERW Literature Conversations

A vital component of the traditional reading workshop, the literature

conversations lend themselves to integration of electronic forms of communication. Leu

(2002) stated that "literacy has always been a social phenomenon, but the new literacies

contain even more of a social component than traditional literacies" (p. 314). With

increasing access to the Internet, e-mail, chat rooms, Instant Messenger, programs, and

other modes of online communication, computers "invite new forms of social interaction"

(Carroll, 2004, p. 24) and online discussions are becoming more common in

elementary/middle schools as a means to encourage communication and learner engagement (Hamilton, 2006; Wolsey, 2004). Results of early studies support that online literature discussions have great potential for fostering literacy skills, strengthening communication, and building a sense of community (Carico, Logan, & Labbo, 2004; Grisham & Wolsey 2006; Wolsey, 2004). Meeting the needs and resources of almost any contexts and users, electronic communications are available in various forms, including 1) e-mail exchanges; 2) message board threaded discussion groups; and 3) real-time, online chats. The review of the literature for this study revealed that of the four components included in the electronic reading workshop, researchers have focused the most on electronic forms of literature conversations.

E-mail exchanges. Doherty and Mayer (2003) argued that e-mail communications may be used to foster positive student-teacher relationships. During a project aimed at developing technological literacies for groups of Indigenous students in Australia, they found that relationships facilitated by e-mail dialogue "achieved a warmth which contributed to the productive, and cooperative nature" or their program (p. 595). They related this observation to broader issues of teacher-student relationships and further stated that "incidental e-mail communications between teacher and student provides a new space – new in scope, location, tome, mode, and interactional protocol – in which to explore and build this core relationship" (p. 596).

E-mail technology is readily available and allows teachers and students innovative opportunities to facilitate literature discussions between readers from classrooms around the world. E-mail partnerships (often referred to as Keypals or Webpals) may be established between classmates or students from different venues. Pairs of preservice

teachers and elementary/middle-level students have also shown to produce rich

conversations about literature (Doherty & Meyer, 2003; Larson, 2002; Roe, 2000). Roe

(2000) engaged university students enrolled in a literacy methods course and seventh-

grade students in e-mail conversations about literature. The university students modeled

literary analysis and reading strategies, while conversing with the middle-school students

about a book that they were both reading. As the keypal partners became accustomed to

analyzing the story and sharing their reasoning, the exchanges evolved into true

discussions between readers. After three years of regularly scheduled conversations,

teachers and students at both level evaluated the exchanges positively.

Larson (2002) orchestrated a similar partnership between sixth-grade students and

preservice teachers and found that the exchanges, which were similar in nature to

dialogue journals in which a reader write back and forth to another respondent about a

book, "truly encouraged dialogue about the literature, between both groups of students"

(p. 60). She also reported that providing the sixth-grade students with a printed hard

copy of each e-mail, encouraged them to reflect and reevaluate their previously written

responses while investigating incoming messages for probing questions or prompts from

their university partner. Three general response trends emerged, including text

engagement, media connections, and prediction of events.

Message board threaded discussions. Utilizing an electronic message board,

several readers may participate in literature discussion asynchronously – meaning, not

simultaneously, but rather in their own time. Participants may initiate a new discussion,

or thread, by posting a new message, or they may reply to already existing messages.

The asynchronous context allows each reader time to reflect on the text, consider peer

responses, and contribute to discussions without the risk of being interrupted by group

members (Grisham & Wolsey, 2006; Wolsey, 2004).

Grisham and Wolsey (2006) used threaded literature discussions in which groups

of students participated in asynchronous message board conversations to share their

responses and opinions about books. They found that the threaded discussions combine

the benefits of written response journals with the advantages of face-to-face discussions,

in middle school classrooms to support literature studies and build a sense of community.

After reading one of several book choices, the students talked about the literature with

their group members, and exchanged written comments and reactions about it using First

Class Client software (similar to Microsoft Outlook) in a threaded discussion. Under the

guidance of their teacher (Wolsey), the students had previously participated in traditional

literature circles with some success. However, the teacher had noted that the discussions

"tended to be fairly superficial unless he was in close proximity to the groups (Grisham

& Wolsey, 2006, p. 652). The researchers quickly learned, as with any other learning

activity, they had to carefully structure the experience. Students were involved in

creating an evaluative rubric for grading their own engagement and responses, and the

teacher provided instructional models using a projector and screen. Students were also

taught Netiquette and reminded that "this isn't a chat room" and academic language was

required (p. 653).

The threaded literature discussions appeared stilted at first, but the engagement

level increased as students continued to read and write. Based on the 10 central

principles around which new literacy research should be constructed (Leu, et al., 2004),

Grisham & Wolsey (2006) further noted several implications for teaching and learning:

- The nature of the asynchronous online discussion, including adequate time to read and reflect on each other's postings, "prompted students to think more deeply about their responses to the literature and the members of their groups than did the paper journal or the face-to-face discussions." Based on the researchers' observations, in the face-to-face literature circles, students had done their parts, but failed to build upon and engage in the comments and reflections of their peers.

- As argued by Leu, et al. (2004), critical literacies are central to the new literacies. The threaded discussions provided students the opportunity to examine the literature from multiple vantage points. The students had to consider each other's points of view and build on those to construct context and meaning.

- With the new literacies, learning is often socially constructed (Leu, et al., 2004). Grisham and Wolsey (2006) compared how students used the threaded discussions to personalize their reading experiences and arbitrate discussions with their group members to the way we now use roadmaps:

  We both possess many paper road maps, but in most instances when maps are needed we use the Internet. The customized maps produced show only the relevant portions of the terrain to be traversed and the route from start to finish. Level of details can be increased or decreased, depending on our background knowledge of the terrain. Similarly, students used the threaded discussions to customize their reading experiences and mediate discussions with their peers. (p. 657)

The role of the teacher also changed. Grisham and Wolsey (2006) noted that their roles as researchers and teachers changed from directors of to participants in the threaded discussions. Consequently, they adjusted their expectations of what counted as academic language and the required writing style. "We were surprised, even though we shouldn't have been, at the quality of the student work once their voices were restored through social contact" (p. 657).

- Comparing the traditional literature circles and the online discussions, the structure of the face-to-face discussions and their assigned roles, appeared rigid and did little to encourage engaging discussions. The online discussions format brought the focus on the students' voices and appeared to ease the stringency of the literature circles while producing more genuine, authentic responses.

Real-time, on-line chats. Groups of readers participate in synchronous, or real-time, online discussions in an online chat room. Special programs (like the MOO) are available to provide students and teachers safe online environments in which the participants meet to discuss an established topic. Participants can speak at any time, just like in a face-to-face conversation, but without the physical presence and the opportunity to gather and express individual thoughts (Carico, Logan, & Labbo, 2004).

Jacobs (2004) noted the challenging of conducting a qualitative study involving instant messaging and adolescent girls. She quickly noted that analyzing IM transcripts was not nearly enough to understand the sociocultural context in which these messages were composed and transmitted. She further revealed the challenges of capturing and analyzing her participant's facial expressions, IM language, simultaneous cell phone conversations and text messages, and television viewing. The sociocultural context in

which this adolescent girl operated was very different from most classrooms. Today's

literacies extend beyond paper, pencils, and traditional print texts. The use of

technologies and digital literacies has expanded the ways students read stories,

comprehend and share information, and collaborate/communicate with others. Results of

early studies support that online literature discussions have great potential for fostering

literacy and communication skills (Wolsey, 2004) and it is imperative that today's

teachers have knowledge of acquiring, organizing, evaluating, and creatively approaching

the new literacies in which today's students are already engaged.

ERW Project Response Options

In addition to the literature conversations, the reading workshop invites a variety

of project-based response options based on individual readers' interests and talents

(Hancock, 2007). Labbo (1996) suggested that teachers utilize appropriate computer

programs and Internet sites containing multimedia features that support children's

engagement with and response to various genres of text. Labbo (2005) further advocated

that effective teachers design activities that link stories and computer time and that those

activities will motivate and promote children's literacy skills by drawing their attention to

thematic connections, big ideas, and innovations on text.

Valmont (2000) emphasized the "content of learning" (p. 160) in addition to

learning *how* to use computers. In his essay *What Do Teachers Do in Technology-Rich*

Classrooms?, he described how teachers and students use technology to support literacy

learning and as a means to responding to literature. In this classroom-based study, it was

noted that students "benefited greatly from exposure to an author's website on the

Internet" (p. 184) due to the students' immediate connections with the author through her

website. Other examples of response-based activities included multimedia projects created with Hyperstudio, website design, and students' application of literacy skills as they used brainstorming techniques (using Inspiration software), as they prepared to write sequels or alternative endings to literature (Valmont, 2000).

Tancock and Segedy (2004) conducted an action research project in a second-grade classroom to determine the effects of technology on responses to texts. Eight of the 15 students read online texts and completed technology-based response projects; the other seven students read printed texts and responded to the readings through paper-and-pencil activities. The students read six texts representing a range of reading levels. For each text, they completed a response activity, answered comprehension questions, and filled out a short survey which obtained students' perceptions of how much they had learned and how much they enjoyed the reading experience. Results showed that the students reading traditional texts (control group) scored higher on the comprehension questions for each text. They also outscored the treatment group on the response activities for all but one of the stories. However, on the survey, the treatment group scored higher than the control group for every text, except one, indicating that these children enjoyed the texts they read, perceived they learned from them, and enjoyed the response activities more than the control group.

The researchers concluded that several factors influenced why the technology group scored lower on the comprehension questions: The students using the computers spent a lot of their time navigating the computer and experimenting with the technology itself; they participated in more off-task behaviors (sharing discoveries with peers); and they had more difficulty scanning/skimming the texts on the screen. "Children were

focused on these activities rather than on reading and responding meaningfully to the text" (p. 63). Based on their findings, Tancock and Segedy (2004) argued that "teachers must be aware that for young children, technology-based activities take more time than paper-and-pencil activities. The computers create excitement and the desire for experimentation, which is very important in education" (p. 64).

With the help of commonly available technology tools, students at South Woods Middle School in Syosset, New York, responded to intermediate-level literature by starring in their own versions of the American Library Association's celebrity READ posters, which feature celebrities posing with their favorite books (Maslin & Nelson, 2002).   To create the posters, students used desktop publishing programs, which enabled them to manipulate text, fonts, pictures, and word art; digital cameras to take the pictures of the "star" student with his or her favorite book; and color printers able to accommodate the 36-inch wide poster paper. The posters, which were laminated and displayed around the school, were written in lively language to entice others to read the book. In addition to digital images, each poster included a student-composed review, recommendation, citation of a meaningful passage, and a personal response or reflection. The researchers noted that "the personal reflection piece allows students to incorporate connections they made with the text during the reading and accompanying reader response activities" (p. 629). According to Maslin and Nelson (2002), both students and teachers benefited from participation in the READ poster project in numerous ways: Students' hard work and excitement were evident as their posters were published and served as models for the entire school community; students and teachers worked collaboratively to create authentic, informational products to promote literacy; the reader

response experience enabled students to express both opinions and reactions to the literature; and, teachers learned along with their students, resulting in increased use of technology within the school community (pp. 628-629).

Summary

This study builds on and extends the background provided by the literature review in this chapter. Constructivist theory and transactional theory of reader response support the belief that meaning is constructed by the learner and is unique to the context and individual experiences. These theoretical underpinnings support the electronic reading workshop approach in which students read and respond to electronic texts to socially construct meaning. In this study, the transactional theory of reader response helps explain transactions between readers and electronic books.

With the rapid infiltration of instructional technologies and the "new literacies," today's reading and writing instruction are influenced by change in profound ways (International Reading Association, 2002). To help researchers and educators understand the new literacies and to direct a critical future research agenda, new theoretical perspectives and frameworks are needed (Leu, et al. 2004). Recognizing that it is too early to define a comprehensive theory of new literacies, Leu, et al. (2004) identified ten principles on which this theory should be built. These principles emphasize the importance of socially constructed learning within the new literacies and the need for teachers to orchestrate learning environments in which students can work collaboratively while participating in complex contexts for the new literacies.

The reading workshop is a common literature-based approach for teaching reading in the intermediate and middle-level grades that provides students opportunities to experience and discuss quality pieces of literature, while working independently, in small groups, or as a whole class, under the watchful eye of a knowledgeable teacher (Atwell, 1998; Serafini, 2001). Although the structure of the reading workshop may vary to suit unique needs and contexts of teachers and students, there are four key components of a reading workshop: 1) literature selection, 2) literature response journals, 3) literature conversations, and 4) project response options (Atwell, 1987, 1989; Hancock, 2007).

By integrating aspects of technology into all key components of the reading workshop the concept of an electronic reading workshop emerges. In this study, I conceptualize and integrate an electronic reading workshop into a fifth-grade classroom to explore how integration of technology supports the emergence of new literacies. While this chapter explains the theoretical underpinnings surrounding this study, Chapter 3 describes aspects of the study's research methodology.

CHAPTER 3 - Methodology

The purpose of this study was to identify and describe ways technology supports the emergence of new literacies within the context of an electronic reading workshop. This chapter provides a description of each aspect of the research methodology. Information is organized in the following sections: 1) research design, 2) pilot study, 3) teacher/classroom site, 4) school/student participants, 5) role of the researcher, 6) role of the teacher, 7) ERW implementation and procedures, 8) data collection, 9) data analysis, and 10) establishing trustworthiness. This study is guided by the following research questions:

How does the integration of technology within the context of a fifth-grade electronic reading workshop support the emergence of new literacies?

1. How do fifth-grade students interact with and perceive literature (e-books) in an electronic reading workshop?

2. What types of reader response emerge within an electronic reading workshop in a fifth-grade classroom?

3. How does an electronic reading workshop support socially constructed learning in a fifth-grade classroom?

Research Design

Using a qualitative case study approach, this study describes multiple dimensions

of an electronic reading workshop in a fifth-grade classroom. A qualitative methodology was chosen as it provides an expressive, narrative description of a social or human problem within a natural setting (Creswell, 1998). Qualitative research proceeds from the assumption that people and events cannot be fully understood if they are removed from the environmental circumstances in which they naturally occur (Schram, 2006). In other words, the qualitative researcher will not attempt to produce a standardized set of results that will work across a range of settings, but rather study issues in relation to circumstances of which they are part. This study addresses human and social issues within a natural setting of a fifth-grade classroom. Qualitative researchers are further concerned with process rather than specific outcomes or products. Bogdan and Biklen (1998) suggested that quantitative methods used in educational research may show changes in students' academic achievements by the means of pre- and post-testing. Qualitative techniques, on the other hand, can explain how student performance and academic expectations are translated into daily activities, contacts, and procedures.

Just as today's teachers are challenged by the new literacies and instructional technologies, so, too, are today's researchers as they address the question of which research designs will be most helpful in making sense of these new literacy and technology practices. The task is complicated by a political climate that places high emphasis on scientifically based studies and clinical experiences. The resulting situation is one in which the phenomena of the study of the new literacies and technology instruction are widening, as the range of "legitimate" research methods is narrowed (Steinkuehler, Black, & Clinton, 2005). However, despite potential criticism, many literacy researchers continue to choose a qualitative stance (Hinchman, 2005).

This qualitative study is interpretive in nature as it seeks to understand interactions, experiences, and meaning constructed by fifth-grade students and their teacher as they engage with new literacies and instructional technologies within an electronic reading workshop. The researcher of interpretive study is concerned with identifying how participants make meaning with a phenomenon or particular situation and presenting such findings descriptively (Merriam, 2002).

A case study is characterized by a bounded, integrated system in which a unit of analysis or entity (the case) is being studied (Creswell, 1998; Merriam, 2002). However, it is not necessarily defined by the methods used for investigation, but rather "a choice of what is to be studied" (Stake, 2000, p. 435). In this study, a particular instructional configuration – the electronic reading workshop – was studied within the boundaries of a fifth-grade classroom. According to Stake (2000), case study research designs may be classified as intrinsic, instrumental, or collective. *Intrinsic* case study research is undertaken because the researcher seeks better understanding of a particular case. Researchers engage in *instrumental* case study research mainly to facilitate understanding of something else (besides the case itself) or to redraw a generalization. The *collective case study* research design holds even less intrinsic interest as the researcher investigates a phenomenon, condition, or population in a collection of several cases which may or may not display common characteristics. As emphasized by Stake (2000), the three categories are "heuristic" more than "determinative" (p. 438) and most researchers and studies do not fit neatly into one particular category. This study primarily involves an instrumental case study research design, in which the case of the implementation of electronic reading workshop in a fifth-grade classroom was examined in depth to provide

insight and facilitate understanding of the general issue of new literacies and instructional technologies within a literacy-based curriculum. Furthermore, the research design in this study is exploratory (Yin, 2003), seeking to provide an in-depth account of the electronic reading workshop within the fifth-grade classroom, while defining research questions of subsequent research efforts.

Within the qualitative case study the "search for particularity competes with the search for generalizability" (Stake, 2000, p. 437). Although most academic researchers support the study of individual cases with clear expectations and limitations of generalizability to other cases, some qualitative methodologists have criticized study of the particular for its lack of generalizability (Denzin, 1989; Herriott & Firestone, 1983; Yin, 2003). Merriam (1998, 2002), however, explained that much can be learned from a particular case. Stake (2000), agreed that readers can learn vicariously from one encounter with the case through the researcher's narrative description. The colorful description in an exploratory case study can create a vivid portrait for subsequent studies striving to establish transferability or generalizability (Erickson, 1986).

With a heavy emphasis on a natural setting and boundaries within which the research was conducted, this study lent itself to a qualitative case study design. The qualitative methods embedded in this design invited descriptive data collection, inductive data analysis, and a focus on process rather than product.

Pilot Study

This study was partially informed by a pilot study that examined multiple dimensions of literacy during a preservice teacher electronic reading workshop in the fall

of 2006. A qualitative methodology with descriptive case study methods of data

collection and analysis was used to develop an understanding of integrating aspects of

technology into a reading workshop. The study involved two sections of 41 elementary

preservice teachers from a language arts methods course as they participated in an

electronic reading workshop. During this experience, the students read *A House of*

Tailors by Patricia Reilly Giff (2004) in an electronic book format (e-book), responded in

electronic reader response journals in the form of Microsoft Word documents,

participated in asynchronous online literature discussions using a threaded discussion

board, and completed technology-based response projects. Because the participants in

the pilot study consisted of preservice teachers who soon would be responsible for

integrating technology in their future classrooms, they were asked to reflect not only on

the literature and the reading process, but also on the concept of learning and teaching

with technology. Their verbal and written responses provided valuable insights for all

four components of the electronic reading workshop in this study.

Pilot Study Literature Selection

None of the 41 participants had previously accessed an e-book and 38 of them

perceived the idea of an e-book daunting or unfavorable. At the end of the book, all

participants still favored traditional literature, but rated the e-book reading experience as

positive. Thirty-three (80%) of the participants accessed one of the many "tools"

available in Adobe Reader™, the software program used to open the e-book on the

computer. Such tools invite the reader to edit the text by inserting, deleting, or replacing

text; to mark passages by highlighting, underlining, or crossing out words; to add

comments by inserting post-it-like notes, attaching files, or recording audio comments;

and to manipulate the page format, text size, and screen layout. Search features allow the user to instantaneously locate specific words or phrases within the text, or turn to a particular page. The preservice teachers identified the following possible uses for such tools in elementary/middle level classrooms:

- Highlight or underline key vocabulary or text passages to increase word recognition and/or comprehension.

- Attach a document with spelling words, definitions, questions, or prompts, relating to the text.

- Attach students' literature response journals as an electronic document (provides easy access while reading).

- Accommodate struggling readers by changing font size and page format, or by attaching an audio file with supportive comments or recorded text.

Many of these suggestions were incorporated in this study. The fifth-grade students were given an overview of the tools available in Adobe Reader and encouraged to utilize them to support their reading processes.

The preservice teachers also identified three distinct disadvantages of the e-book.

- Reading on the computer felt restricting and time consuming. The participants missed being able to read between classes or while waiting in line.

- The computer itself provided a source of distraction. Several preservice teachers reported feeling distracted as the computer provided constant access to entertainment (music, video, Internet, etc.) and communication (e-mail, Instant Messaging, etc.).

- The most prevalent disadvantage was the lack of physical interaction with the e-book. Although interactive in nature, the e-book did not spark a physical bond. 68 % of the participating preservice teachers indicated that they missed "snuggling up" with a regular book.

Furthermore, the pilot study suggested that use of e-book "tools" can motivate and facilitate readers. I also learned that the participating preservice teachers favored traditional books over e-books. These insights were carefully considered as this study sought to learn about attitudes and perceptions of fifth-grade students during an electronic reading workshop.

Pilot Study Literature Response Journals

Throughout the pilot study, each participant kept an ongoing digital journal on his/her computer using a word processing program such as Microsoft Word. The students electronically submitted their journals half-way through the book and then again at the end. I learned from the pilot study that the electronic literature response journal served a dual purpose. First, it provided opportunities for personal response to the literature. Second, it offered participants a chance to express their opinions of and attitudes toward participation in the electronic reading workshop.

Pilot Study Literature Conversations

Because asynchronous threaded discussions are commonly used at the university level, most of the participants were familiar with the procedures of posting and reading messages. However, none of the preservice teachers had previously been part of an electronic literature conversation. After a few days of online conversations the

preservice teachers shared both satisfactions and frustrations in class. They identified

many advantages of asynchronous online discussions, including:

- The asynchronous format provided extra time to reflect on the reading and

  formulate responses prior to posting.

- Reading the responses of others inspired deeper transactions with the text.

- The online discussions were less distractive than a face-to-face conversation

  allowing participants to focus on the topic.

- The online discussions provided a safe environment for getting to know

  classmates and sharing personal thoughts about the book.

A few disadvantages also emerged:

- The lack of body language and facial expressions made it difficult to interpret the

  tone of voice of other group members.

- The fast-paced schedule made it difficult to meet deadlines for postings.

  Technical difficulties or lack of access to the Internet further affected some

  participants' ability to post entries on time.

I learned from the pilot study that scheduling and time management issues are

important factors to consider when implementing a threaded literature discussion group.

In addition, access to technology becomes crucial and may greatly affect participants'

ability to participate in ongoing discussions. Although Wolsey (2004) suggested that

online threaded discussions allow for the flexibility of expanding the classroom beyond

the school day so more thoughtful exchanges can take place, the classroom teacher and I

agreed to only allow fifth-grade students access to the threaded discussion boards during

the school day. This was done to avoid outside influences on students' responses as well as issues of technology access.

Pilot Study Project Response Options

The preservice teachers collaborated in groups of four or five to extend the reading experiences by generating unique literature extension projects that reflected their personal interests as well as their ideas for integrating technology in their future classrooms. A wide variety of distinctive projects emerged including pod casts, multimedia presentations, and Internet-based projects such as WebQuests. One group created a series of PowerPoint slides, each with links to Internet resources that provided prior knowledge or further information on a range of topics relevant to the text, to enhance the reading experience for young students, which they referred to as a "virtual guide" to the literature. Recognizing the need to structure the assignment and limit the number of options for fifth-grade students, the classroom teacher selected the virtual guide as an open-ended project to model a literature response option within the fifth-grade classroom. A brief introduction of the preservice teachers' Virtual Guide to the Literature, provided guidance and inspiration for the fifth graders as they created their own virtual guides during this study.

While the pilot study was conducted with preservice teachers, it provided valuable insights to the participants' interactions with and perceptions of and attitudes toward technology integration in general and the electronic reading workshop in particular. Further more, it allowed me to explore several methods for data collection and analysis, along with potential versions of literature response. The pilot study also provided me

with an opportunity to address and solve various technical problems that arose within the electronic reading workshop, including hardware and software issues.

Teacher/Classroom Site

The teacher involved in this study was chosen for her outstanding teaching credentials as well as her willingness to undertake instructional endeavors involving the new literacies and instructional technologies. Mrs. Stitt has 20 years professional experience, with the past five as a fifth-grade teacher at the selected site. Mrs. Stitt completed her Master of Science in Educational Administration and Leadership in December 2006 and has recently been hired as a principal for a new elementary school within her current school district in the fall of 2007. She has assumed many past and present leadership positions within the school district, including the role of university clinical instructor and teacher leadership cadre member. In 2005, Mrs. Stitt was selected the Elementary Teacher of the Year within the district and became a regional semi-finalist in the state's Teacher of the Year competition. Her resume includes numerous awards and recognitions for her distinguished teaching capabilities.

Mrs. Stitt is an avid proponent of technology, but does not consider herself a technology expert. Her students visit the school's computer lab to create projects utilizing software including Microsoft PowerPoint, Microsoft Word, Microsoft Publisher, Inspiration, and Timeliner.   Her fifth graders also conduct research on the Internet. Mrs. Stitt acknowledges, however, that with increasing pressures to perform on standardized tests, less time is available for "creative" technology projects and more computer time is spent preparing for high-stakes assessments.

Reasons for selecting this classroom included Mrs. Stitt's desire to further expand her knowledge of instructional technologies and their effective integration within her current literacy curriculum. Prior to this study, Mrs. Stitt was familiar with the functions and features of an online message board, which was used in this study during the literature conversations. Although she had been an active participant of such discussion during her recent graduate studies, she had never introduced this means of communication to her students. Throughout the study, she recognized that her own prior knowledge with asynchronous online discussions was extremely helpful as it helped her support and guide students. Furthermore, Mrs. Stitt had no prior experience with accessing or reading an e-book but she welcomed the challenge and looked forward to participating in this study.

School/Student Participants

The school chosen as the site of this study is located in a Midwest town with a population of approximately 45,000. The school is one of seven K-6 buildings within a school district serving a total of 5149 students in grades K-12. In the fall of 2005, the school's enrollment was 361 students, of which 294 (81.44%) were white, 2 Hispanic (0.55%), 31 African American (8.59%), and 34 other (9.42%). Of the 361 students, 55 (15.24%) were considered economically disadvantaged. The building houses fifteen K-6 classrooms with two or three classes per grade level. There are currently two fifth-grade classrooms. The school further accommodates a library, an art room, a combined lunch room and gymnasium, and a computer lab with 30 desk top computers. Most teachers sign up to use the computer lab on a weekly basis. A full-time computer lab aide assists

with clerical and technical tasks, but it is the classroom teacher's responsibility to design lessons and facilitate instruction in the lab. All computers are networked with high-speed Internet access. In addition to the computer lab, the school owns two mobile lab carts with a total of 28 laptop computers with wireless Internet capabilities. The mobile lab carts are used in various locations around the school, including individual classrooms. All computers within the building use a Windows operating system and are equipped with Microsoft® Office 2003 including Microsoft Word, Microsoft Publisher, and Microsoft PowerPoint.

Twenty-six students, 15 males and 11 females, made up the selected fifth-grade classroom in which this study took place. Of the 26 students, 23 (92%) are white, 1 (4%) is Asian, and 1 (4%) is African American. All 26 students actively participated in the electronic reading workshop. However, due to unexpected problems with downloading e-books (see page 91), only ten computers with e-book copies were available for student use, resulting in ten students reading e-books while 16 students read paper copies of the same books. Although all 26 students engaged in literature response journal writing, participated in online literature conversations, and created technology-based response projects the data collection and data analysis in this study focused on the ten students with e-book access.

Participant Biographies

The following section contains short biographies of the ten students involved in this study. Mrs. Stitt identified the ten participants based on criteria of being communicative (in writing and/or verbally) and willing to work hard. Although each participant is unique, the ten students display homogeneous characteristics of being good

readers and and having prior knowledge of technology. Biographical information of each

child was attained through interviews and conversations with the teacher and the

students. To protect identities, pseudonyms were assigned to all student participants.

    Adam. Adam is an athletic eleven-year-old Caucasian boy with a great sense of

humor. He describes himself as "good reader" who reads plenty of books at school and

sports magazines at home. In particular, he enjoys mystery books and books that are

funny. The preliminary state assessment scores for the Spring of 2007 indicate that

Adam scored in the "Exceeds Standards" category in reading. Adam expresses himself

well verbally and is a frequent contributor to class discussions. He has an outgoing,

likable personality and a large group of friends. At school, Adam represents the class as

a student council member. After school, Adam is involved in numerous activities,

including basketball, baseball, and football. Being the youngest of three siblings, he also

likes to spend time on the family's home computer. He often participates in synchronous

online chats with his friends and feels comfortable using various means of technology,

including his portable DVD player, X-Box, and iPod.

    Elaina. Elaina, an eleven-year-old Caucasian girl, is the oldest of three siblings

who enjoys spending time at home reading or playing outside. She is also involved in

several after-school activities, including athletics and music lessons. She plays the violin,

basketball, golf, and softball. In addition, she loves to swim and thinks of herself as a

"fish" in the summertime. Elaina loves to read. She enjoys selecting realistic fiction

books at the school library and read whenever she has spare time at school; she also reads

for at least half-an-hour before bed every night. Mrs. Stitt reported that Elaina works

very hard in school to please the teachers and puts forth her best effort. She is

enthusiastic, energetic, and represents the class as a student council member. She expresses herself well, both verbally and in writing. Preliminary scores for the state's Spring 2007 reading assessment, suggests that Elaina scored in the "Exemplary" category. At home, Elaina has access to a family computer on which she spends 10-20 minutes every other day. She uses the computer to word process homework assignments and explore websites on the Internet. She has her own digital camera, iPod, and a DVD player.

Sing. Sing is a bright ten-year-old Asian boy. He was born in South Korea and moved to the United States with his parents when he was only a few months old. Sing is bilingual and speaks Korean at home with his parents and two sisters. At school, he expresses himself in English and does not receive ESL/ELL services. Although he speaks with a slight accent, his English is strong and he communicates well both verbally and in writing. Preliminary state assessment scores in reading for Spring 2007, indicate that he scored in the "Exemplary" category. His parents want him to learn to formally read and write in Korean and have arranged for Sing to work with a Korean tutor on a regular basis. Mrs. Stitt reported that Sing is very bright and learns quickly. His favorite subject in school is social studies. He explained that he enjoys doing presentations but expressed that he gets nervous when speaking before the class. At home, Sing has access to a computer on which he spends 1-2 hours a week. He likes to play computer games and communicate with friends via e-mail or instant messenger.

Alisha. Alisha is a friendly ten-year-old Caucasian girl. She is the youngest child in a close-knit family and she enjoys playing outside with her two sisters and brother. She is athletic and particularly enjoys horseback riding and running. Alisha has access to

a home computer on which she spends approximately 30 minutes a day. She uses the computer to word process homework assignments or play computer games. In addition, she likes to play Nintendo video games. Mrs. Stitt reported that Alisha sometimes needs extra time to finish reading assignments. She is thorough, detailed oriented, and takes her time to read every word on the page. Alisha thinks of herself as a "medium" reader – "not really fast and not really slow." She loves reading and usually selects books based on recommendations from friends or because she likes the cover. Preliminary reading scores from the state's Spring 2007 assessment suggest that she scored in the "Exceeds Standards" category.

Leah. Leah is an outgoing eleven-year-old Caucasian girl. She is the older of two sisters and likes to spend time after school watching television, playing outside, or drawing and painting. Leah is also involved in several organized sports, including dance and soccer. Mrs. Stitt refers to Leah as creative and unique. She is outgoing and communicates well both in writing and verbally. Leah's favorite subject is art because she likes to draw and paint on canvas. At home, she spends about 30 minutes on the computer two or three times a week. She uses e-mail to communicate with friends, plays games, and uses the Webkinz Internet site. Leah reads with her mom and sister at home. She is a versatile reader who prefers mystery books but enjoys most books that are presented to her at school. The preliminary 2007 state assessment scores in reading indicate that Leah scored in the "Exemplary" category of performance.

Mick. Mick is a ten-year-old Caucasian boy who has two brothers and one sister. Mick is younger than most of his class mates because he skipped second grade. He is currently in the gifted program. As specified in his IEP, he sees the school's gifted

facilitator twice a week for approximately 45 minutes at a time. Mrs. Stitt reported that Mick is a methodical problem solver. He indicated that his favorite subject is mathematics because there is only one correct answer. Because of his young age, Mick displays signs of immaturity and lack of social interactions with his peers. Mrs. Stitt explained that Mick continues to work on being assertive and assume roles of leadership within the classroom – especially when involved in group-related activities or assignments. Mick is also an avid reader, both at home and in school. When selecting books, he looks for survival stories or mysteries. Mick explained that he has been a good reader for as long as he can remember. According to the state's preliminary reading assessment results for Spring, 2007, Mick scored in the "Exemplary" category. After school, Mick enjoys playing with friends. He also takes piano lessons and participates in a local track club. He spends about 20 minutes a day on the family's home computer playing online games or games on CDs.

Madison. Madison is a creative eleven-year-old Caucasian girl who loves to socialize and spend time with her friends. At home, she spends about five hours a week on a computer, mostly chatting with friends, e-mailing, or visiting popular websites. She also loves to listen to music on her hot pink iPod, talk on the phone, and shop. Madison is in the gifted program and works with the school's gifted facilitator for approximately 45 minutes twice a week. Her favorite subject is writing because it allows her to "pour things on paper, however I please." Madison explained that she enjoys acting, singing, and dancing. Her creative and outgoing personality is apparent in the classroom as she is very sociable, talkative, and articulate, both verbally and in writing. The preliminary

2007 scores for the state's reading assessment, indicate that Madison scored in the "Exemplary" category with the highest overall score in her class.

Katie. Katie is an outgoing eleven-year-old Caucasian girl. She has two brothers, four step brothers, and one step sister. Mrs. Stitt views Katie as sociable, energetic, and caring. In the classroom, she communicates easily and often contributes to class discussions. She enjoys playing in the school band and expressed that playing the flute comes easily to her. Katie thinks of herself as a good reader. She looks for books that are part of a series, such as the *Harry Potter* books. The preliminary state assessment scores in reading suggest that Katie scored in the "Exemplary" category. After school, Katie mostly plays with friends, jumps on the family's large trampoline, or plays tennis. She also spends time on the home computer whenever she gets a chance. She communicates electronically with her friends via e-mail and synchronous online chatting. Katie explained that she loves all kinds of technology gadgets and uses an iPod, portable DVD player, and anything else she can get her hands on.

Charlie. Charlie is an active eleven-year-old Caucasian boy. Although he moved to this school from out-of-state only a year ago, he is currently the school's student council president. His leadership skills are evident in the classroom as he is a frequent contributor to class discussions and often offers solutions to any issues or problems that may arise in the classroom. His favorite subject in school is social studies because "you get to learn about things that wouldn't have happened today if not for the people in history." Charlie considers himself an "okay" reader. He explained that he uses context clues to figure out what words mean while reading. The preliminary state assessment scores in reading for Spring, 2007, indicate that Charlie scored in the "Exemplary"

category. After school, Charlie plays baseball, shoots hoops, plays in his family's

swimming pool, or spends time with friends or his younger brother. He has access to a

computer on which he spends about an hour a week, primarily checking e-mail, looking

up interesting facts on ask.com, or watching funny videos on youtube.com.

   Molly. Molly is an eleven-year-old Caucasian girl with a busy after-school

schedule. She loves gymnastics and practices up to seven hours a week.   In addition, she

participates in dance and church activities. She enjoys art because it is fun and

challenges her creative side. Mrs. Stitt reported that Molly works very hard although she

may need extra time to process information. To improve her reading skills, Molly spent

time with the Academy of Reading (a computerized reading program) before school

several days a week at the beginning of the school year. According to Molly, she did not

enjoy this process, but it helped improve her reading skills. The preliminary state reading

assessment scores support this sentiment as she recently scored in the "Exemplary"

category. She now considers herself as a pretty good reader and she enjoys reading a

variety of books in the fiction genre.   Although Molly appears to have many friends, she

is quiet in class and does not always contribute to class discussions. However, she

expresses herself well in writing. At home, Molly spends about an hour every other day

on her family's computer chatting with friends on MSN or playing on kid-friendly

websites.

Role of the Researcher

   The role of the qualitative researcher ranges on a continuum from on one point

where the researcher is fully present and a co-participant, to the other point where the

researcher is experiencing, without being fully involved in, the events around him or her (Rossman & Rallis, 2003). Creswell (1998) suggested that the qualitative researcher often takes on the role of an active learner and tells the story from the participants' point of view, rather than as an expert passing judgment. The researcher's role as an active learner is becoming especially important in today's literacy classrooms. Often, the researcher's own technical literacy (knowledge), within the context of observation or study, constrains or broadens what he/she can observe, and, therefore, is in a position to explain and theorize (Steinkuehler, Black, & Clinton, 2005). Miller and Olson (1998) emphasized that the reality of today's literacy classroom often requires more participation than originally planned since the researcher often unintentionally assumes the role of technical advisor and computer teacher. I found this to be particularly true in this study; I was undeniably an active participant observer.

A myriad of technical issues, ranging from setting up the equipment every day to dealing with hardware and software concerns, demanded much of my time. Although the classroom teacher provided a large amount of the instruction, I provided technical support, monitored student groups, and modeled technology skills and applications on a daily basis. Due to Mrs. Stitt's recent assignment as an elementary school principal for the upcoming school year, she was absent on numerous occasions which transferred many of the instructional responsibilities to my role. Table 3.1 provides a detailed view of the researcher's roles and responsibilities during this study.

Prior to entering the classroom, an application for human-subject approval from the IRB of the Office of Research Compliance of Kansas State University was submitted and approved (see Appendix C). Permission from the school district was also requested

and granted from the Associate Superintendent of Schools. Signatures were obtained

from each student and his or her parent(s)/guardian(s) granting permission for students to

participate in the study (see Appendix D). All student participants were assured of the

privacy and confidentiality through the use of pseudonyms. No adverse effects to human

subjects involved in this study were anticipated nor observed.

Role of the Teacher

Prior to the study, the Mrs. Stitt designed and taught lessons dealing with equality,

the Civil Rights Movement, and African American history. To prepare for this study,

Mrs. Stitt and I jointly selected the e-books and considered the available technology and

how to best schedule and utilize the technology within the school and classroom setting.

Participation in these lesson provided students with prior knowledge relating to the

selected literature. Throughout the school year, Mrs. Stitt also engaged her students in a

variety of lessons and activities involving technology, including multimedia software and

Internet use. Furthermore, she provided her students numerous opportunities to read and

respond to historical fiction.

As explained in Table 3.1, Mrs. Stitt assumed the role of classroom teacher and

facilitator of the electronic reading workshop. She explained many of the procedures,

expectations, and content knowledge and guided students in reading e-books, responding

to literature in electronic journals, participating in online literature discussions, and

collaboratively creating response projects. Mrs. Stitt corresponded with parents and

informed them of the study during spring parent-teacher conferences. She also

communicated with teachers and staff members in the building to secure the use of the mobile lab and computer lab as needed.

Throughout the study, Mrs. Stitt and I met approximately once a week and communicated regularly via e-mail to discuss students' progress, plan for and schedule upcoming sessions, and reflect upon previously taught lessons. During these meetings, I informally interviewed Mrs. Stitt about insights regarding the content and progress of the electronic reading workshop and the direction of the study.

ERW Implementation and Procedures

To explore the integration of technology within a reading workshop, close consideration was given to appropriate and available resources and materials within a feasible timeline. What follows is a detailed discussion of the implementation and procedures of the electronic reading workshop within the fifth-grade classroom.

Timeline

The electronic reading workshop (ERW) was initially scheduled to begin on February 12 and end on April 9, 2007. However, prior to and for the duration of the study, a series of unforeseen problems occurred which altered the original schedule considerably. The downloading process of e-books proved to be time consuming and difficult. Initially, the district's firewall prevented the downloading process, but after contacting the district's technology department, the issue was resolved within a few days. At that point, after successfully downloading and installing three e-books, all subsequent attempts were prohibited. An error message indicated a server error, but did not identify

the specific problem. The district technology staff was supportive and understanding, but unable to solve the problem. After repeated downloading attempts spanning over several days, I was finally able to obtain three additional e-book copies resulting in only six of the school's 29 laptops with e-books. In addition, I borrowed four laptop computers (iBooks) from the university, on which e-books were downloaded without any difficulty, resulting in ten available laptops with e-books.

Throughout the months of February and March, availability to the school's computer lap and mobile laptop carts was extremely limited. Because all students in grades three through six participate in the state's online assessments in both reading and math, all computers were used for test preparation or testing purposes. The lack of available computers delayed the study further.

As indicated in Table 3.1, three introductory sessions took place in February. To provide time to solve technology-related issues and to ensure availability of computers, subsequent ERW sessions did not begin until after spring break. Beginning on March 26 and ending on May 10, students engaged in 30 ERW sessions of 60-90 minutes, resulting in approximately 43 contact hours. Table 3.1 explains the focus of each ERW session along with the specific activities in which students engaged. Additionally, the teacher's role and the researcher's role are presented.

Table 3.1 ERW Timeline

Date	Purpose/ ERW Component	Activities	Teacher's Role	Researcher's Role
U 2/15 1:30-2:00	• Introduction of study	• Introduce the two books to the students. Ask them to consider selections. • Introduce the author, Christopher Paul Curtis. Visit author's website.	• Distribute parent/student consent forms. • Introduce the two books to students. • Determine reading selection for each student. • Group students into small groups of 4-5 students (for online literature discussions).	• Explain procedures and purpose of study. • Provide parent/student consent forms. • Introduce author's website to students (whole class; use of LCD projector and classroom computer)
F 2/16 8:45-9:45	• Introduction of study, cont. • Provide students with prior knowledge	• Provide prior knowledge about the Great Depression (relates to *Bud, Not Buddy*) and the Civil Rights Movement (relates to *The Watsons Go to Birmingham – 1963*) through children's literature	• Book Talks: Use *Children of the Great Depression* (by Russell Freedman) and *Through My Eyes* (by Ruby Bridges) to provide students with prior knowledge of the Great Depression and the Civil Rights Movement • Collect parent/student consent forms •	• Remind students about parent/student consent forms • Assist with Book Talks and discussions
M 2/19 9:45-11:15	• EWR Literature Response Journal	• Complete pre-reading questions	• Minilesson: Effective response writing. Discuss requirements for pre-reading questions (complete sentences, answer all questions, etc.)	• Explain to students how to access ERW Literature response journals on the school's server (including pre-reading questions) • Create pre-reading questions and copy those into each child's ERW literature response journal
3/15-3/16	• Parent/teacher conferences – no school			
3/19-3/23	• Spring break – no school			
M 3/26 9:45-11:15	• EWR Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations.	• Assign groups, books, and computers	• Minilesson: Message board basics. Show KSOL Message Board using projector; Assign passwords, user IDs, and log-in procedures. • Minilesson: e-Book basics. Show how to access e-books and tools.

Date	Purpose/ ERW Component	Activities	Teacher's Role	Researcher's Role
T 3/27 10:45-12:00	• EWR Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Minilesson: Posting messages. Discuss various forms of posts on message board (length, quality, insights, etc.)	• Explain how to "reply" to posts.
W 3/28 9:45-11:15	• ERW Literature selection • ERW Literature Response Journals	• Read e-books • Complete ERW Literature Response Journal Entry #1	• Explain guidelines for response and expectations for journal writing	• Demonstrate access and use of student folders (ERW literature response journals) on school server
U 3/29 1:00-2:00	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Minilesson: Effective prompt writing. Explain how to write an effective prompt (open-ended, thought-provoking, etc.).	• Assist teacher in class discussion about writing an effective prompt. • Provide technical support
F 3/30 10:00-11:30	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Teacher absent (substitute present)	• Assist students as needed with reading and/or online literature conversations • Provide technical support
M 4/2 10:30-11:30	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Teacher absent (substitute present)	• Assist students as needed with reading and/or online literature conversations • Provide technical support
T 4/3 10:45-12:00	• ERW Literature Selection • ERW Literature response journals	• Read e-books • Complete ERW Literature Response Journal Entry #2	• Teacher absent (substitute present)	• Assist students as needed with reading and/or literature response journals • Provide technical support
W 4/4 2:00-3:30	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Minilesson: Review how to write an effective prompt (open-ended, thought-provoking, etc.).	• Assist teacher in class discussion about writing an effective prompt. • Provide technical support
T 4/5 10:45-12:00	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Teacher absent (substitute present)	• Minilesson: What makes a good reply to a message board prompt? • Assist students with reading and literature discussions • Provide technical support
F 4/6 10:00-11:30	• ERW Literature Selection • ERW Literature Conversations ERW	• Read e-books • Participate in online literature conversations	• Monitor, guide, and support students during the ERW	• Assist classroom teacher and students as needed

Date	Purpose/ ERW Component	Activities	Teacher's Role	Researcher's Role
M 4/9 10:30-11:30	• ERW Literature Selection • ERW Literature Conversations ERW	• Read e-books • Participate in online literature conversations	• Monitor, guide, and support students during the ERW	• Assist classroom teacher and students as needed
T 4/10 8:45-10:00	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Minilesson: Discuss number and quality of responses. Show students reports on KSOL message board. • Monitor, guide, and support students during the ERW	• Assist classroom teacher and students as needed
W 4/11 2:15-3:30	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Minilesson: Social studies connection, Discussed Civil Rights Movement and the Great Depression. • Monitor, guide, and support students during the ERW	• Assist classroom teacher and students as needed
U 4/12 8:45-9:45	• ERW Literature Selection • ERW Literature Conversations	• Read e-books • Participate in online literature conversations	• Teacher absent (substitute present)	• Minilesson: Review what makes a good reply to a prompt on the message board? • Assist students with reading and literature discussions • Provide technical support
F 4/13 10:45-12:00	• ERW Literature Selection (final reading day) • ERW Literature Response Journals	• Read e-books (finish books) • Complete ERW Literature Response Journal Entry #3	• Minilesson: Overview of "Epilogue" and "About the Author." • Monitor, guide, and support students during the ERW	• Assist classroom teacher and students as needed • Provide technical support
M 4/16 1:30-2:30	• ERW Project: Virtual Guides	• Class discussion about the ERW experience up to this point • Generate ideas for project response options with group members	• Lead class discussion about the ERW experience up to this point • Explain guidelines and expectations for group projects. Handout: *A Virtual Book Guide* and green *Chapter sheets.*	• Introduce two examples of project response options (two different "virtual guides to the literature") • Assist classroom teacher and students as needed
T 4/17 1:15-2:15	• ERW Project: Virtual Guides	• Generate ideas for each chapter	• Review guidelines and expectations for response project	• Assist classroom teacher and students as needed

Date	Purpose/ ERW Component	Activities	Teacher's Role	Researcher's Role
W 4/18 2:45-3:30	• ERW Project: Virtual Guides	• Work on projects • Review/summarize ideas from each member within the group.	• Teacher absent (substitute present)	• Overview of handout: *What to Include in the Virtual Guide?* • Assist students as needed.
U 4/19 1:00-2:00	• ERW Project: Virtual Guides	• Work on projects	• Monitor, guide, and support students during the ERW	• Minilesson: Explained how to "transfer" ideas from paper to a PowerPoint slide.
F 4/20	• No school			
M 4/23	• No ERW (scheduling conflict; no computers available)			
T 4/24 11:00-12:00	• ERW Project: Virtual Guides	• Work on projects	• Monitor, guide, and support students during the ERW	• Minilesson: Demonstrate how to create/insert a hyperlink. Handout: *How to Create an Internet Hyperlink in PowerPoint*
W 4/25 9:15-10:00	• ERW Project: Virtual Guides	• Work on projects	• Teacher absent (substitute present)	• Minilessons: Demonstrate how to insert slides, use various PP tools, and use action buttons. Discuss importance of adding text to slides and linking to images or specific Web pages (not search engines).
U 4/26 10;45-12:00	• ERW Project: Virtual Guides	• Work on projects	• Minilesson: Discuss important components of a title slide (title of book, author of book, title of presentation, group members' names, etc.)	• Minilesson: Demonstrate how to use/change color schemes.
F 4/27 9:45-11:00	• ERW Project: Virtual Guides	• Work on projects	• Monitor, guide, and support students during the ERW	• Assist classroom teacher and students as needed
M 4/30 9:00-12:00 1:00-3:00	• ERW Project: Virtual Guides	• Meet with students individually to go over their slides within each group's PowerPoint project	• Teacher absent in the morning	• Pull out students one at a time (work on computer in library) to review each student's slides and assist on an individual basis.
T 5/1 11:15-12:00	• ERW Literature Response Journals	• Complete ERW Literature Response Journal Entry #4	• Teacher absent (substitute present)	• Assist students as needed.
W 5/2	• No ERW (students preparing for MAP testing)			

Date	Purpose/ ERW Component	Activities	Teacher's Role	Researcher's Role
U 5/3 1:00-2:30	• ERW Project response options	• Practice presenting virtual guides.	• Minilesson: Model how to talk and add information to the written text on the slides while presenting.	• Assist classroom teacher and students as needed
F 5/4 10:45-11:45	• ERW Project response options	• Practice presenting virtual guides.	• N/A	• Pull out one group at a time (used computer in the library) to allow each group individual practice time.
M 5/7 10:30-11:30	• ERW Project response options	• Practice presenting virtual guides.	• N/A	• Pull out one group at a time (used computer in the library) to allow each group individual practice time.
T 5/8 11:00-12:00	• ERW Project response options	• Project Presentations	• Facilitate presentations	Provide technical support
U 5/10 1:00-2:00	• ERW Project response options	• Project Presentations	• Facilitate presentations	• Provide technical support
M 5/22 3:00-3:40	• Debriefing session	• Class discussion • Student Interest Questionnaire	• Facilitate discussion	• Audiotape discussion • Provide questionnaires • Facilitate discussion

Total hours with students: 42.25

ERW Literature Selection

The Kansas fifth-grade social studies curriculum is primarily history-based with a strong emphasis on U.S. history. In the past, Mrs. Stitt has often turned to historical fiction to help her students make meaningful connections with characters and events of the era of study. Hancock (2004) proposed several benefits of teaching with historical fiction:

- Historical fiction brings historical facts to life for young readers.

- Historical fiction provides personal interaction with the people, places, and events of a particular time period.

- Historical fiction emphasizes strong characters while providing readers with the joy of reading about events based on historical facts.

Furthermore, the pilot study revealed that *A House of Tailors,* a work of historical fiction, provided rich responses and generated a wide variety of literature response options. "Quality historical fiction breathes life into history and the curriculum and connects across time with personal feelings and experiences" (Hancock, 2004, p. 149). While planning this study, Mrs. Stitt and I agreed that historical fiction was the desired genre. However, a review of available e-books revealed a rather limited selection of historical fiction for children and young adults. I did not find e-books to support upcoming fifth-grade history units relating to the American Revolution and the Westward Expansion of the United States. After discussing the available selection of e-books with the classroom teacher, it was decided to select books that would tie in with a unit on the American Civil Rights Movement which Mrs. Stitt introduced in January, 2007 in

conjunction with Martin Luther King, Jr. Day and Black History month. Two books by
the award-winning author Christopher Paul Curtis were selected:

- *Bud, Not Buddy* (1999) won both the Newbery Medal and Coretta Scott King
  Award in 2000. This highly acclaimed novel follows a determined African
  American boy during his fervent struggles to find a home during the Great
  Depression.

- *The Watsons Go to Birmingham – 1963* (1996)*,* captures the adventures of ten-
  year-old Kenny and his family, the Watsons of Flint, Michigan, as they set out on
  a trip to Birmingham, Alabama, toward one of the darkest moments in America's
  history. The book received a 1996 Newbery Honor and a 1997 Coretta Scott King
  Honor Award.

The fifth-grade class was introduced to paper copies of the books during my
initial classroom visit on February 15. Using a projector, screen, and laptop computer I
also explored and discussed the author's official website with the students.   Mrs. Stitt
asked the students to consider both reading choices and express their preference to her.

As mentioned earlier, due to technical difficulties in downloading electronic
copies of the books, I was only able to secure ten e-book copies (five of *Bud, Not Buddy*
and five of *The Watsons Go to Birmingham – 1963*).   Mrs. Stitt selected ten students to
read the e-books (the participants of this study) while the remaining 16 students were
given paper copies of the books (eight of *Bud, Not Buddy* and eight of *The Watsons Go to
Birmingham – 1963).* Mrs. Stitt provided me with a roster identifying which of the two
titles should be assigned to each student based on their personal choice and previous
reading experiences.

ERW Literature Response Journals

Prior to this study, I considered several options for electronic literature response journals as the increased use of technology and students' engagement in the new literacies have fashioned numerous approaches to journaling, including e-mail, web logs (blogs), electronic journals, and electronic discussion boards (King, 2006). Due to safe and easy access, I opted to utilize Microsoft Word to create the electronic literature response journals on the school's server in the students' individual folders. The students had previous word processing experience and knew how to access and save documents in their individual folders on the school's student shared drive.

The journal served two distinct purposes: First, it provided a safe environment in which students engaged in written reader response, allowing them to express their own thoughts without worrying about supplying the "right" answer. Second, it encouraged students to reflect on their participation in the electronic reading workshop, share insights about what they had learned, and ask questions. As indicated in Table 3.1, prior to reading the book, the students were asked to write an initial pre-reading entry discussing their thoughts and anticipations regarding the upcoming e-book reading experience (see Appendix E). Throughout the e-book readings, five additional journal entries were completed.

Guided by the pilot study, the students responded to two kinds of open-ended prompts: 1) literature prompts, and 2) ERW prompts. The literature prompts related directly to the literature itself, encouraging the reader to a deeper interaction with the text. The ERW prompts, on the other hand, addressed the ERW experience in general and the

e-book reading experience in particular (see Appendix F for a complete list of journal prompts).

After each session, Mrs. Stitt and I read the journal entries and used the students' responses to guide future instruction, including classroom discussions and minilessons.

ERW Literature Conversations

After reviewing numerous software options which provide for threaded discussions and/or live chats, I decided to use the electronic message board on K-State Online. All 26 fifth graders were granted temporary access to K-State Online, available at no cost through the university's Webpage. Each child was assigned an eID and a password which provided them with access to K-State Online's electronic message board in a safe environment. The message board was accessible to four groups of students: *Bud, Not Buddy Group #1* consisted of five students reading *Bud, Not Buddy* as an e-book. *Bud, Not Buddy Group #2* consisted of 8 students reading the same book in paperback. *The Watsons Go to Birmingham Group #1* was made up by five students reading the e-book version of *The Watsons Go to Birmingham – 1963* . The remaining eight students were part of *The Watsons Go to Birmingham Group #2* which read paper copies of the book. Although all 26 students participated in the electronic reading workshop, this study focused exclusively on the ten students reading e-books (see Participant Biographies, p 81).

As explained in Table 3.1, the students were initially introduced to the electronic message board on March 26, 2007. Using a projector, large screen, and laptop computer, I modeled how to access K-State Online from the KSU homepage, log on to the message boards, and reply to a previously posted discussion prompt.

The students learned additional features and procedures of online message board discussions over the next few sessions. Throughout the reading experience, they participated in multiple discussions, or threads, about the book.   They moved from answering teacher-created prompts to composing and posting their own prompts. Mrs. Stitt and I conducted several minilessons to assist students in improving the quality of their prompts and replies to other group members (see Appendix G).   We monitored the literature conversations closely and occasionally joined the conversations. As noted by Grisham and Wolsey (2006), the roles of teachers and researchers often change from "directors of" to "participants in" the threaded discussions in attempts to guide students in a certain direction, keep the conversation on track, or socially construct meaning along with their students.

ERW Virtual Guide Response Projects

Guided by the pilot study and suggestions from the classroom teacher, the students created variations of the virtual guide to literature as their response project options. As shown in Table 3.1, Mrs. Stitt and I first introduced the project on April 16, 2007,   During this session, the students were given time to choose a topic and brainstorm ideas for their virtual guides. We emphasized that the sample produced by preservice teachers at the university was intended to provide ideas and inspiration, but the fifth graders should think creatively and feel free to diverge from the format and content of the model.

The students spent 14 sessions planning, creating, publishing, and presenting their virtual guide response projects. The group project provided students with the opportunity to socially construct meaning by collaborating with their group members. Leu, et al.

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(2004) emphasized that the new literacies demand skilled teachers that can construct and facilitate learning situations that take advantage of students' literacy skills and support students in exchanging ideas and sharing their expertise. Mrs. Stitt and I assisted and guided the students on numerous occasions. Numerous minilessons emphasizing specific technology skills and applications, along with effective presentation and publishing skills were taught to the class as a whole of small groups of students (see Appendix G).

Upon completion of the response project, the students presented their virtual guides to the class. Using a projector, laptop computer, and interactive whiteboard (Smart Board), each group visually presented their final product while explaining the processes involved in conceptualizing, researching, and publishing their project.

Debriefing

On May 22, 2007, the researcher concluded the study by facilitating a whole-class discussion during which the students shared their reactions to the ERW experience.   In addition, students filled out a written questionnaire about their personal interests, home technology use, and general biographical information (see Appendix H). Each fifth grader was also given a data CD containing their group's PowerPoint presentation of their virtual guide to share with their parents. On June 4, the researcher met with the classroom teacher and conducted an audio recorded exit interview.

Data Collection

In this study, my goal was to identify and describe what happens when aspects of technology are simultaneously integrated with key components of an electronic reading

workshop in a fifth-grade classroom. In particular, I examined how students interacted

with e-books, opportunities for reader response to e-books, and evidence of socially

constructed learning during threaded discussions and virtual guide response project

development.

Creswell (1998) proposed that the essence of qualitative research is extensive

collection of data, typically from multiple sources of information including interviews,

observations, documents, and audio-visual materials. Creswell (1998) further

acknowledged that new forms of information, including e-mail and computer software,

challenge such traditional categorization and function as additional and viable sources of

data. Because this study involved multiple components of an electronic reading

workshop (literature selection, literature response journals, literature conversations, and

virtual guide response projects), multiple contexts (classroom, computer lab, mobile lab,

online community), and multiple participants (ten students), a wide array of data were

available for the purpose of providing an in-depth description and analysis of the study.

As presented in Table 3.2, data sources and collection strategies included observations

and field notes, digital voice recordings of teacher and student interviews, digital

photographs and video clips of ERW sessions, and multiple documents and artifacts.

Field Notes and Observations

Observation has been portrayed as "the fundamental base of all research methods"

in the social and behavioral sciences (Adler & Adler, 1994, p. 389). Naturalistic

observation or fieldwork was an essential component of this study. I was present during

all 33 sessions of the ERW, in which the participants were observed within the natural

classroom setting. Acknowledging my role as an active participant observer, it was not

Table 3.2 Research Question, Data Collection, and Data Analysis

Research Questions	Data Collection	Data Analysis
Overall Question: How does the integration of technology within the context of a fifth-grade electronic reading workshop support the emergence of new literacies?	• Observations/field notes • Electronic literature response journals (ERW prompts) • Project response options (virtual guides to literature) • Audio recordings of interviews with participants • Digital photographs/video clips of ERW sessions	• Transcribe/review audio and video recordings • Categorize and code emergence of new literacies within the context of the ERW, based on data gathered from interviews, observations, field notes, written reflections, and within each ERW component (see below). • Rich description based on findings of collected data.
Research Question #1: How do fifth-grade students interact with and perceive literature (e-books) in an electronic reading workshop?	• Observations/field notes • e-books • Digital photographs/video clips of students' interaction with e-books • Electronic literature response journals (ERW prompts) • Audio recordings of interviews with participants	• Review e-books for use of tools and features (i.e., highlighter, note tool, stamps, and voice recordings) • Review fieldnotes, interview transcripts, digital photographs/video clips; identify emerging trends and categories in students' reading venue, use of e-book tools, and page layout/view of e-books.
Research Question #2: What types of reader response emerge within an electronic reading workshop in a fifth-grade classroom?	*Literature Selection (e-books)* • e-books • Observations/Fieldnotes • Digital photographs/video clips of ERW sessions *Literature Response Journal (electronic journals)* • Literature response journals (literature prompts) • Observations/fieldnotes *Literature Conversations (online discussions)* • Online transcripts • Literature response journals (ERW prompts) • Instructional handouts *Project Response Options (virtual guides to literature)* • Student-created multimedia response projects • Digital photographs/video clips of ERW sessions and project presentations • Instructional handouts • Literature response journals (ERW prompts)	• *Review e-books.* Look for use of tools and features (i.e., highlighter, notes, voice recordings, etc.) • *Review electronic response journals.* Look for emerging trends in literature prompts and ERW prompts; personal response to e-books, use of formatting tools, and students' questions. • *Review online transcripts.* Look for trends and emerging categories in teacher-constructed prompts, students-constructed prompts, and replies to student-constructed prompts. Examine numerical aspects of KSOL message board (i.e., number of postings, length of responses, new threads). • *Review virtual guide response options.* Look for use of hyperlinks (Internet and/or within PP slideshow); use of multi-modal features (i.e., animation, sound effects, images, etc.) • *Review/transcribe digital audio tracks, pictures, and video clips.* Add digital tracks to iPod for repeated listening. • *Review observations/fieldnotes.*
Research Question #3: How does an electronic reading workshop support socially constructed learning in a fifth-grade classroom?	• Audio recordings of researcher/teacher meetings (informal teacher interviews) • Observations/fieldnotes of ERW sessions • Literature response journals (ERW prompts) • Digital audio tracks, photographs, and video clips of ERW sessions and project presentations	• Transcribe and review audio recordings from meetings with teacher and interviews with students. • Look for emerging trends and patterns. Identify categories and begin coding.

plausible to engage in in-depth note taking during every ERW sessions as I was too busy

teaching and/or providing technical support. However, at the beginning of each session, I

set up my laptop computer in a central location in the classroom, which allowed me to

instantly and efficiently add notes as important events or communications were observed.

Upon conclusion of each session, I reviewed my notes and appended additional

comments about the day's events, activities, and conversations, along with personal

reflections and insights (see Appendix I). Bogdan & Biklen (1998) referred to such

written descriptions, or field notes, as "the written account of what the researcher, hears,

sees, experiences, and thinks in the course of collecting and reflecting on the data in a

qualitative study" (pp. 107-108). In addition to enhancing participant observation, I

employed field notes to supplement other methods of data collection.

Digital Audio Recordings

I used a digital voice recorder to depict the sounds of the electronic reading

workshop. As explained in Table 3.1, my role in this study included facilitating whole-

class discussions. Recording such sessions allowed me to review the voices of the

electronic reading workshop and add reflective field notes at a later time. Fortunately,

the digital voice recorder clearly recorded sounds within a classroom setting. During

whole-class discussions, students were asked to raise their hands before contributing to

the discussion, which allowed me to identify each speaker by calling his or her name.

This proved helpful when identifying voices during review of the digital tracks. The

digital voice recorder was also used during my formal and informal meetings with the

classroom teacher and individual conversations with the participating students. Mrs. Stitt

and I met approximately once a week to reflect and plan for upcoming sessions. During the second week of electronic reading workshop I formally interviewed all participants to learn how they perceived themselves as readers and technology users (see Appendix J). These audio recorded interviews took place in the hallway outside the classroom and lasted for approximately 20 minutes each.

Digital Photographs/Video Clips

Due to my active involvement in the daily operations and facilitation of the ERW, I was only able to use a digital video camera to capture the fifth graders' reading processes and interactions with the electronic book during a few sessions. I did, however, take large quantities of digital photographs during the ERW sessions. To learn how "offline spaces" (classroom) and "online spaces" (computer with e-book and online discussions) inform each other, it is essential to intertwine elements such as facial expressions and body movements with mouse clicking and the turning of electronic pages (Jacobs, 2004). Although limited in length and content, the video clips played a valuable role in capturing how students explored and manipulated the e-books, including various tools and features. The digital photographs captured screen shots of the students' laptop computers, also permitting analysis of their use of e-book tools. The fifth graders' presentations of their final projects were video taped using the school's VHS camera. These recordings, in addition to the student-created multimedia projects, allowed for repeated review and multiple perspectives of the same event.

Documents and Artifacts

During this study, each component of the electronic reading workshop produced a wealth of documents and artifacts which were later meticulously analyzed. Below is a brief description of these documents and artifacts and the process involved in collecting these sources.

e-Book Responses

Initially, I had planned to review each of the students' e-books at the completion of the reading experience for a detailed analysis of the specific tools and features used by each reader. Unfortunately, as students shut down their computer at the end of each reading session, their use of tools, including highlights and notes, did not save. Although I never learned with certainty what caused this problem, it forced me to change how I collected this data. At the end of each reading session, knowing that the students' comments would not save, I carefully copied their use of electronic tools, taking care to record students' notes and responses exactly as they originally appeared. Because this was a tedious and time consuming process, during which many of the laptops ran out of battery power, I was only able to review one or two e-books at the end of each session. To be consistent, I asked Madison, and avid e-book tool user, for her computer at the end of most reading sessions. At times, other students would request that I record their use of e-book tools, especially if they had discovered a new tool or used a familiar tool in a new way.

Literature Response Journals

Including the pre-reading response, each student submitted six journal responses in which they responded to two distinct teacher-constructed prompts, including literature

prompts and ERW prompts (see Appendix F).   The literature prompts related directly to

the unfolding plot of the e-books, while the ERW prompts encouraged students to reflect

on their participation in the electronic reading workshop. The students saved their

electronic literature response journals in their individual folders on the school's student

shared drive.   Following each response session, I retrieved, reviewed, and saved

electronic copies of the journals to a portable external memory (flash drive). A backup

copy was saved to the school's shared drive in a folder created solely for this purpose.

Online Transcripts

The students spent fifteen sessions reading e-books. Eleven of those ended with

15-20 minutes of online discussions among group members reading the same e-book.

Following each discussion session, I accessed, reviewed, and printed out the resulting

message board transcript, including extra copies for Mrs. Stitt. The transcripts provided

an ongoing, authentic record of students' online conversations about the literature,

including exact date and time of each contribution. In addition, numeric summaries of

students' use of the message board were accessed and printed out.   These reports

provided valuable insights to the length and frequency of students' online responses.

Virtual Guide Response Project

Working closely with their group members, the students created technology-based

projects in response to the e-books. The projects, or virtual guides to the literature,

extended the students' knowledge about and connection with the book through a series of

PowerPoint slides including hyperlinks, images, sounds, animations, and text effects.

Copies of students' individual slides were saved in each child's folder on the school's

shared drive. At the end of each session, I reviewed the progress of each student and

saved copies of their individual slides on an external memory. As the project came to an

end, all individual slides were compiled into one presentation, or virtual guide, per group.

In addition to saving copies for data analysis, I burned data CDs for all students, allowing

them to take share copies of their projects with their parents.

Data Analysis

In this case study, the primary goal for data analysis was to make a detailed

description of the electronic reading workshop. To attain an overall sense of the data, the

analysis initially involved a general review of all information along with summarizing

field notes (Creswell, 1998; Tesch, 1990). As illustrated in Tables 3.1 and 3.2, data

collection and analysis were ongoing and simultaneous during the study. Using

categorical aggregation (Stake, 2000), multiple sources of data were examined in search

of emerging categories of information and meanings.

What follows is a precise description of the analysis of fieldnotes, audio

recordings, digital photographs/video clips, and multiple documents and artifacts which

were produced within the context of the electronic reading workshop. The findings are

presented through descriptive writing; authentic samples; and visual representations,

including figures, tables, and frequency matrixes, to visually display the data for each

recognized category.

Analysis of Field Notes

At the end of each session, I reviewed my notes and added personal reflections

and insights as well as additional comments about the day's events. Although initially

written in the same Word document, I clearly separated the many recorded e-book responses from my own commentary by adding bold headings (i.e., **From Madison's e-book**). Verbatim comments or quotes were changed to italicized font. The fieldnotes clearly supplemented other data sources as I reread them numerous times while exploring emerging categories (See Appendix I).

Analysis of Digital Audio Recordings

A digital voice recorder was used to capture the sounds and voices of the electronic reading workshop. A few class discussions and ERW sessions were recorded, along with formal and informal student and teacher interviews. Following each recorded session or interview, I synced the digital voice recorder with my laptop computer, naming each sound file after the interviewee and date of conversation (i.e., Elaina April 4). I also converted the digital sound tracks from WAVE format (the standard Windows sound file format) to AAC files (Advanced Audio Coding) which are compatible with most MP3 players. Importing teacher and student interviews to my iPod nano allowed for repeated listening of recordings in the authentic voices of the participants. I found this to be a convenient and effective way to sift through large amounts of interviews. Select portions of audio tracks were transcribed and enhanced by my field notes. The digital format allowed for easy access and playback functions at various speed directly on my laptop computer. This, in turn, made the process of transcribing voice recordings very efficient. Being well immersed in the content of the audio files from repeated listening and transcriptions of sound files proved to be very helpful, since the recordings were the primary source for many of the authentic examples used in this study.

Analysis of Digital Photographs/Video Clips

Throughout the study, I captured images from the electronic reading workshop through approximately 50 digital photographs and ten digital video recordings ranging in length from 15 seconds to six minutes. Photographs and digital video clips were transferred on a continuous basis from a digital camera to my laptop computer where they were stored. While exploring emerging trends relating to students interactions with e-books and use of e-book tools, a thorough review of the photographs and video recordings proved to be very helpful as they validated or supplemented my fieldnotes. The digital photographs captured screen shots of the students' laptop computers, also permitting analysis of their use of e-book tools.

Analysis of Documents and Artifacts

Categorical aggregation was used to review multiple documents and artifacts in quest for emerging categories or trends. As suggested by Sandelowski (1995), analysis of written documents began with proofreading the material and simply underlining key phrases or words as they tentatively began to make sense. This process was repeated and results compared with multiple documents and artifacts.

Analysis of e-Book Responses

As previously mentioned, I carefully recorded samples of students' use of e-book tools by writing detailed descriptions of how and where these tools were used. Authentic responses were copied, including students' original spelling and conventions. These recordings allowed me to capture what, in reality, did not save on the students' laptops (see Appendix I). After repeated readings of the recorded responses, emerging patterns

began to appear relating to students' spontaneous use of e-book tools in response to the text. I noted the type of tools students used, frequency of their use, and how the tools were used in response to the literature. Revisiting my fieldnotes and digital photographs, particularly of screen shots, helped support and clarify emerging categories.

Analysis of Electronic Literature Response Journals

The electronic literature response journals contained two types of teacher-constructed prompts. The literature prompts elicited responses to the text as the plot unfolded. The ERW prompts, on the other hand, encouraged students to reflect on their own involvement in the electronic reading workshop. I began the analysis of the electronic literature response journals by sorting and compiling students' responses by prompt. For example, all ten responses to Prompt 1 in Journal 1 were copied and pasted onto the same page for easy comparison. The same process was repeated for each prompt. The prompts and correlating student responses were identified as literature prompts or ERW prompts. Furthermore, with the help of Microsoft Word and Excel, a word count was conducted of every response, allowing for analysis of response lengths to the two types of prompts.

The students' responses to the literature prompts were coded according to Hancock's (1993a) categories for students' literature response journal entries, and exemplified through carefully selected samples from the students' electronic journals. A matrix was developed to organize and illustrate students' individual use of formatting tools supported by authentic examples. Students' questions were identified and organized according their purpose and relevance. Illustrative examples were selected to lend authentic voices of children to this study.

Analysis of Online Transcripts

The online discussion transcripts provided an ongoing, authentic record of students' message board conversations about the literature. I repeatedly reviewed printed copies of the transcripts both during and after data collection. Students created their own discussion prompts by starting a new thread on the message board. As a springboard for initial coding of the student-constructed prompts, I utilized Hancock's four identified types of teacher-constructed prompts: 1) experiential prompts, 2) aesthetic prompts, 3) cognitive prompts, and 4) interpretive prompts. The transcripts were recoded using the emerging categories. Authentic examples were selected to illustrate and clarify each category.

Transcripts were examined further to look for trends and patterns in the replies elicited by each type of student-constructed prompt. I counted the replies elicited by each prompt and performed a brief numerical analysis of this information, including number of replies, mean, and range.

A numeric summary was calculated and compiled to provide valuable insights to the students' use of the message boards. For each participant, information include the number of posts written, words written, new threads, posts read, replies written, and the average number of words for each post.

Analysis of Virtual Guides Response Projects

Two virtual guides to the literature, one from *Bud, Not Buddy* and one from *The Watsons Go to Birmingham – 1963,* were analyzed at the end of this study. Each virtual guide consisted of a PowerPoint slideshow to which individual group members had

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contributed individual slides over certain chapters or sections of the e-book. Each

presentation included Internet hyperlinks and within document hyperlinks. Initial

analysis involved identifying and coding the two types of hyperlinks. I closely reviewed

the destinations of all Internet hyperlinks, revealing four emerging categories. Analysis

of the virtual guides further informed students' use of instructional technologies and

multi-modal literacies within the context of the electronic reading workshop. Description

was used to explain the process of conceptualizing, researching, publishing, and

presenting the virtual guides. In addition, a matrix was created to organize and illustrate

students' use of multi-modal features within their PowerPoint presentations. In this

study, the findings are presented in Chapter Four through descriptive narratives, authentic

samples, and visual representations including figures, tables, and frequency matrixes, to

visually display the data for each recognized category.

Establishing Trustworthiness

Traditional positivist criteria of internal and external validity are commonly

replaced by terms such as trustworthiness and authenticity by the naturalistic inquirers

(Lincoln & Guba, 1985; Denzin & Lincoln, 20000). Lincoln and Guba (1985) refer to a

study's integrity by its credibility, transferability, dependability, and confirmability.

Creswell (1998) explained that to establish credibility, the naturalistic researcher employ

techniques such as prolonged engagement in the field and triangulation of data. Rich

description is used to ensure transferability of findings. The naturalistic researcher seeks

dependability that the results will not be prone to instability and change, rather than the

conventional inquirer's notion of reliability. To establish the value of the data, the

naturalistic researcher looks to confirmability through an auditing of the research process. While criteria differ decidedly from positivist terminology and views, establishing a study's integrity, or trustworthiness, is equally important to the naturalistic researcher. In this study, trustworthiness will be established through member checks, triangulation, prolonged engagement, inter-rater reliability, and rich description.

Member Checks

Regarded by Lincoln and Guba (1985) as "the most critical technique for establishing credibility" (p. 314), member checks played a vital role in this study. Throughout the study, Mrs. Stitt and I met approximately once a week outside the electronic reading workshop. These meetings served as planning periods for upcoming ERW sessions and as a gateway for discussion and evaluation of the study's progress. Furthermore, our visits provided Mrs. Stitt with an opportunity to ask questions, seek clarification, and offer her perceptions of emerging trends and coding categories. As explained by Lincoln and Guba (1985), requesting a participant's view of the findings and interpretation of findings gives case studies credibility. In this study, Mrs. Stitt played an active role in reviewing drafts of my work, offering suggestions, and judging the accuracy and credibility of the findings.

In addition to seeking insights and perceptions from Mrs. Stitt, I requested involvement in the study by the school's library/media specialist who contributed valuable suggestions for efficient use of instructional technologies available within the building. During our almost daily encounters, I often asked for her help in problem solving technology-related issues or for input on upcoming ERW minilessons. Member

checks with the classroom teacher and library/media specialist held me accountable while offering support and insights for improving the study.

Triangulation

Stake (2000) suggested that for qualitative researchers the procedures employed to reduce misinterpretation commonly involve triangulation. Triangulation is generally considered a process of using multiple sources or methods to clarify meaning or identify different views of a phenomenon (Smith & Deemer, 2000). Richardson (2000) asserted the concept of triangulation, contending that the central image for qualitative inquiry is the crystal, not the triangle. Richardson (2000) proposed that descriptive, mixed-genre texts have more than three sides. Hence, researchers should "crystallize" rather than "triangulate" as they recognize that there are far more than "three sides" from which to approach a phenomenon. Crystals grow, change, and alter as they reflect externalities *and* refract within themselves, creating colors, patters, and arrays, casting off in different directions. "What we see depends upon our angle or repose" (Richardson, 2000, p. 934). In the crystallization process, the qualitative researcher tells the same tale from different perspectives and multiple points of view.

This study involved multiple students and numerous sources and strategies of data collection. The students read and responded to two different e-books by the same author. Students encountered four opportunities to respond to e-books: 1) use of e-book tools, 2) in electronic literature response journals, 3) during online group discussions, and 4) through participation in a technology-based response project. Evidence gathered from each source were corroborated through comparison with other sources (i.e., entries in literature response journals were compared to transcripts of online discussions). The

credibility of data sources were continually checked and discussed during meetings with the classroom teacher.

Prolonged Engagement

The investigator in a qualitative study must spend a considerable amount of time in the field in order to build trust with participants, learn the culture, and determine what is relevant to the purpose of the study (Lincoln & Guba, 1985). For trust and rapport to emerge, regular engagement is essential. As indicated in Table 3.1, I was an active participant observer within the classroom context between February 15 and May 10, 2007. Within that time frame, I participated in 34 ERW sessions for approximately 42 student contact hours.

Rich, Thick Description

In contrast to quantitative work, which can be interpreted through its tables and summaries, qualitative research presents itself through its entire text (Richardson, 20000). Rich, descriptive narratives, in which the researcher brings the setting and participants under study to life, helps the reader make decisions regarding transferability (Lincoln & Guba, 1985; Merriam, 2002). Qualitative data is descriptive (Bodan & Biklen, 1998) and the data analysis of this study will be presented through an extensive narrative description of the case and its context. By providing a comprehensive account of the context of the study along with detailed description of procedures and findings, I enable readers to transfer information to other settings. In addition, authentic examples, vivid images, and visual representations of essential findings were used to bring the study to life.

Summary

A qualitative case study approach was utilized to explore, identify, and describe ways technology in a fifth-grade electronic reading workshop can support the emergence of new literacies. With a heavy emphasis on a natural setting and boundaries within the fifth-grade classroom in which the research was conducted, this study lent itself to a qualitative case study design. The qualitative methods embedded in this design invited descriptive data collection, inductive data analysis, and a focus on process rather than product.

Ten fifth-grade students and their teacher, Mrs. Stitt, participated in this study. Throughout the study, I assumed the role of active participant observer. To avoid researcher bias, the classroom teacher provided most of the instruction to the students. However, I frequently assisted in monitoring student groups, provided technical support, and collaborated in the planning and implementation of lessons. Guided by the research questions, numerous data sources were explored. These included fieldnotes, audio recordings, photographs and video clips, and multiple documents and artifacts produced within the context of the electronic reading workshop. To attain an overall sense of the data, the analysis initially involved a general review of the collected data. Using categorical aggregation (Stake, 2000), multiple sources of data were examined in search of emerging categories of information. In this study, trustworthiness was established through member checks, triangulation, prolonged engagement, and rich description.

CHAPTER 4 - Results

As instructional technologies become readily available in today's classrooms, literacy and literacy instruction are changing in profound ways. Professional organizations emphasize the importance of integrating instructional technologies into current language arts instruction (IRA, 2002; NCTE, 2005) and teachers search for effective ways to utilize the potentials of the new literacies.

This case study was conducted during the spring semester of 2007, between February 15 and May 22, in a fifth-grade classroom in an elementary school in the Midwest. It addresses the implementation of an electronic reading workshop in which aspects of technology were integrated within all components of a reading workshop. Throughout the study, ten fifth-grade students read e-books, engaged in electronic literature response, participated in online literature conversations, and created a technology-based response project. While reading e-books, the students utilized electronic tools which allowed them to respond to the literature through notes, highlights, and other interactive features. They also participated regularly in online literature discussions with their group members. In addition, students kept an electronic literature response journal in which they responded to the readings and reflected on their participation in the electronic reading workshop. Upon completion of the e-book, each group created a virtual guide to the literature, a technology-based response project.

A descriptive case study design was used as it provides the researcher with opportunities to seek relationships and variables previously unknown, often resulting in a rethinking of the phenomena (Stake, 1995). Through repetitive, ongoing review of

multiple sources of information (including e-books, literature response journals, online

discussion transcripts, and virtual guides) I sought to establish patterns and emerging

categories to answer the research questions which guided this study.

How does the integration of technology within the context of an electronic reading

workshop support the emergence of new literacies?

1. How do fifth-grade students interact with and perceive literature (e-books) in
   an electronic reading workshop?

2. What types of reader response emerge within an electronic reading workshop
   in a fifth-grade classroom?

3. How does an electronic reading workshop support socially constructed
   learning in a fifth-grade classroom?

Through rich description, I begin this chapter with an account of fifth-grade

students' interaction with and approach to e-books within the context of an electronic

reading workshop. Next I will introduce three vehicles through which the students

responded to the literature during reading: 1) e-book tools, 2) electronic literature

response journals, and 3) online literature discussion boards. Emerging patterns and

categories relating to literature response to e-books will be defined and discussed,

supported by italicized examples of fifth-grade students' responses. To preserve the

unique voices and authentic language of children, students' written responses have been

left untouched. Any changes or clarifications are shown within brackets [ ].

e-Book Reading

It's more fun to read on the computer… I don't know why, but it just

makes it more fun!   (Interview with Charlie.)

To learn more about how and why the students interacted with and reacted to the e-book, I reviewed a plethora of data sources including fieldnotes, transcripts of student interviews, digital photography and video clips, pre-reading surveys, and students' literature response journals in which they had reflected on their participation in the electronic reading workshop. The following section provides a detailed description of students' reactions to and interactions with the e-books prior to, during, and after reading the book.

Pre-Reading

The students completed a pre-reading journal entry prior to reading their e-books (see Appendix E). Their entries revealed that none of the ten participating students had previous experience with e-books. As indicated in Table 4.1 and illustrated in the examples below, eight of the ten students reacted positively when informed by Mrs. Stitt that they had been assigned to the groups reading e-books.

> Madison: *I'm looking forward to it because trying new things is something I like to do and the tools and message board look like a lot of fun…*
>
> Charlie: *Yes, because reading on the computer feels like we're in the hi-tech future.*

Katie reported that she had mixed feelings about the upcoming reading experience.

Katie: *Yes and No because it sounds really fun but in another way is sounds*

really weird but I mostly look forward to reading this book!

Molly, on the other hand, stated that she was not looking forward to reading an e-book

and would prefer to read a paper copy.

Molly: *I'm not that excited and would rather read a book that is not on the*

computer.

Table 4.1 Students' Initial Perception of the e-Book Experience

	Book	**Previous e-book experience**	**Initial perception of e-book (pre-reading)**
Adam	B	None	positive
Elaina	B	None*	positive*
Sing	B	None	positive
Alisha	B	None	positive
Leah	B	None	positive
Mick	W	None	positive
Madison	W	None	positive
Katie	W	None	neutral
Charlie	W	None	positive
Molly	W	None	negative

B = *Bud, Not Buddy*   W = *The Watsons Go to Birmingham - 1963*
* Student was absent when responding to the prompt in his/her literature response journal. Information was obtained at a later time during an individual student interview.

When asked to foresee how reading an e-book would differ from reading a regular

book, three students indicated that reading on the computer might take longer and/or be

more difficult.

Madison: *It's more modern and you never know what the laptop is going to do.*

You can't just grab the book and go, you have to boost up the laptop and so on.

So this will take more time than a paperback book. You can't take it home or

read during extra time.

Five students anticipated that reading an e-book would likely be more exciting, and possibly easier, due to the interactive e-book tools.

> Adam: *It will be a lot easier to read because you can make the font bigger and smaller.*

> Katie: *I think it will be a lot different from reading a regular book because in the book I am reading now I wish I could make marks or notes in the book...*

During Reading

The e-book reading sessions took place over 15 days of approximately 45 minutes. Prior to class, I picked up the mobile laptop carts from the school's library and connected them to a power source and Internet source. The students reading e-books had assigned laptops on which a copy of the electronic book was saved.   The six students reading on the school's laptops picked up their computers from the cart. Those reading on the university's iBooks, gathered their computers from a designated area in the classroom. The process of picking up and turning on the computers, logging on, and opening the e-book proved to be quite time consuming, resulting in the e-book readers starting to read about five minutes later than their paperback-reading classmates. However, with each session, the tasks involved in preparing for and executing the e-book reading sessions, became routine for both me and the students, resulting in a more efficient process.

To identify ways in which the students physically interacted with the e-books while reading, I inductively analyzed multiple sources of information including, fieldnotes, student interviews, students' literature response journals, and photographs and digital video clips from ERW sessions. Three broad categories emerged: 1) reading

venue, 2) use of e-book tools, and 3) page layout/view. Below is a description of each category, including authentic examples to describe the context and setting of the electronic reading workshop.

Reading Venue

Most days, Mrs. Stitt requested that the e-book readers were seated in their desks while reading. However, the students clearly preferred and often requested to read in the hallway or to spread out on the classroom floor. If given a choice, Katie and Molly opted to partner read, using one laptop. Alisha, Elaina, and Leah, on the other hand, positioned themselves very close together but read at their own pace from separate computer screens. Sing and Mick preferred to spread out and read without interruptions from others. Adam and Charlie, although reading individually, usually stayed within close proximity of each other, often positioning their laptops so the back of their screens were touching. Madison, a fast reader, tended to finish reading on her own and then join Katie and Molly and re-read parts of the chapter with them. It seems that some of the same reading styles in reading paper books appear in e-book reading. Finding a comfortable venue to read seems to remain a priority.

Use of e-Book Tools

I love reading on the computer! I've never done it before and it is a new experience for me. At first I didn't know how to use all of the buttons, but once I learned how, I liked reading on the computer a lot more. (From Elaina's literature response journal.)

What Elaina describes as "buttons" served as vehicles for the many e-book tools which are part of the software (Adobe Reader) used to access and read the electronic book once downloaded on the computer. Prior to the first reading session, the students were given a brief overview of e-book tools, including the note tool and highlighter tool. Although no particular guidelines were established for utilizing these tools, students were encouraged to use them as they deemed appropriate and allowed to explore additional features (such as drawing markups and typewriter). Figure 4.1 illustrates the menu through which the e-book readers accessed the tools.

Figure 4.1 e-Book Tools Menu
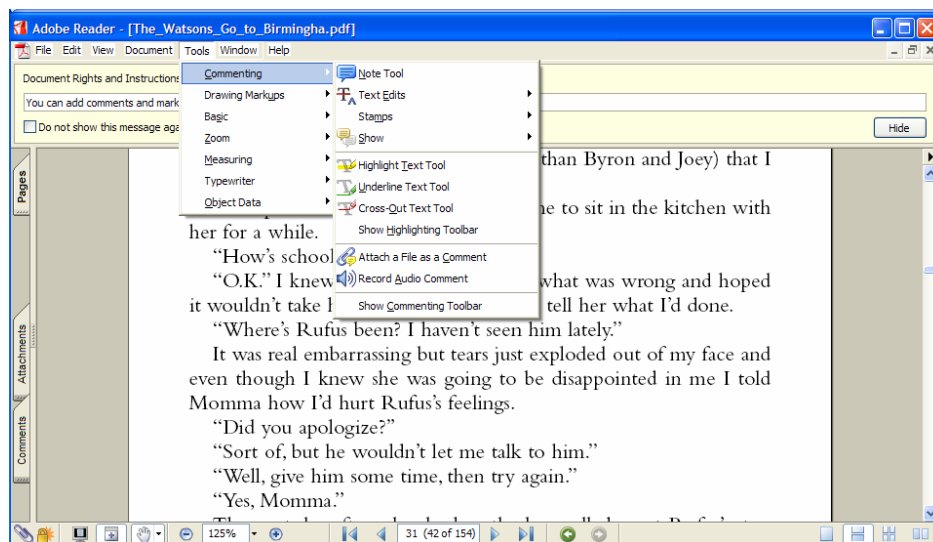
As explained in Chapter 3, at the end of each session when the students shut down their computers, their notes, highlights, and audio comments did not save. Although disappointing from a researcher's point of view, it did not seem to discourage the students from continuing to use the tools in subsequent sessions. The fifth graders acknowledged that the tools did not save, but when asked to discuss the e-book

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experience in their response journals, all participants referred to their use of e-book tools as a positive experience.

> Katie: *I read faster on the computer and I like that I can make notes when I want and even though they don't save I still like them!!*

> Charlie: *I would rather read an e-book [than a regular book] because there are so many cool tools to use and choose from. I still haven't used them all and I'm done with the book.*

Since I was unable to revisit each book and analyze the use of e-book tools in detail, I relied on my fieldnotes, transcripts of individual student interviews, digital photographs, and students' journal entries for information regarding the students' use of e-book tools. Careful examination of these documents revealed the following tools had been employed during the study: 1) note tool, 2) stamps, 3) highlight text tool, 4) audio comment, and 5) typewriter. Table 4.2 shows the tools used by each student during the study.

Table 4.2 Use of e-Book Tools

	Adam	Elaina	Sing	Alisha	Leah	Mick	Madison	Katie	Charlie	Molly
Note	X	X	X	X	X	X	X	X	X	X
Stamp	X	X		X					X	
Highlight	X	X	X	X	X	X	X	X	X	X
Audio	X				X		X	X	X	X
Typewriter							X	X		X

Although the frequency of each tool used was not recorded, the data revealed that all students utilized both the note tool and the highlight text tool. Students' use of the note tool will be discussed in detail later in this chapter, as it served as an effective means

of reader response to e-books. Figure 4.2 illustrates how Sing highlighted text that he

found of importance to the story (in this case a book title), followed by a written response

using the note tool. My fieldnotes indicate that these two tools were the first tools to be

utilized by the students who continued to access them frequently throughout the study.

Figure 4.2 Note Tool and Highlight Text Tool
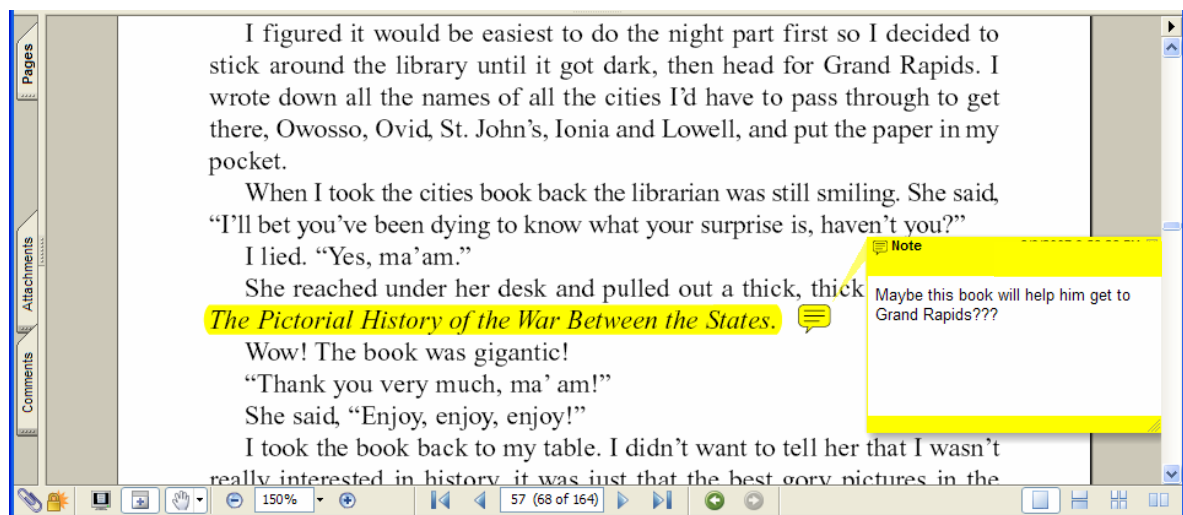
Mrs. Stitt had previously informed me that the students had prior experience with

highlighting text passages on a computer screen in preparation for and while taking the

state's online reading assessment. During the first few EWR sessions, students tended to

highlight what they anticipated to be included on a formal reading assessment of the e-

book. Gradually, as the fifth graders learned that formal assessments were not part of the

electronic reading workshop, they began using the highlighter in unique ways, reflecting

their personalities and individual reading styles. As exemplified in Figure 4.2, many

students used the highlighter to mark passages that were personally significant to their

reading experience and meaning making process. In some cases, this involved passages

that they later wanted to address in their literature response journals or discuss on the

online message board. The fact that their markings did not save, did not seem to affect

the students' use of the highlighter tool.

My fieldnotes, student interviews, and response journal entries support that

students highlighted funny, interesting, or unusual words and expressions such as *woop,*

zoop, sloop; on the lam; and *...the thing was positively alive with germs!* (From *Bud, Not*

Buddy). Many also highlighted derogatory terms, including vulgar and insulting

expressions: *...shut the hell up and enjoy the damn cookies, ...sit your ass down,* and *You*

ever seen a nekked lady? (From *The Watsons Go to Birmingham – 1963).* Most students

reading *Bud, Not Buddy,* highlighted the "rules" by which Bud lives in an attempt to

"Have a Funner Life and Make a Better Liar Out of Yourself" (see Figure 4.3), while the

readers of *The Watsons Go to Birmingham – 1963* commonly marked names of places

and people that the Watsons encountered on their journey south. In an interview, Mick

explained that highlighting the characters' names helped him "keep track of who is who."

Figure 4.3 Use of Highlighter Tool
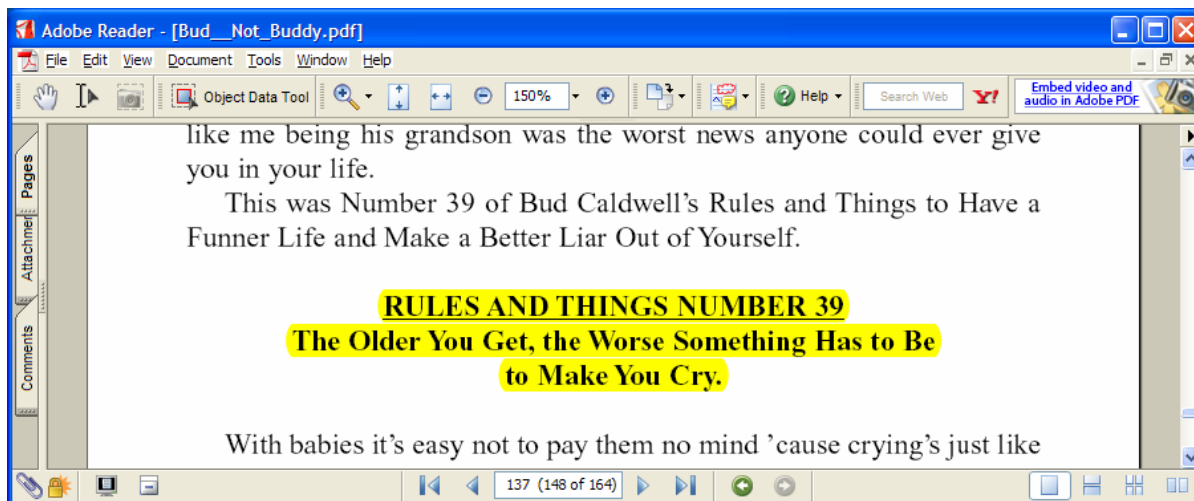
Four students used an assortment of stamps to mark significant pages or passages

in the book. For example, while reading *Bud, Not Buddy,* Alisha and Elaina noticed a

misprint in their e-books. Herman E. Calloway (a main character) was referred to as

Herman B. Calloway on several occasions throughout the e-book. After investigating

which version was "correct" (by reviewing a paper copy of the book and discussing the

matter on the online message board with their peers), Elaina stamped her book to

emphasize that Herman E. Calloway was the correct spelling of the character's name (see

Figure 4.4).

Figure 4.4 Stamps and Highlight Tool
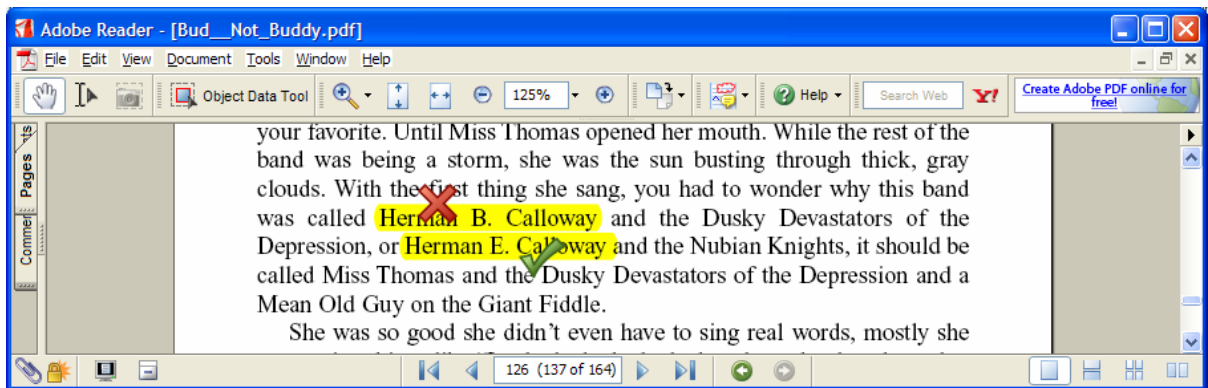
Six students added audio comments to their e-books. This tool was only

accessible to the participants reading on the four iBooks borrowed from the university, as

the school's laptops did not include a built-in recording device. The iBook users shared

their discovery with the rest of the group inviting their peers to explore this feature.

Although considered "fun" and "cool" initially, my fieldnotes show that students only

utilized this option during two reading sessions.   The sound symbol in Figure 4.5 shows

where Madison inserted an audio comment in which she imitated Grandma Sands's scary

laugh from *The Watsons Go to Birmingham - 1963*.

Figure 4.5 Recorded Audio Comment
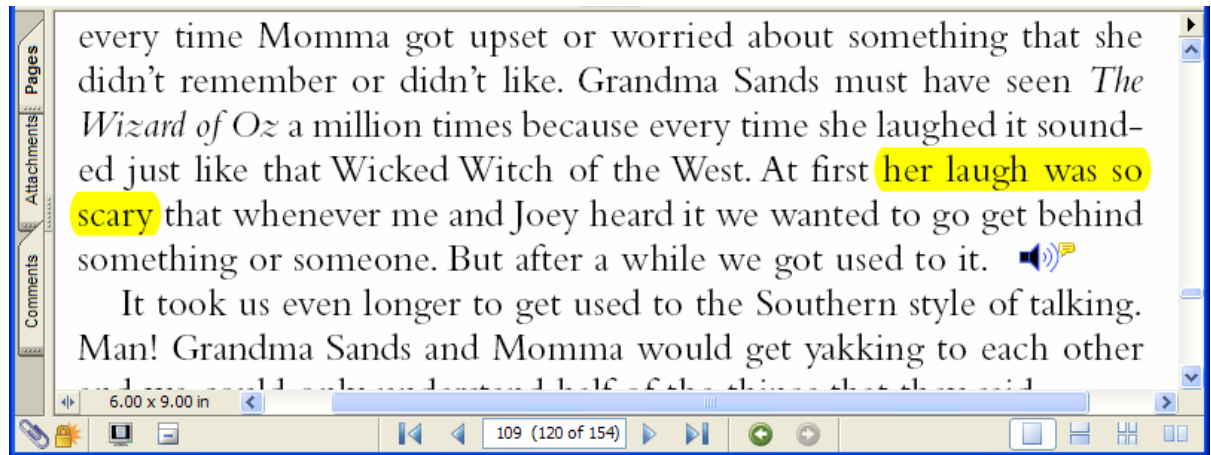
Only three students used the typewriter – a tool allowing the reader to add written

comments directly to the e-book pages. Madison used this tool for several different

purposes including marking her place in the book.

Bookmark 4 Thursday.

STOP READING HERE

She celebrated the end of the final chapter by typing,

I'm done YAY! That was an awesome ending I think everything will be all right 4

the Watsons and their lives.

Illustrated in Figure 4.6, Madison further used the typewriter to express her opinion about

reading the upcoming epilogue.

This is going 2 be BORING. It's not about the Watsons. It's about segregation.

Oh Yay.

Figure 4.6 Typewriter Tool and Note Tool
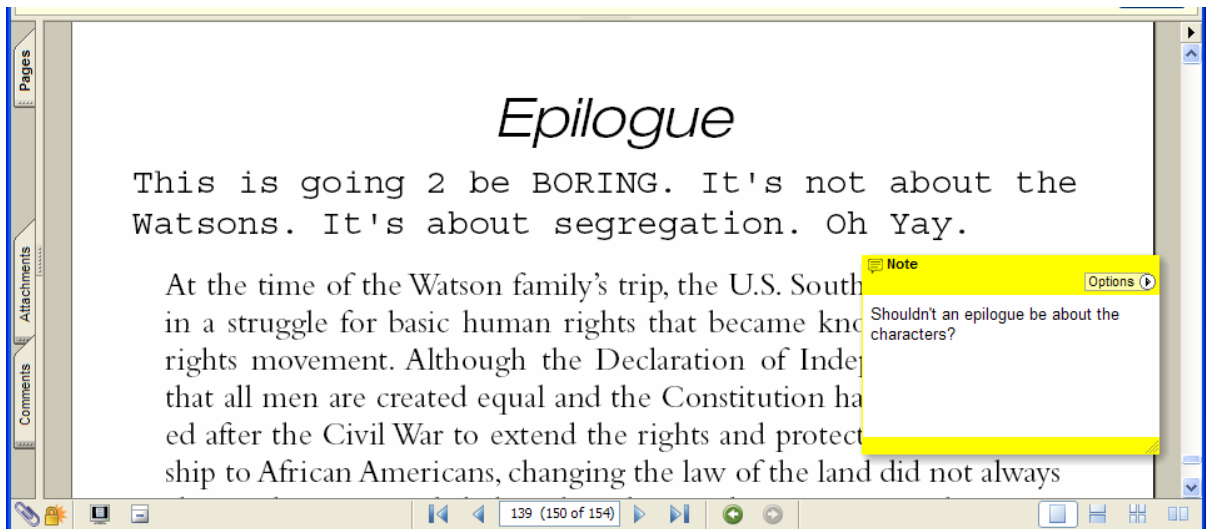
Although not considered an e-book "tool," several of the students utilized the

search, or "find," feature which allows the reader to instantly look for words or phrases

within the book. For example, as Elaina and Alisha investigated Herman Calloway's

middle initial, they used the find feature to learn that Herman E. Calloway was used 67

times throughout the book, while Herman B. Calloway appeared on only 31 occasions.

Students also used the find feature to locate previously encountered vocabulary words or

expressions. This proved particularly useful when working on their virtual guide

response projects.

View/Page Layout

The e-book software (Adobe Reader) allows for multiple viewing options,

inviting the reader to view more than one page at a time, zoom in and out, or change the

page layout (see Figure 4.7).   My fieldnotes and digital photographs of students' laptop

screens revealed that all participants used the single page layout during the first reading

session, likely because it is the default setting. During subsequent settings, they adjusted

the viewing settings to suit their own unique needs and preferences.

Figure 4.7 View/Page Layout
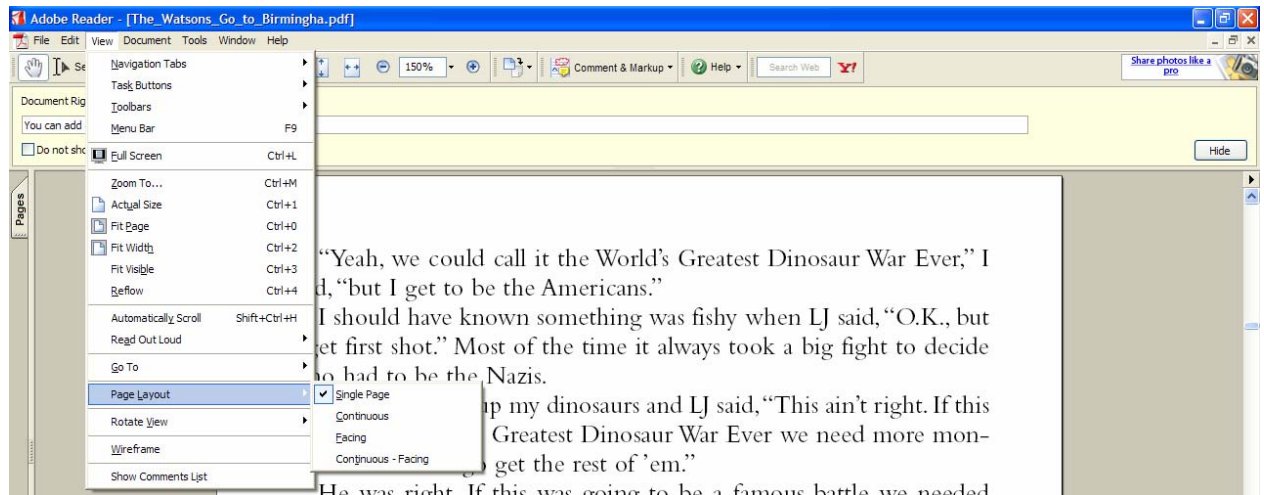
The following excerpt from my fieldnotes exemplifies how students manipulated

the viewing features.

Tuesday, April 3, 2007

> *Today the e-book readers were spread out in the hallway outside*

the classroom. I noticed that they spent more time than usual

experimenting with the various page layouts.

Molly and Katie: Sharing one iBook computer, using large print, single-

page layout. "We're keeping the font large so we can both see the words,"

explained Molly, "But when I read by myself I keep the pages side-by-

side."

Madison: Reading on a small iBook screen using facing page layout.

Zoomed in to 150% and had to scroll side-to-side to read the text. "It's a

little inconvenient, but I like how it looks like a 'real' book when the pages are side-by-side. And, I like keeping the text large. It makes it faster to read."

Mick: Reading on a large screen (school's computer) using a continuous single page view. Used the bottom of the screen as a "ruler" to guide the line that he was reading. Continued to scroll up, reading one line at a time.

Elaina: Zooming in 200% using a continuous single page layout. "I like to just keep my curser on the arrow and scroll to the next page… it's like I don't even have to lift a finger."

Sing: Using smaller font, facing page layout.

Adam: Zooming in 250% using a single page layout. "It's more fun on a computer… when you think about it, it takes a couple of seconds to turn a page, but with e-books, you can just press a button then 'ta-da,' there it is."

Alisha: Zooming in 200% using continuous single page layout. Alisha often complains that her eyes hurt when reading on the computer. The larger font seems to help.

Leah: Using a smaller font, continuous single page view.

Charlie: Reading on an iBook using facing page view, Charlie zoomed out the postage-size pages (5%). "Imagine if you were reading this little text… that's crazy!" Later, inspired by other group members, he later switched from facing page view to continuous single page layout. "I guess I just

> *found it a little easier to read on just one page cause you don't just have*
>
> *to go up and down, up and down."*

After Reading

I would snap up the chance 2 read another ebook!! It's different and everyone has read a [regular] book! It's fun, the tools r cool, and it's just a great experience that doesn't come around a lot. (From Madison's literature response journal.)

As the e-books came to an end on April 13, 2007, the students reflected on the reading experience in their electronic literature response journals. Like Madison, all ten students reported that reading an e-book had been a different, yet positive, experience and they would welcome the opportunity to read another e-book in the future.   Table 4.3 shows that all students, regardless of their initial perception of the e-book, perceived the experience as positive in the end.

Table 4.3 Students' Final Perception of the e-Book Experience

	Book	Previous e-book experience	Initial perception e-book (pre-reading)	Final perception of e-book (post-reading)
Adam	B	None	positive	positive
Elaina	B	None	positive	positive
Sing	B	None	positive	positive
Alisha	B	None	positive	positive
Leah	B	None	positive	positive
Mick	W	None	positive	positive
Madison	W	None	positive	positive
Katie	W	None	neutral	positive
Charlie	W	None	positive	positive
Molly	W	None	negative	positive

B = *Bud, Not Buddy*   W = *The Watsons Go to Birmingham – 1963*

Initially, Katie, an avid reader and technology user, had mixed feelings about the e-book. Throughout the reading experience, however, she discovered that she read faster on the computer and used the e-book tools to support her reading process.

Katie: *I love it! I am good at typing and I love that I can make notes in the book, because [in] other books I want to remember a part and I never can seem to remember it any way. So this is great! I also read faster on the computer... I hope in the future I can read more books on the computer.*

Molly, who originally expressed that she was not looking forward to reading on the computer, explained in an audio-recorded interview that her viewpoint had changed while reading the book.

Molly: *It's been better than I thought it was going to be. I thought it was going to be kind of boring and a lot of difficulty, but it's been much better than I thought... all the new tools and all the things you can do with it.*

Katie and Molly's enthusiasm for e-book tools reflected a consensus among all participants – using the e-book tools was fun and "cool." Through the use of new literacy skills and strategies, students envisioned innovative ways to approach the e-book tools and features to enhance the reading experience and meaning-making process. In the following section, I will describe how the fifth graders used e-book tools, along with literature response journals and online discussions boards, to engage in reader response to e-books.

Reader Response to e-Books

I was really sad when they said that Joetta's church got blown up. A shock went

through my body and for some reason, I felt like I was there with Kenny...

knowing the feeling and thinking you could have lost your brother or sister!

(From Katie's electronic literature response journal.)

Katie's heartfelt response to the fictional rendition of the 1963 church bombing in

Birmingham, Alabama captures the essence of literature response as she breathes life into

the text and engages in personal meaning making. Rosenblatt (1978), argued that reading

is understanding what one reads, not simply the ability to identify words within a text or

read words aloud. The electronic reading workshop provided ample opportunities for

students to make sense of and respond to the text itself. Throughout the reading

experience, four distinctive instruments captured each reader's emotional and personal

involvement with the e-books: 1) e-book response tools, 2) electronic literature response

journals, 3) online literature discussions, and 4) technology-based project response

options. What follows is a detailed description of how fifth-grade students used each of

these means to respond to e- books.

e-Book Response Tools

Yes...we were able to highlight words from the book and write on the book, things

you can't and shouldn't do on a book. (From Charlie's electronic literature

response journal.)

As explained previously, students' use of e-book tools was not recorded in its entirety due to difficulties with the technology. However, at the end of each reading session, knowing that the students' comments would not save, I carefully recorded their use of electronic tools, followed by page number and exact placement on the page. This was a tedious and time consuming process, during which many of the laptops either ran out of battery power or had to be transferred to another classroom teacher, resulting in a limited collection of data. In all, I was able to complete this process 16 times during which 125 separate responses were recorded. A review of digital photographs of computer screens allowed me to document seven additional student-generated responses. Table 4.4 shows the distribution of the 132 recorded responses, which, of course, only represent a limited sample of the students' actual use of these tools.

Table 4.4 Recorded Responses

	Note	**Stamps**	**Highlighter**	**Audio**	**Typewriter**	**TOTAL**
Frequency	75	3	42	3	9	132
Percentage	57%	2%	32%	2%	7%	100%

A review of literature revealed no previous studies examining reader response to e-books. However, close examination of the 132 recorded responses supported my efforts to explore and gain insight into the reader response process within an electronic reading workshop in a fifth-grade classroom. Although each of the five tools provided unique opportunities for response, the note tool was used most frequently and, perhaps, revealed the most insight into the reader's meaning-making process as the text unfolded. This tool became an insightful conduit to ongoing, response writing as it captured the reader's thought process instantaneously and spontaneously. It is worth mentioning that these

notes were placed directly on the page in close proximity to the passage to which the reader was responding (see Figures 4.2 and 4.6).

While using the note tool, the students did not concern themselves with proper writing conventions and mechanics, but rather focused on transferring their thought onto paper as quickly and effectively as possible. As shown in the examples below, use of punctuation marks, capitalization, and onomatopoeic words, added voice and expression to their responses.

Joey said that?????????????? Funny and sweet.

I do not like mustard. yuck!!!!

GROSS! I could pass on this part.

Oooo… is it another smelly thing?

dum da dum dud um

The recorded responses also revealed students' use of invented spelling, letter/number substitutions, and emotional icons.

Who wouldn't luv attention from ur dad?

poor him... he brought it on himself, 2 bad 4 u

He says woop zoop slop a lot! ☺

As the plot emerged and the characters evolved, the response notes often indicated personal meaning making and understanding of the story. These responses frequently appeared as clear statements, confirming evolving events while predicting future happenings.

If Bud hurries he could catch up with Bugs in Grand Rapids maybe.

Ahhh… That sounds nice on a hot summer day.

Joey and Grandma sound like they would get along.

At times, responses indicated a desire for additional information or a lack of understanding, resulting in a single question. These questions were consistently positioned right next to the confusing text passage.

Why is he playing and wasting his time?

Is it a compliment or an insult?

What might the codes mean?

The notes were also used in response to specific text features or discoveries within the text. For example, after detecting the erroneous use of Herman Calloway's middle initial, Elaina assumed the role of copy editor and actively searched for additional misprints. Consequently, she used the note tool every time Herman B. Calloway appeared in the text.

For the 4th time it's Herman EEEEE not Herman B!!!

On the same page, but in a different note, she added,

They need to put a space between cars and the word to!

As previously illustrated in Figure 4.6, Madison inserted a note as she wondered about the purpose of the epilogue *(Shouldn't an epilogue be about the characters?).* Figure 4.9 shows how she also questions the author's choice of chapter titles by asking, *Does this book have any NORMAL titles???*

Figure 4.8 Questioning the Chapter Titles
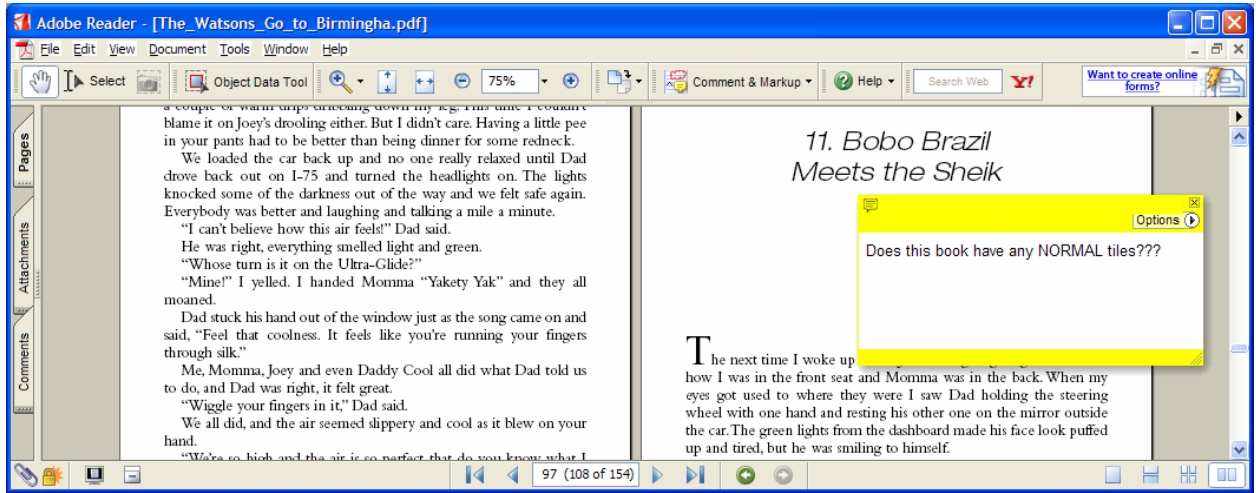
Most of the response notes reflected a sense of spontaneity and impulsiveness. These statements were short in length and conversational in tone, as the reader offered a personal commentary while the story unfolded.

He has a point!

NASTY!

Don't do it!!!

A… yeah… beautiful…

R u sure about that?

How cute does Joey get???

While the note tool technology provided students with a mechanism to respond to the literature to suit their individual needs and purposes as readers, they utilized new literacy skills and strategies to envision and access the potential of the e-book note tool. By utilizing the e-book notes, the readers captured their thought process through

spontaneous and instantaneous response. Subsequent to reading, students adhered to a more structured format as they wrote in their electronic literature response journals. What follows is a discussion of the electronic literature response journal within the context of the electronic reading workshop.

Electronic Literature Response Journals

The use of electronic literature response journals provided a second opportunity for reader response to e-books. The students had access to their response journals in individual folders on the school's student shared drive. In the journals, they responded to two kinds of open-ended prompts: 1) literature prompts, and 2) ERW prompts. The literature prompts related directly to the text itself, while the ERW prompts encouraged students to reflect upon the overall electronic reading workshop experience (see Appendix F). Table 4.5 reveals the number of literature prompts and ERW prompts included in each journal including eight literature prompts and 26 ERW prompts.

Table 4.5 Electronic Literature Response Journal Prompts

	Pre-Reading	Journal 1	Journal 2	Journal 3	Journal 4	Journal 5	TOTAL
Literature Prompts	0	3	2	3	0	0	**8**
ERW Prompts	5	2	0	3	10	6	**26**
TOTAL	5	5	2	6	10	6	**34**

The following two tables present a word count analysis of the students' responses to the two types of prompts. Separated by individual students, Table 4.6 shows the average number of words per response to each of the literature prompts included in the first three journals. Overall means are also provided, reflecting each child's individual

response length to the eight literature prompts, as well as the performance of the group as

a whole.

Table 4.6 Average Length of Responses to Literature Prompts

Journal	Lit. Prompts	Words Written / Literature Journal Prompts										
		Bud, Not Buddy					*The Watsons Go to Birmingham - 1963*					
		Adam	Elaina	Sing	Alisha	Leah	Mick	Madison	Katie	Charlie	Molly	MEAN
Journal 1	3	40	68	56	55	23	23	55	57	34	24	**44**
Journal 2	2	41	55	59	30	14	30	54	21	42	N/R	**38**
Journal 3	3	N/R	50	42	33	19	46	66	59	27	20	**40**
OVERALL MEAN		**40**	**58**	**52**	**41**	**19**	**33**	**59**	**49**	**33**	**22**	**41**

N/R = No Response (student absent or did not respond to prompts)

Table 4.6 indicates that Madison's wrote the longest responses to the literature

prompts with an average of 59 words per response. Elaina, with 58 words per response,

trailed closely behind. Leah, on the other hand, consistently provided the shortest

responses with an overall mean of 19.   Looking at all ten participants, their average

response length to literature prompts was 41 words per response.

Similarly, Table 4.7 shows students' average response length to EWR prompts

from the pre-reading entry and journals one, three, four and five. Consistent with the

findings in Table 4.6, Madison wrote the longest responses to ERW prompts with a mean

of 56 words per response. Again, Leah provided the shortest answers with an average

word count of 19. The overall mean for ERW prompt responses was 28 words.

Table 4.7 Average Length of Responses to ERW Prompts

Journal	ERW Prompts	Words Written / ERW Journal Prompts										
		Bud, Not Buddy					*The Watsons Go to Birmingham - 1963*					
		Adam	Elaina	Sing	Alisha	Leah	Mick	Madison	Katie	Charlie	Molly	MEAN
Pre-Reading	5	13	N/R	12	17	10	11	33	54	16	13	**21**
Journal 1	2	48	40	55	32	29	51	40	56	N/R	N/R	**44**
Journal 3	3	N/R	37	36	16	14	29	32	35	23	25	**28**
Journal 4	10	30	37	28	30	16	24	56	18	20	20	**28**
Journal 5	6	14	31	31	21	10	17	25	37	13	13	**21**
OVERALL MEAN		**23**	**36**	**29**	**24**	**14**	**23**	**40**	**34**	**18**	**17**	**26**

N/R = No Response (student absent or did not respond to prompts)

Table 4.8 compares the two previous tables, indicating that literature prompts elicited longer responses from all participants. On the average, students' responses to literature prompts were 58% longer than those addressing EWR prompts. Leah and Molly who wrote the shortest responses to both ERW prompts and literature prompts also had the lowest relative difference with 36% and 29% respectively. Although fairly short in length, Charlie's responses varied in length depending on the type of prompt, with a relative difference of 83%. Similarly, Sing's responses to literature prompts were 79% longer than those addressing ERW prompts on the average.   Madison, who consistently wrote long responses showed a relative difference of 48% between the two types of prompts.

While the e-book tools invited students to respond spontaneously and instantaneously to the e-book as the plot unfolded, the literature response journals were not accessed until the students had finished the assigned readings. The iBooks borrowed

Table 4.8 Comparison of Responses to ERW and Literature Prompts

	Overall Means for ERW Prompts and Literature Prompts										
	Bud, Not Buddy					The Watsons Go to Birmingham - 1963					
	Adam	Elaina	Sing	Alisha	Leah	Mick	Madison	Katie	Charlie	Molly	MEAN
Literature Prompts	40	58	52	41	19	33	59	49	33	22	**41**
ERW Prompts	23	36	29	24	14	23	40	34	18	17	**26**
Difference in word count	**17**	**22**	**23**	**17**	**5**	**10**	**19**	**15**	**15**	**5**	**15**
Relative difference	**74%**	**61%**	**79%**	**41%**	**36%**	**43%**	**48%**	**44%**	**83%**	**29%**	**58%**

from the university did not have Internet access at the elementary school. Consequently,

the four iBook users had to switch to a networked computer in order to access their

journals. Once finished responding to the journal prompts, the students saved their

electronic journals in their individual folders on the school's student shared drive.

Following each response session, I retrieved, reviewed, and saved copies of the

journals. The electronic format further allowed me to copy all ten answers to each

prompt and paste them into a summarizing document. This, in turn, provided for easy

comparison of all ten student-generated responses to each of the 34 prompts. Careful

examination of the journals revealed several emerging categories of students' utilization

of the electronic literature response journals: 1) personal response to e-books, 2) use of

formatting tools, and 3) place to ask questions. Below, I describe each emerging

category, followed by authentic excerpts from the fifth graders' journals.

Personal Response to e-Books

The students utilized the literature response journal as a vehicle to capture their

written responses to e-books. Compared to the spontaneous responses produced with the

e-book tools, the note tool in particular, the journal responses were generally more formal

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and structured. By offering quality response prompts, Mrs. Stitt and I encouraged deep interaction with the story and reflection on the overall reading experience (see Appendix F).

As students responded to the open-ended prompts, they tended to compose longer entries, write in complete sentences, and apply conventional spelling and grammar. Hancock (1993a) recognized that students' literature response journal entries generally fall into three broad categories, including 1) personal meaning making, 2) character and plot involvement, and 3) literary criticism. Demonstrated in authentic examples below, the electronic literature response journals comprised responses to the e-books from all three of Hancock's categories.

Personal meaning making. Moving beyond summary, Adam's response indicates a sense of understanding by recapturing the unfolding plot and predicting future events.

> *I think Bud it crazy walking for a whole day and night. He was probably going to pass out a quarter of the way there. But he ran into someone and stole his car and some food. Maybe he'll get to Grand Rapids faster. Or I think the strange guy will call the police and chase down Bud.*

Elaina's response suggests comprehension as she invalidates a previously stated prediction.

> *At the part where Herman E. Calloway found out that Bud was his grandson then I was in shock I didn't see that coming. I thought that maybe he was his dad but I never thought that.*

Character and plot involvement. Madison's response suggests a deeper level of understanding and character identification as she reaches out to Kenny Watson.

> *When Kenny started seeing the "Wool Pooh" I wanted to help him understand*
> *that he created the Wool Pooh in his shock, and I felt bad 4 him. When Kenny*
> *started staying behind the couch, I felt so horrible 4 him, wanted 2 cheer him up*
> *and help him through it.*

Elaina expresses her fondness for Bud as she gets to know him better in each page of *Bud, Not Buddy.*

> *I like Bud's personality. I think he's funny and his accent is neat and I can really*
> *hear him talking.*

Literary criticism. A literary critic, Charlie voices his opinion about the book and the author's craft.

> *I loved the book from chapter 1 to 2 but later in the book it got boring. The*
> *author was adding too much. The book really didn't need the chapter with the*
> *dinosaur war. It was dumb.*

Mick's response implies contemplation of his own value system as he criticizes the author's choice to include profanities and realistic contexts.

> *I also think there were a lot of bad words and some inappropriate stuff.*

 The written responses to the teacher-constructed prompts fell into Hancock's (1993a) existing categories of literature response journal entries, indicating that electronic format did not seem to impact the types of responses elicited from students.   The next

section, however, explains how students accessed the potential of the technology to complement their writing through the creative use of formatting tools and features.

Use of Formatting Tools

In the pre-reading entry, all students used a professional font (usually Times New Roman), black font color, and single spacing. Adam was the only student who deviated from this format as he utilized the underline tool to clearly separate his answers from my prompts. In journal entries one and two, Adam continued to underline his responses while making the text bold. He was absent during the third journaling session, but experimented with different fonts and font styles in the last two journals. Table 4.9 shows the various tools and formatting features utilized by the participants while writing in their response journals. Throughout the study, Mrs. Stitt and I did not formally address the use of formatting tools with the students, leaving it up to the fifth graders to employ these new literacies as they deemed appropriate.

Table 4.9 Use of Formatting Tools and Features

	Change font	Font color	Font size	High-lighter	Bold font	Italic font	Lists	Under-line	Visual lang.*
Adam	X		X		X	X		X	
Elaina		X	X	X	X	X			
Sing				X				X	
Alisha	X	X		X					
Leah							X		
Mick		X		X	X	X		X	X
Madison		X					X		X
Katie		X		X					X
Charlie			X	X					
Molly		X				X			

* Includes use of emoticons (☺, ☹), abbreviations (lol = laugh out loud), and number/letter substitutions (I felt bad 4 him; you r so lucky).

While reviewing students' responses, I noticed a gradual increase in the use of formatting tools and features with each journal entry. Exemplified in Figures 4.9 and 4.10, Mick's responses clearly evolved over time. Initially, his entries consisted of short statements, presented in a basic, black font. In later journals, Mick visually represented his responses through colors and text effects, while embellishing the writing with rich details.

Figure 4.9 Response Journal #1
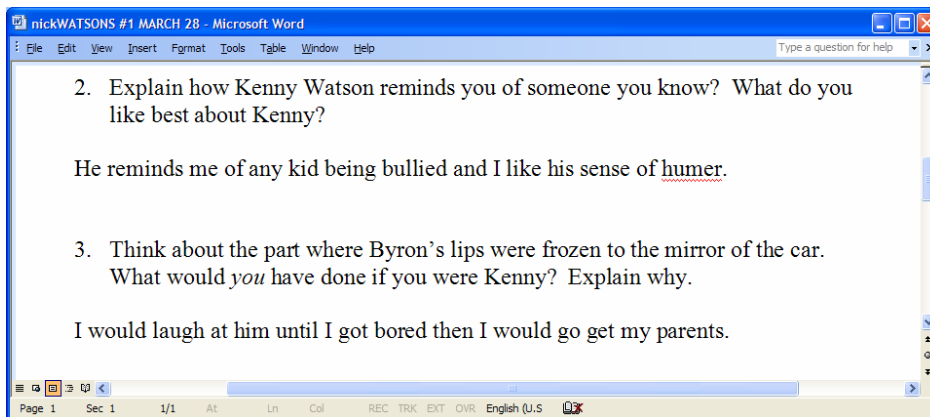
Figure 4.10 Response Journal #4
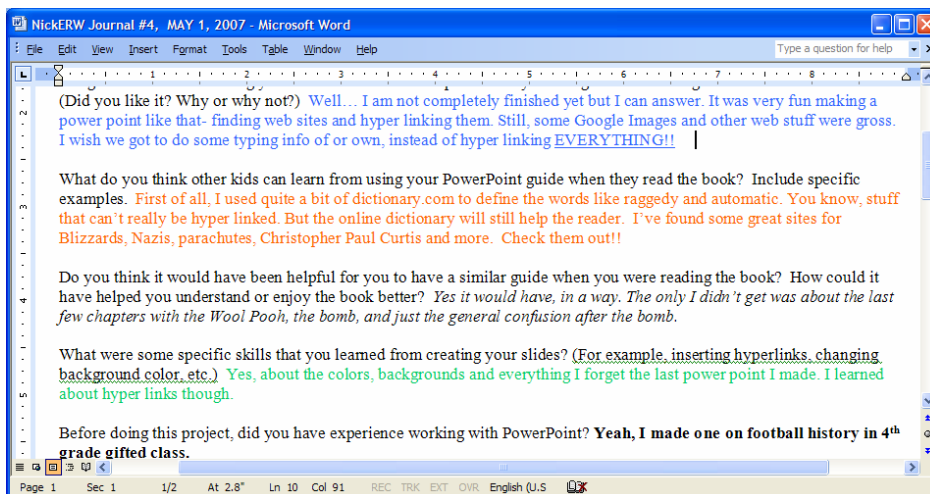
With each journal entry, students adopted a more relaxed, informal approach to response. As use of formatting tools augmented, students' use of conventional grammar and spelling diminished. Starting with the second journal entry, both Molly and Madison wrote all their responses in a bright pink font. In addition, Molly italicized her responses and, as shown below, Madison began substituting numbers for words whenever possible. In an informal interview, she explained that using numbers and symbols "feels natural" when writing on the computer, adding "that's how I write when I chat on Instant Messenger."

Madison: I felt so horrible 4 him, wanted 2 cheer him up and help him through it.

Similarly, students abbreviated words and expressions. For example, the letter *u* was used for *you* (*if u know how 2 type*) and *r* for *are* (*you r so lucky!!*) and *ppl* for *people*. Acronyms, such as *lol* (*laugh out loud*), emoticons (☺, ☹), fonts, and various formatting styles were further utilized to express emotion and add emphasis to personal responses.

Questions

The journal proved to be a safe place for students to ask questions about the text, technology, and the structure of the electronic reading workshop. In the pre-reading entry, I ended the list of questions by asking, "What questions do you have for Mrs. Larson or Mrs. Stitt about this project?" Although this prompt was not asked in subsequent journals, it served as inspiration for students to independently ask questions within the context of the journal. Initially, questions generally related to the e-book format or the structure of the electronic reading workshop.

Is there an e-book for every book?

Will we do it [read e-books] every day or certain days?

Will we have to take a quiz on the book?

When will we have to finish reading?

In later journals, most of the question related directly to the story. The excerpts below, clearly express some confusion as the students approached the ending in *The Watsons Go to Birmingham – 1963.*

Who is the Wool Pooh? Is it real or a figment of Kenny's imagination?

After the bomb how did Joey survive without even knowing about the bomb?

…it's a little hard to tell who is talking to whom.

Because I retrieved and reviewed students' responses at the end of each session, I was able to address their questions or concerns in a timely manner, either individually or during class discussions. Furthermore, the response journals suggested that students turned to the online message board for answers to questions or to learn the opinions of their peers:

I mean there is a lot more [questions about the book] but I can ask them on the message board right?

I still have some questions [about the book] but I'm sure my friends online can answer them.

A review of the transcripts from the online message board validated these journal entries. Throughout this study, the fifth graders clearly viewed the message board as an extension to their personal response writing and an additional tool in the meaning-making process. In the next section, I will provide a detailed description of the students' exploitation of the online discussion board in response to e-book reading within the context of an electronic reading workshop.

Online Literature Discussions

I learned a lot from talking to ppl [people] on the message boards because if I did not understand things I could ask ppl and they would help me and talk me through things I did not understand. (From Katie's electronic literature response journal.)

While the electronic literature response journals offered teacher-constructed response prompts, the online message board provided students the opportunity to post their own prompts to engage in literature discussions with their peers.   The students spent fifteen sessions reading e-books. Eleven of those sessions included time for online literature conversations. As students finished reading, they logged on to the online message board to begin a new discussion by starting a new thread, or to reply to previously posted messages. Most students, depending on how quickly they finished reading, spent 15-20 minutes on the message board following the e-book readings. In addition, a few students accessed the message board at other times during the school day. All communication took place at school. Although the students could access the message

board from any computer with Internet access, they were asked to not engage in discussions outside of school.

Student interviews revealed that none of the ten participants had previously engaged in an online discussion on a message board. However, several students reported that they had previously posted messages on message boards on commercial children's websites, but these sites did not allow users to reply to each other's messages. All students had previous experience communicating online via e-mail or in chat rooms.

The fifth graders were first introduced to the message board in the fourth ERW session. Recognizing that the majority of the participants frequently "chat" online with their friends after school, Mrs. Stitt emphasized that this was a school-related activity in which students were expected to stay on topic and use appropriate language. Using a projector, screen, and laptop computer, I demonstrated the log-in procedures and explained how to reply to my initial prompt. Relevant vocabulary (thread, prompt, post) were also introduced and explained.

Teacher-Constructed Prompts

My initial prompt included several sub questions, to which each student was asked to respond before reading and replying to group members' responses.

Congratulations on your first day of reading [title of book]! Please click the "Reply" button and explain:

What do you think about the book so far?

What do you think about reading on the computer?

What do you think will happen to [main character]?

Does this story remind you of any other book that you have read?

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The students spent two sessions reading and responding to my initial prompt and subsequent posts from their peers. The group reading *Bud, Not Buddy* posted 32 replies while the group reading *The Watsons Go to Birmingham – 1963* posted 36 replies. On Two days into the online discussions, Madison wrote in her electronic literature response journal:

> *I love using the message board. Having online conversations is really fun!!! It*
> *kind of reminds me of an online book club. To make it better I would like to know*
> *how to make a Prompt.*

Since several students expressed similar sentiments, Mrs. Stitt and I decided to adjust our original plan to only use new threads with teacher-constructed prompts. Instead, on the third day, Mrs. Stitt conducted a minilesson on what constitutes a "good" prompt. Through direct and guided instruction, the fifth graders learned that good discussion prompts should be open-ended, spark interest, and often begin with "why… tell me about… explain." Furthermore, students were taught how to start a new thread on the message board and were given a handout with step-by-step instructions for writing a prompt (see Appendix K).

For the duration of the electronic reading workshop, the participants initiated the majority of literature conversations by creating and posting their own prompts. In addition to my initial prompt, I started only two more new threads, whereas the students started 55 new threads collectively. Table 4.10 visually represents students' involvement with the online message board including new threads and replies written.

Table 4.10 Summary of Online Literature Discussions

	Book	*Posts Written	Words Written	Words/ Post	New Threads	Replies Written	Posts Read	Replies Written/ Read Posts
Adam	B	37	843	23	4	33	68	49%
Elaina	B	47	1421	30	8	39	58	71%
Sing	B	28	887	32	3	25	52	48%
Alisha	B	45	828	18	5	40	43	93%
Leah	B	34	587	17	4	30	45	67%
Mick	W	48	1512	32	7	41	73	56%
Madison	W	54	2186	40	6	48	90	53%
Katie	W	105	3052	29	9	96	162	59%
Charlie	W	18	646	36	3	15	35	43%
Molly	W	57	1124	20	6	51	102	50%
TOTAL		**473**	**13086**	**28**	**55**	**418**	**728**	

B = *Bud, Not Buddy*   W = *The Watsons Go to Birmingham – 1963*
*Posts Written = Total messages posted on message board (new threads + replies written)

Table 4.10 indicates that students actively participated both in replying to existing messages and initiating discussion by posting a new thread. The technology required students to use new literacies to communicate and socially interact with their peers. Furthermore, the asynchronous online message board format provided all students with multiple opportunities to share their thoughts and voice their opinions about the book.

Student-Constructed Prompts

The online discussion transcripts were analyzed inductively to determine patterns and commonalities in the 55 student-generated discussion prompts which started new threads on the online message board. A review of the literature revealed no previous studies relating to student-generated online literature response prompts. However, as a spring board for initial coding, I turned to Hancock's (2004) four types of teacher-constructed prompts including experiential, aesthetic, cognitive, and interpretive prompts. Through meticulous examination of the threads, an additional category, clarification

prompts, was added, resulting in five identified categories: 1) experiential prompts, 2) aesthetic prompts 3) cognitive prompts, 4) interpretive prompts, and 5) clarification prompts.   Table 4.11 shows the types of student-constructed prompts that made up the 55 new threads posted on the online message board throughout the electronic reading workshop.

Table 4.11 Types of Student-Constructed Prompts

Book	Experiential	Aesthetic	Cognitive	Interpretive	Clarification	TOTAL
B	6	1	11	5	1	24 (44%)
W	1	7	12	6	5	31 (56%)
TOTAL	7 (13%)	8 (14%)	23 (42%)	11 (20%)	6 (11%)	55

What follows is a discussion of the five types of prompts constructed by students as they started a new thread. Authentic examples from the online message boards will be used to exemplify trends and patterns.

Experiential prompts. As explained by Hancock (2004), experiential prompts focus on what the reader brings to the reading experience through prior personal experiences and prior knowledge. Posted on the online message board, these threads tended to begin, "Have you ever…" prompting the reader to relate an event to his or her own life. Referring to the unfolding plot, the students reading *Bud, Not Buddy* created experiential threads in an attempt to learn more about their peers.

Adam (new thread): *Bud was very brave to go on a 24 hour all day all night walk. Have you ever gone on a long run or walk and felt like collapsing? Where? How long?*

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Adam's prompt sparked a meaningful conversation among his group members, who all could relate to being tired to the point of "collapsing."

> Elaina (reply to Adam): *Bud is very brave and I agree with you. I think I have been on a long run and I was sooo tired by the end... I'm not sure how long it was I was only 8 or 9.*

> Sing (reply to Adam): *I did except I wasn't walking I was playing instead. I was so tired I just collapsed into the first thing, with a cushion, I saw which was a couch.*

Other experimental prompts included:

> *Have you ever been given a nickname like Bud?*

> *Have you ever pretended to sleep? Explain what happened.*

> *Have you ever been with someone who can talk your ear off?*

Aesthetic prompts. The aesthetic threads tended to bring out heartfelt, and sometimes heated, discussions among the group members. According to Hancock (2004), aesthetic prompts promote emotional interactions with the text while eliciting feelings, empathy, and character identification. After reading about the Alabama church bombing in *The Watsons Go to Birmingham – 1963,* emotions were running wild on the online discussion board. Several students initiated new threads expressing their own feelings and seeking comfort from their peers.

> Madison (new thread): *I am in shock about Joey. I'm biting my nails and I just want 2 stop reading in case she dies, but I have 2 read more! This really*

happened in history... How do u feel about this? Describe. Joey is so sweet and I

couldn't imagine the book without her. Plz [please] don't let her die.

Starting a separate thread, Katie eloquently explained how the book makes her feel,

asking for input from her friends.

Katie (new thread): *I think this book is like a roller coaster... some parts are*

fun... so what I'm trying to say is a roller coaster goes up... like the book you go

up in the good parts... you go down and the book gets boring... do you agree with

me? Why or why not?

Cognitive prompts.   These threads encouraged group members to make

predictions, solve problems, and make inferences regarding the plot and characters

(Hancock, 2004). After Adam learned that Bud left his foster family and consequently

seeking food at a mission, he makes a predictions and encourages his friends to consider

the situation:

Adam (new thread): *I think Bud will get tired of eating the same breakfast and*

supper at the same place. So he will go back to the Amos and steal some food, Do u

agree?

Pondering the same topic, Elaina's new thread asks,

Elaina (new thread): *Pretend that you are Bud and you just left the Amos's house*

where would you go? Explain why.

Frequently posted by both groups, cognitive threads often asked, "What do you

think…?" or "What would you do…?"

What do you think Mr. Calloway is going to say about Bud staying?

What do you think is going to happen to Byron?

What would you have done?

Interpretive prompts. Interpretive response prompts call for a higher level of reasoning as they encourage readers to contemplate personal consideration of morals or values, meaning or message, and judgment of plot and characters (Hancock, 2004). The interpretive threads posted on the online discussion board, often made reference to a specific, significant event in the text. Sing's post explains his view on a hitting incident in *Bud, Not Buddy,* while encouraging others to judge the situation and express their opinions.

Sing (new thread): *Do you think Mrs. Sleet has the right to hit Lefty Lewis ... I think Mrs. Sleet has the right because Lefty Lewis is her dad. But then I think she doesn't because Lefty Lewis is older than Mrs. Sleet.*

Clearly, the students pondered over the situation as they tried to justify whether or not Mrs. Sleet acted appropriately.

Adam (reply to Sing): *I agree with you on the part that Lefty is older than Mrs. Sleet. So she shouldn't be able to hit him.*

Elaina (reply to Sing): *I don't' think she has the right to hit Lefty Lewis because he's her dad and he is older but then again Lefty does joke around a lot. But I'm not allowed to hit my dad.*

Readers of *The Watsons Go to Birmingham – 1963* faced issues of segregation and racism throughout the book. After the church bombing, Mick contemplates what has happened while looking for the opinion of his peers.

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Mick (new thread): *What do you think about the bomb? Does it have to do with racism? I mean the Watsons are black...*

Clarification prompts. Clearly indicating confusion or lack of understanding, these threads were posted as the reader sought an answer or clarification to a specific question relating to the text. Often sparking replies from multiple perspectives, the clarification prompts encouraged the group members to collaboratively make sense of the unfolding plot.

Molly (new thread): *Why didn't By stay with grandma and how did they just appear back in Flint?*

Mick (new thread): *Confusing ending! Why didn't they leave Byron? I think the "wool pooh" stuff just made the book really confusing...*

In their literature response journals, Leah and Katie acknowledged using the message board as a place to post questions to help her make sense of the text.

Leah (new thread): *I like using the message board... instead of talking and getting mad when no one can hear us. [Now] we can ask each other questions and answer one at a time.*

Katie (new thread): *I enjoy that most of the time people will answer my questions or give me another point of view about the book...*

By assuming ownership in constructing the online discussion prompts, the fifth graders took on simultaneous roles as facilitators of and participants in the online literature discussions. Leu, et al. (2004) reminds us that the teacher's role is changing in

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the new literacy classroom as students assume new responsibilities and effective learning

experiences are increasingly dependant on social learning strategies. Analysis of the

message board transcripts revealed that students constructed five types of prompts,

including experiential, aesthetic, cognitive, interpretive, and clarification prompts. While

different types of prompts elicited divergent responses, they all inspired diverse opinions

and multiple perspectives.

Replying to Student-Constructed Prompts

Through inductive examination of the online transcripts, I searched for patterns or

trends in the fifth graders' replies to the student-constructed prompts. Overall, the

participants replied 418 times on the message board in response to both teacher-

constructed and student-constructed prompts (see Table 4.10). Table 4.12, closely

examines the 371 replies which were written in response to student-constructed prompts

only.   What follows is a brief analysis of the replies generated by each type of student-

constructed prompts.

Table 4.12 Replies to Student-Constructed Prompts

	New Threads	**Total Replies**	**Mean** (Replies/Thread)	**Range** (Replies/Thread)
Experiential	7 (13%)	57 (15%)	8	0-18
Aesthetic	8 (14%)	63 (17%)	8	1-21
Cognitive	23 (42%)	161 (43%)	7	0-13
Interpretive	11 (20%)	68 (18%)	6	1-25
Clarification	6 (11%)	22 (6%)	3	1-9
TOTAL	**55**	**371**	**7**	**0-25**

Replies to experiential prompts. Seven (13%) of the 55 threads included an experiential prompt, eliciting 57 replies from group members. With a mean of eight, the experiential threads obtained the greatest number of replies per thread as students related the book to their prior knowledge and personal experience. One of experiential threads received no replies, while another elicited 18 responses. Inspired by the Watsons' new car radio, Mick starts a new thread and elicits nine replies to his experimental prompt:

Mick (new thread): *What do you think about he new radio? Has you family ever gotten something new & exciting? Tell me about it.*

Katie (reply to Mick): *Yes we got a new flat screen t.v. and it is really big and we put it in the family room and we got cable for it so we have 998 channels!!!!!*

Replies to aesthetic prompts. Eight (15%) of the new threads contained aesthetic prompts to which students replied 63 times. With a range from 1 to 21, the aesthetic prompts elicited approximately eight replies on the average. Furthermore, a close review of the transcript revealed that students' responses to aesthetic prompts were often longer in length than other replies. As Molly learns that Byron Watsons is being sent to his grandmother in Alabama, she expresses her empathy in a new thread which elicited twelve responses.

Molly (new thread): *I can't believe Byron has to go to Birmingham. I feel bad for him I would hate to travel 2000 miles away from my parents for the summer… to live with a very strict grandma Do you feel bad for Byron? Even though he deserves it.*

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Madison (reply to Molly): *We all know Byron has a heart, but maybe he needs 2 go there 2 find himself and who he really is. I hope he can open new doors and experience new things while he's there. Mybe he'll make new friends and make peace with Grandma Sands. Wishing him luck as I read on!*

Katie (reply to Molly's initial thread): *I do not feel bad for him at all because he deserves what he is getting.*

Madison (reply to Katie): *Oh come on, just imagine being in his shoes, being pressured into doing things with Buphead, getting shipped off to Grandma's with no matter what you felt like. BOOR BY! Reconsider it then reply. OK?*

Replies to cognitive prompts. Almost half (42%) of the student-constructed prompts were coded cognitive. The online transcripts revealed that 6 of the 23 cognitive response threads received no replies, resulting in a minimum range value of 0. However, an upper range of 13 and a total of 161 replies, resulted in mean of seven replies for each new thread. While Charlie thinks about Byron Watson's potential stay with his grandmother, he posts a cognitive prompt which sparks 6 replies.

Charlie (new thread): *I think Grandma Sands will be very strict on Byron probably because she's heard how bad he is… how do you think she will be on Byron? Why?*

Mick (reply to Charlie): *I think Byron will not even give Mrs. Sands a chance. He will just run away if the first few days.*

Katie (reply to Mick): *Me to I think you are right he will not even give her a chance then he will runaway then everyone has to go down to Birmingham to go find Byron.*

Replies to interpretive prompts. The 11 (20%) student-created interpretive prompts invited rich replies in which students expressed personal ideas and viewpoints. Although the average number of replies to interpretive prompts was rather low (6), the example below illustrates how an interpretive prompt elicited 25 replies, and a heated discussion, from the group.

Katie (new thread): *Do you think Kenny's parents have problems in their marriage because there mom didn't even care about the new radio. All she did was roll her eyes and complain about how much money he was wasting! I mean at one part she's ignoring him now they are touching wrong spot! Like when Daniel (three dad) touched there moms breast! Disgusting!!!!*

Molly (reply to Katie): *Your right they do have issues especially that one part when Daniel was reaching over...*

Madison (reply to Molly): *No, all parents have little fights, and come on was this message necessary? Ewww! I could have done without this. So what maybe Momma was having a bad day. It wasn't necessary to bring up what Daniel did in the car... Give it a break.*

Replies to clarification prompts. Six (11%) of the 55 new threads consisted of clarification prompts in which students turned to their group members for answers to or

clarification of specific questions relating to the book. Ranging from one to nine replies, with a mean of only three, these prompts did not initiate a considerable amount of responses. Examination of the transcripts suggest once questions were addressed or answered (often in a few replies) students lost interest in these threads and did not return to them again. The following question, posted by Elaina, elicited five replies from her group members.

Elaina (new thread): *Is the house that Bud is staying at Mr. Calloway's house or do they all live there or is there just a couple of the band members living there. I need help understanding that question.*

Alisha (reply to Elaina): *I think they all live there, there kind of like roommates like at [the university] dorms with a lot of people.*

Sing (reply to Elaina): *They might live close to each other (the band) but they don't live together, I think... I think it came out in the book. Only Mr. Calloway and Miss. Thomas lives there…*

Throughout the study, general expectations were discussed regarding quality and quantity of prompts (open-ended, should spark discussion) and replies (include examples from the text if possible, elaborate). Students were not given specific guidelines regarding the length or content of their prompts and replies. Within each group, however, students seemed to establish their own expectations and "rules" for appropriate conduct on the message board. Interviews and written reflections revealed that students valued replies from classmates.

I loved writing new threads and reading what people responded to me.

I think the kids shouldn't ignore other kids messages...

It was fun making new threads because people reply to you.

On the message board, students frequently thanked each other for replying to their

prompts and offered praise and compliments to peers who posted interesting ideas or

alternative viewpoints.

Thanx 4 answering my questions.

Rock on Charlie way 2 be mature.

never thought of it that way... very nice

Good point Molly...

Keeping the expectations high, students asked for clarification of vague or ambiguous

prompts or replies.

Leah (new thread): *Have you ever been in a situation like bud when you are*

locked up in a dark and scary place? Explain.

Elaina (reply): *No, I don't think I've ever been in a place as scary as Bud's.*

Leah (dissatisfied with Elaina's answer): *but if you were bud how would you feel?*

Similarly, in the example below, Katie is clearly disappointed with Molly's brief reply.

Molly: *i agree with you*

Katie: *thanks, but do you have any opinion on what will happen next in the book?*

On rare occasions, discussions strayed from the book. As exemplified in the

conversation below, without intervention from adults, the students self-monitored their

conversations.

Molly: *Lets stop calling each other names and get back to the book.*

Katie: *I know, but we can go off the subject a little I mean that is what this project is about to enjoy and have fun!!!*

Mick: *Katie, TALK ABOUT THE BOOK!!!*

As the students ended the final chapter of their books, their last posts reflected insights to the author's craft, the conclusion, and unresolved questions.

Charlie: *I didn't like the author's technique of writing because he used a lot of catch phrases more than once, "talking a mile a minute" and "tie me to a tree and shoot me." What do you guys think?*

Madison: *After reading the ending to this book, what r your feelings about it? Byron has really changed... do u think this is going to last and why do u think he changed, because of the bomb, or something else?*

Katie: *Did Kenny's parents ever find out about the cookies... I mean what happened?*

As the book and accompanying message board discussions came to an end, the students encountered a fourth opportunity to respond to e-books in which they visually represented the literature by creating a virtual guide response project. The next section provides a detailed account of this technology-based response project accompanied by authentic examples of students' work.

Virtual Guide Response Projects

> *I think [making a virtual guide] was a blast. Not just telling about the book, but*
>
> *making a whole slide show about it with cool features... it makes it more fun to*
>
> *learn about the book.* (From Adam's literature response journal.)

Although the possibilities for project response options are practically endless, Mrs. Stitt recognized the need for structure in the fifth-grade classroom and requested that only one project would be introduced to the students. Guided by the pilot study, the fifth graders created variations of *A Virtual Guide to the Literature* as their project response option (see Appendix L). The project was first introduced to the class in the fourth consecutive week of the electronic reading workshop. During this session, student were given a brief overview of the project and introduced to a few sample PowerPoint slides from a virtual guide created by preservice teachers. Emphasizing that the sample slides were intended to provide ideas and inspiration, the fifth graders were encouraged to think creatively and to deviate from the format and content of the model. Students were informed that they would continue to work within their previously assigned reading groups of five students. Adam, Elaina, Sing, Alisha, and Leah focused on *Bud, Not Buddy,* while Mick, Katie, Madison, Charlie, and Molly responded to *The Watsons Go to Birmingham – 1963.* Each group divided the book's chapters among its members and began the process of identifying and recording key events and concepts and unfamiliar or interesting vocabulary from their assigned chapters. Teacher support and guiding handouts were provided to assist in this process (see Appendix M).

The students spent 14 sessions planning, creating, publishing, and presenting their virtual guide response projects. Students worked cooperatively to socially construct meaning. In addition, I conducted several minilessons emphasizing specific technology skills and applications throughout the sessions, either to small groups or to the class as a whole. Correspondingly, Mrs. Stitt guided students in effective publishing and visual representation of information and effective oral presentation of information.   The following sections include an in-depth description of the virtual guides and the process of creating these projects in response to the e-books.

Internet Hyperlinks

Each virtual guide consisted of a PowerPoint slideshow to which individual group members contributed slides over his or her assigned chapters. While students' slides varied greatly in context and format, each sought to inform and respond to the book through pictures, descriptions, and hyperlinks. Review of the PowerPoint slideshows revealed that students inserted two types of hyperlinks: Internet links and within document links. Both types of hyperlinks allowed for movement from one text to another text. As illustrated in Table 4.13, the group responding to *Bud, Not Buddy* included a total of 64 hyperlinks in their virtual guide. While only ten were linked to destinations within the PowerPoint presentation, 54 had Internet destinations. *The Watsons Go to Birmingham – 1963* virtual guide encompassed 90 hyperlinks. Of these, 85 were linked to Internet sites and five to slides within the PowerPoint itself. I inductively analyzed the Internet links and unearthed four emerging categories: 1) dictionary/reference links, 2) map links, 3) image links, and 4) informational links.   Table 4.13 highlights the distribution of Internet hyperlinks within each of the four emerging categories for the two

group projects. A description of each category, along with examples from the students'

virtual guides, follows below.

Table 4.13 Internet Hyperlink Destinations

Book	Slides	Within PP Hyperlinks	Internet Hyperlinks	Internet Hyperlink Destinations			
				Dict./Ref.	Map	Image	Inform.
B	37	10	54	13 (24%)	2 (4%)	23 (43%)	16 (29%)
W	22	5	85	26 (31%)	6 (7%)	10 (12%)	43 (50%)

Dictionary/reference links. These links connect the reader (or user of the virtual

guide) with instant access to an online dictionary or reference source. The fifth graders

accessed websites such as Dictionary.com (http://dictionary.reference.com) and

Wikipedia (http://en.wikipedia.org) to look up definitions or explanations to unfamiliar or

interesting words and phrases from their e-books. In response to *Bud, Not Buddy,* Elaina

created a PowerPoint slide titled "Other Interesting Words" in which she linked

hoodlums, on the Lamb, and *coldcocked* to their respective definitions from

dictionary.com. After reading the Epilogue in *The Watsons Go to Birmingham – 1963,*

Katie added an "Epilogue" slide to her group's response project in which she hyperlinked

discrimination, segregation, African Americans, and other terms pertinent to the book's

historic events, to individual definitions from dictionary.com. Table 4.13 shows that 24%

and 31% respectively made up the total Internet links in the virtual guides of *Bud, Not*

Buddy and *The Watsons Go to Birmingham – 1963.*

Map links. Using Google Maps (http://maps.google.com/) and MapQuest

(http://www.mapquest.com/), students created hyperlinks to visually represent the

geographic locations of places mentioned in the story. As shown in Table 4.13, students

reading *The Watsons Go to Birmingham – 1963* included six map links, as a way of

tracking the Watsons' journey south, including their departure in Flint Michigan and final destination in Birmingham, Alabama. The virtual guide for *Bud, Not Buddy* only contained two map links of Flint, Michigan and Chicago, Illinois, as few geographical locations are mentioned in the book.

　　　Image links. The image links provide a visual representation of attention-grabbing or complex vocabulary, phrases, or concepts from the books through photographs or illustrations. Students obtained the majority of images from images.google.com or Microsoft.com's clipart gallery. In addition, links were made to websites containing pictures of particular items or concepts. Throughout *The Watsons Go to Birmingham – 1963* reference is made to several 1960's cartoon characters, enticing the students to insert hyperlinks to images of *Betty Boop, Poindexter,* and *Felix the Cat* into their virtual guide. As shown in Table 4.13, image links were common in the *Bud, Not Buddy* virtual guide (43% of all Internet links) while only 12% of the links in *The Watsons Go to Birmingham – 1963* virtual guide consisted of images. Although the use and purpose of image links varied among group members, they were often employed to visually explain vocabulary words found in the book. For example, Sing linked *Packard* to an automobile image gallery showcasing multiple photographs of antique Packards. Figure 4.11 illustrates the images used by Elaina to explain the meaning of words used throughout chapter 4 in *Bud, Not Buddy.*

　　　Informational links. The informational links provide support for the reader by offering prior knowledge or further information on a topic relevant to the story. Table 4.13 reveals that 50% of all Internet links in the virtual guide to *The Watsons Go to*

Figure 4.11 Image Internet Hyperlinks
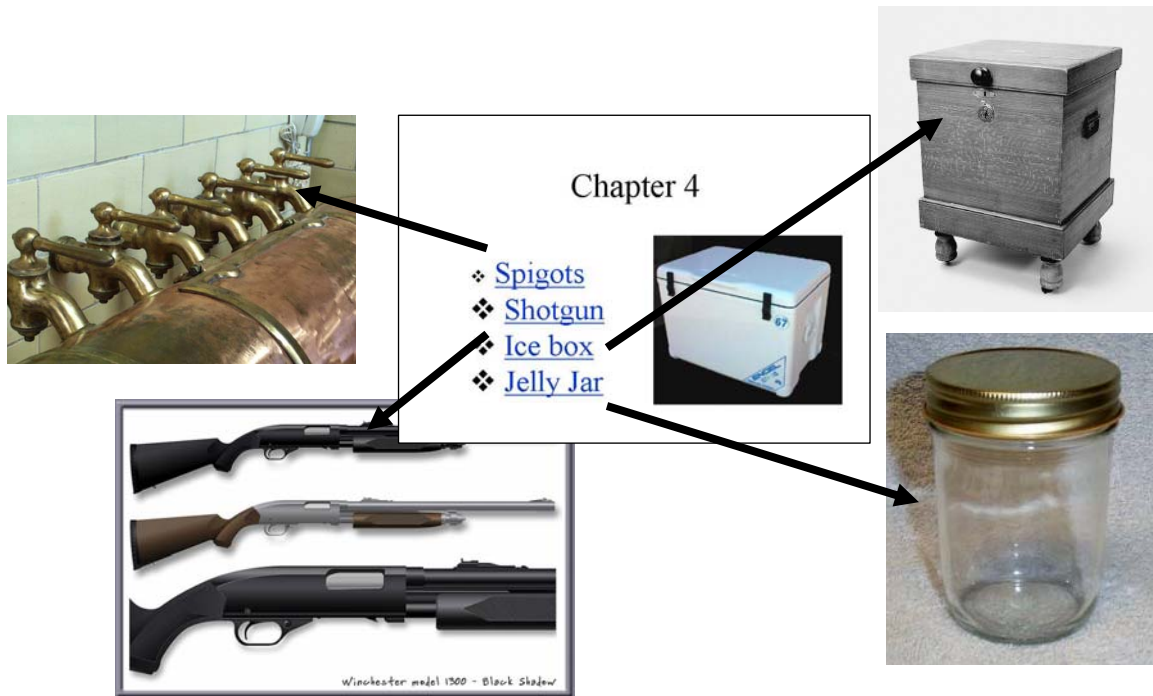
Birmingham – 1963 consisted of informational links, which varied greatly in context and

content.   In the first chapter of *The Watsons Go to Birmingham – 1963,* the reader learns

about the cold climate and freezing temperatures of Flint, Michigan, the Watsons'

hometown. Intrigued by the setting, Mick inserted Internet hyperlinks to websites

offering cold weather tips and detailed information on blizzards and freezing dangers. In

chapter 2, the reader learns that Kenny Watson has a lazy eye. In response o this

information, Madison found a website explaining the condition and possible treatments of

Kenny's condition. In chapter five, Byron Watson's encounter with matches inspired

Mick to add a hyperlink informing safe use of matches. On the same slide, Mick adds an

image link called "or else!" which opens a large photograph of a burning house. In all,

this group inserted 43 informational hyperlinks to their virtual guide, informing such

topics as hairstyles of the 1960s, biographies of Bobo Brazil and the Sheik (famous

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wrestlers in the 1960s), history of basketball and Bozo the Clown, and primary accounts

of the 1963 church bombing in Birmingham, Alabama.

As explained in Table 4.13, the virtual guide to *Bud, Not Buddy* contained 16

(29%) informational links. As in the case above, these links varied in content with the

common purpose of providing prior or extended knowledge relating to the book. Inspired

by the book's setting in the 1930s, Elaina inserted hyperlinks to educational websites

about the Great Depression. She also located sites to explain specific settings from the

story, including information about orphanages and food missions.   Leah, who had never

previously heard of okra (a favorite food of Bud's), found a website with information

about growing and harvesting okra, complete with recipes and suggestions for okra craft

projects. Additional examples of informational hyperlinks from the virtual guide to *Bud,*

Not Buddy include facts about hornets (Bud got stung), information about ethyl gasoline

(used during in the 1930s), a beginner's guide to hopping freight trains (common means

of transportation during the Great Depression), and history of Faygo Soda.

Within Document Hyperlinks

Of the students reading *Bud, Not Buddy,* Adam was the only one opting to create

his own hyperlink destinations rather than accessing Internet websites. Adam added

images and personal responses to slides within the virtual guide (see Figure 4.13). Much

like an appendix, these slides were housed at the very end of the virtual guide and

accessed by clicking on the hyperlinks on his individual chapter slides. To return to a

chapter slide, Adam inserted go-back action buttons in the lower right-hand corner of his

destination slides, allowing the reader to instantly navigate to the source of the hyperlink.

In all, Adam's chapter slides contained ten hyperlinks, each reaching a destination of a

unique PowerPoint slide which he had designed and created. Figure 4.12 showcases

Adam's destination slides to the hyperlinked phrases *Rules and things guide* (left) and

Buddy (right).

Figure 4.12 Within Document Hyperlink Destinations
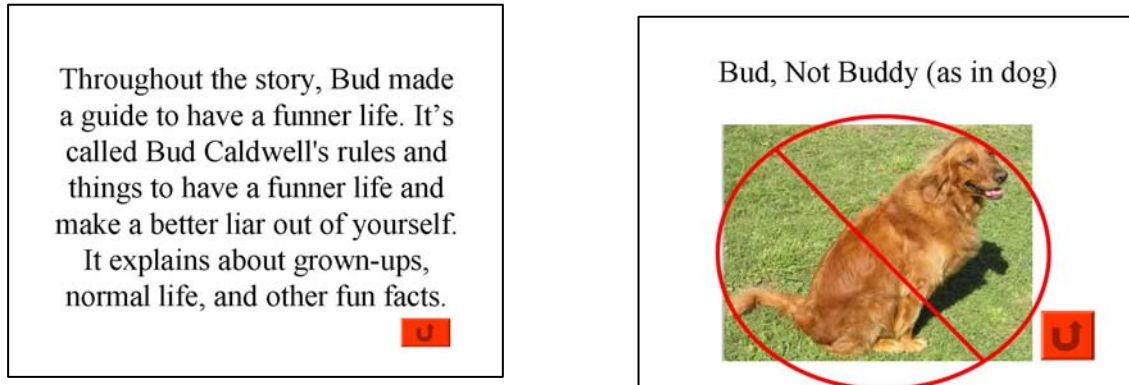
Katie and Charlie utilized within document hyperlinks within the virtual guide to

The Watsons Go to Birmingham – 1963, resulting in five destination slides at the end of

their presentation. Figure 4.13 shows how Charlie's destination slides included vivid

photographs and accompanying captions (left), while Katie created her own definitions to

vocabulary words or concepts from the story (right).

Sing created a series of four slides with illustrations and explanations of the many

band instruments mentioned in *Bud, Not Buddy*. Similar to adding pages to a book, Sing

included the slides directly into the presentation in a linear fashion without the use of

hyperlinks (see Figure 4.14).

Figure 4.13 Within Document Hyperlink Destinations
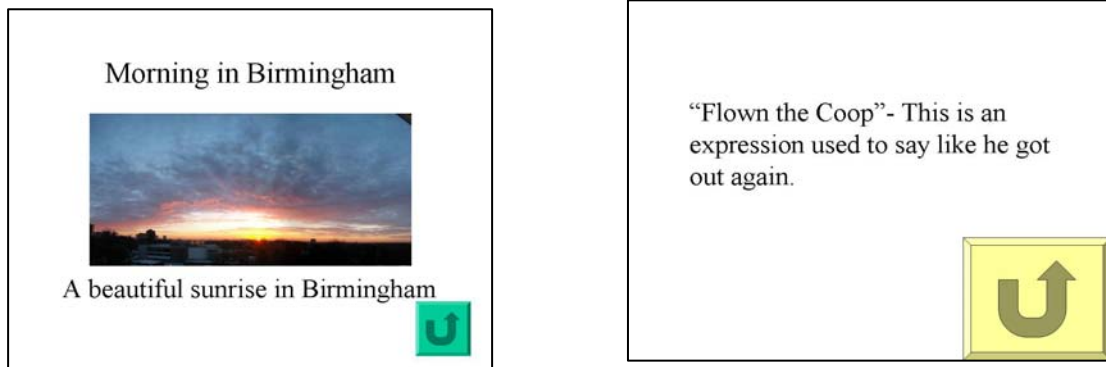
Figure 4.14 Individual Slides with Band Instruments from *Bud, Not Buddy*
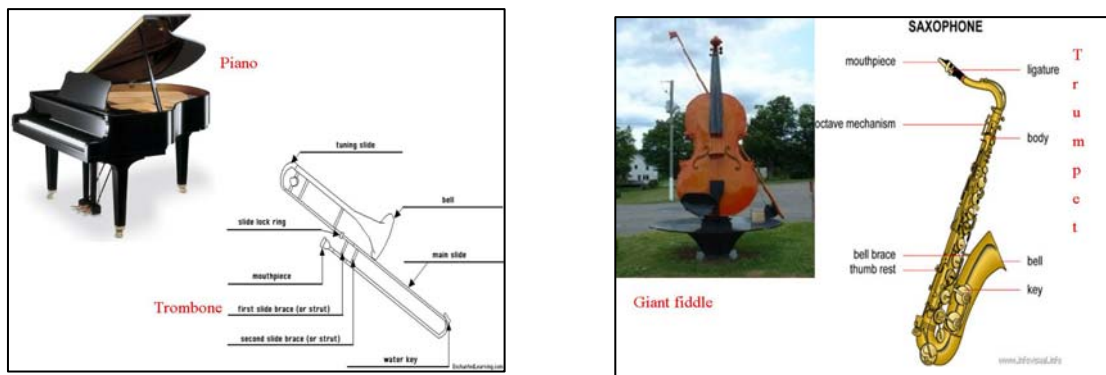
Instructional Technologies and Multi-Modal Literacies

While technology can changes the forms and functions of literacy (Reinking, 1998), literacy may also transforms the use of technology (Leu, et al., 2004). Within the context of the electronic reading workshop, the response projects clearly encouraged integration of instructional technologies and multi-modal literacies. As students created and published their virtual guides to the literature, they used new literacies and critical thinking skills to fully exploit the potential of the available technologies, while utilizing

technology as a means of responding to the literature in unconventional, yet meaningful, ways.

As mentioned previously, Mrs. Stitt and I conducted a series of minilessons emphasizing new literacy skills and specific technology applications (see Appendix G). In addition to whole-class instruction, skills lessons were directed toward individuals or small groups of students, who, in turn, eagerly shared their newfound knowledge with their peers. Prior to this project, Molly and Elaina had no experience working with PowerPoint, while eight students stated that they had a basic understanding of creating a PowerPoint slideshow from earlier grades. Two students, Mick and Madison, reported having previous knowledge of hyperlinks from working on a PowerPoint project with their gifted facilitator.

A review of my fieldnotes, student interviews, and the completed virtual guides suggest that a plethora of new literacy skills and technology applications were utilized throughout the project (see Table 4.14).

Table 4.14 Instructional Technologies and New Literacies during Response Project

Hardware/Software	Skills/Strategies
• Laptop and desktop computers • PowerPoint software • Internet websites • SmartBoard (interactive whiteboard)	• Hyperlinks • Short cuts (ctrl key) • Images • Internet downloads • Slide design and backgrounds • Custom animations • Sounds • Website evaluation • Publishing/presentation/layout

In their literature response journals, the fifth-graders reflected on the skills that they had learned.

Charlie: *I never knew there were so many ways you could use the Ctrl key.*

Alisha: *I learned how to do Hyperlinks, at first I didn't know what they were so I didn't use them, they were kind of invisible to me. I also learned that you can make them go in circles and other cool stuff.*

Molly: *I had never made a power point before and I am excited that I know how now.*

Students engaged in critical thinking as they contemplated over content and design of their individual PowerPoint slides. First, students had to decide slide content by selecting vocabulary or key concepts from the book to which they wanted to respond. Second, each student located or created relevant and appropriate hyperlink destinations including dictionary/reference links, map links, image links, and informational links. Third, students decided how to make the information accessible to others through effective publishing and presentation. The next section will discuss the three steps involved in the process of conceptualizing to publishing the virtual guides.

Conceptualizing slide content. As a group, students divided the e-book's chapters among its members. Individual students skimmed the chapters to remind themselves of key events or relevant vocabulary. Using the e-book "find" feature students quickly located and revisited concepts or words that they wanted to investigate further. Initially, students proposed their ideas on teacher-provided handouts (see Appendix M). In addition, they continuously communicated with group members to share ideas, check for potential overlaps, and provide constructive feedback. In their response journals, students reflected on the process of selecting concepts from the book:

Elaina: *I tried to find the most interesting words in that chapter also I looked for*

words I don't understand or words I've never heard before. Such as **spigots** *I had*

no idea what that meant. (See Figure 4.12 to learn how Elaina visually

represented "spigots.")

Sing: *I decided on what words I would use, by looking for stuff I didn't know, or*

what it looked like, including names and people.

Molly: *I just scanned the book and some of the words kind of jumped at me and*

they may have been in the book other times too.

Researching relevant link destinations. Through observations and informal

conversations with the fifth graders, I recognized that they clearly preferred multi-modal

sites with graphics, photo images, music, voice recordings, video, as well as words.

After learning that the Watsons loved singing in the car, Katie searched the Internet and

found recordings of Kenny Watson's favorite tune, "Yakety Yak" (Lieber & Stoller,

1958). After linking both lyrics and sound recording to her PowerPoint slide, she soon

had the whole class singing. Captivated by the Watsons' grandmother, whom Kenny

Watson compares to the Wicked Witch of the West in *The Wizard of Oz* (Baum, 1900),

Katie hyperlinked *The Wonderful Wizard of Oz Website* to her PowerPoint slide. This

site presents numerous multi-modal features, including images and video clips from the

movie, an art gallery, a blog, Oz links, and interactive games.

To locate and select appropriate and meaningful link destinations (websites),

students used critical literacy skills.   Mrs. Stitt shared that prior to this study, the fifth

graders had been taught how to use Google as a starting point for using the Internet.

Throughout the sessions, we continued to provide guidelines and suggestions for effective searches for specific topics. The school district's firewall blocked access to numerous sites, including popular video sites such as youtube.com. While shielding students from unsuitable contents, it also prevented them from choosing videos, good or bad, as their hyperlink destinations. Despite our efforts, and the school district firewall, the students did encounter inappropriate matter on a few occasions. Viewing these incidents as learning opportunities, they served as springboards for subsequent discussions about safe Internet conduct and usage. Mick noted in his response journal,

> *It was very fun making a power point like that – finding web sites and hyper*
>
> *linking them. Still, some Google Images and other web stuff were gross.*

Publishing and presenting. The completed virtual guides revealed students' use of multiple aspects of multimedia. The fifth graders' PowerPoint slides exuded individuality as they experimented with color schemes, slide designs, and custom animations. Many of the slides included sound effects or sound recordings. Students learned the following technology strategies through teacher-conducted minilessons, or by helping each other: import images from the Internet; insert pictures from clipart; modify or create slide backgrounds; change fonts, color schemes, or layout; insert and play sounds; and animate features (text and images) on their slides. Table 4.15 presents each student's use of multi-modal features within his or her PowerPoint slides. All students inserted images onto their slides. In addition to importing pictures from the Internet, Leah and Katie used the PowerPoint clip art gallery to enhance their slides. Mick and Adam used the drawing tool to create shapes to their slides. Mick, Adam and

Molly each included nine multi-modal features on their individual slides, whereas Alisha

only included four. On the average, students utilized seven different features.

Table 4.15 Multi-Modal Features within PowerPoint Presentations

	Virtual Guide to *Bud, Not Buddy*					Virtual Guide to *The Watsons Go to Birmingham - 1963*					
	Adam	Elaina	Sing	Alisha	Leah	Mick	Madison	Katie	Charlie	Molly	Total
Internet Hyperlinks		X	X	X	X	X	X	X	X	X	9
Within PP Hyperlinks	X							X	X		3
Action buttons	X							X	X		3
Change font style			X		X	X	X			X	5
Change font size	X					X	X	X	X	X	6
Font color	X	X	X		X	X	X	X		X	8
Animation of text	X	X	X	X	X	X	X			X	8
Animation of pictures	X	X	X		X	X	X			X	7
Clip Art					X			X			2
Internet images	X	X	X	X	X	X	X	X	X	X	10
Word art										X	1
Drawing/ shapes	X					X					2
Sounds	X	X	X	X	X	X	X			X	8
Total	9	6	7	4	8	9	8	7	5	9	

During the publishing stage, students considered background choices and color

choices. Knowing that they would present their slide shows to the class, they carefully

considered which font colors would best show on a large screen. Madison, for example,

experimented with several colors of background and fonts to ensure contrast, while Mick

perfected animation of text and pictures. Mrs. Stitt conducted a minilesson over effective

presentation techniques, encouraging students to not read directly from their slides.

Within their groups, students practiced sharing their individual slides, allowing for

constructive feedback from group members. Acknowledging the length of the virtual

guides, Mrs. Stitt asked the students to identify a few hyperlinks or features to showcase during the class presentation. Prior to presenting their virtual guides, the students anticipated the upcoming experience in their journals:

> Elaina: *I'm looking forward to show everyone my choices for pictures and websites. I also am looking forward to seeing everyone's presentations as well.*
>
> Alisha: *I am also excited to see the other groups and see how we are alike and different.*

The presentations took place in the school's library where an electronic whiteboard (SmartBoard) served as the backdrop for the presenting group. The audience members, who consisted of the fifth-grade class and a few adults, were seated on the floor facing the whiteboard and the presenters. Although the majority of the students were familiar with the SmartBoard as their school librarian often uses it, none of them had previous hand-on experience with this technology. As each group journeyed through their virtual guide, they brought their book to life through visual representations and multi-modal texts. By effortlessly tapping on the electronic whiteboard surface, hyperlink destinations magically appeared. Students applied new literacies as they utilized the potential of the SmartBoard technology to visually represent their response projects. At the same time, it was their access to technology that allowed for the transformation of students' literacy skills and, consequently, the creation of their virtual guides. Leu, et al. (2004) reminds us that the "relationship between technology and literacy is transactional" (p. 1593) which proved to be true within the context of the electronic reading workshop.

Summary

Within the context of an electronic reading workshop, fifth-grade students encountered multiple opportunities to respond to e-books.   First, e-book tools allowed the participants to engage in a spontaneous response process as the plot unfolded. Although a variety of tools were used, the note tool proved to be particularly prevalent in capturing the reader's thought process at significant points throughout the story. Second, students responded to e-books and reflected on the reading experience in electronic literature response journals. Through teacher-constructed prompts, the journals provided a structured framework in which each student responded in a unique fashion. Analysis of the electronic literature response journals revealed responses from four broad categories of response: 1) personal meaning making, 2) character and plot involvement, and 3) literary criticism.

Third, students responded to e-books on an online message board. The message board invited the fifth graders to voice their opinions, share ideas, and make sense of the story in electronic discussions with their peers.   The students composed and posted their own discussion prompts by starting a new thread on the message board. Analysis of the message board transcripts suggested five types of student-constructed prompts: 1) experiential prompts, 2) aesthetic prompts 3) cognitive prompts, 4) interpretive prompts, and 5) clarification prompts.   The fifth graders appreciated and encouraged others to reply to their prompts, sparking lively discussions about the literature.

The virtual guide response project provided a fourth opportunity for response to the e-books. Working in groups, students created virtual guides to the literature in which

they visually represented their personal interpretations of the e-books. The virtual guides

were published as multi-modal PowerPoint slide shows including both Internet

hyperlinks and within document hyperlinks. Four types of Internet hyperlink destinations

emerged: 1) dictionary/reference, 2) maps, 3) images, and 4) informational. As students

conceptualized, researched, published and presented their virtual guides to the literature,

they used new literacies and critical thinking skills to fully exploit the potential of the

available technologies. At the same time, they utilized technology as a means of

responding to the literature in unconventional, yet meaningful ways.

CHAPTER 5 - DISCUSSION

The study examined how integrations of technology can support the emergence of new literacies within the context of an electronic reading workshop. Fifth-grade students participated in e-book readings and encountered multiple response opportunities including the use of e-book tools, electronic response journal writing, online literature discussions, and development of virtual guide response projects. The purpose of this chapter is to discuss the findings and recommendations concerning the results of this study. The chapter begins with a summary of the study, followed by findings, a discussion of central principles of a New Literacies Perspective (Leu, et al., 2004), implications for classroom practice, and recommendations for further research.

Summary of the Study

As technology continuously emerge around the globe, today's students need and deserve the skills, strategies, and insights to effectively utilize the new literacies and information and communication technologies (ICTs) both within and beyond the classroom walls. For teachers and students alike, it becomes increasingly important to understand and foster the contemporary literacy skills that these ICTs demand. Leu, et al. (2005) cautions against viewing the rapid infiltration of ICTs is simply a technology issue – rather it is an essential literacy issue. Consequently, today's literacy educators must consider how to integrate the new literacies into the current language arts curriculum. The International Reading Association (2002) declared that in order to prepare students for the literacy futures they deserve, educators have a responsibility to effectively

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integrate new literacies and technology into their current language curriculum. In reality, however, literacy teachers have been slow to embrace and successfully integrate technology into their instruction (McKenna, 2006).   This study integrated technology into key components of a traditional reading workshop, resulting in an electronic reading workshop (ERW) in which students read and responded to e-books. The electronic reading workshop may serve as a framework for teachers seeking to intertwine new literacies with tried and true literacy practices.

The purpose of this qualitative case study was to examine ways integrations of technology support the emergence of new literacies within the context of an electronic reading workshop. The study was conducted in a fifth-grade classroom at an elementary school in the Midwest between February 15 and May 22, 2007. Although all 26 students participated in the electronic reading workshop, the data collection and data analysis focused on ten selected student participants.

As the fifth-grade students read historical fiction e-book novels, they used a variety of e-book tools and features to support their reading processes.   Furthermore, the students encountered four distinct opportunities to respond to the e-books. First, by using e-book tools, the students engaged in spontaneous and instantaneous response as the e-book plot emerged. Next, electronic literature response journals allowed a safe space for students to respond to teacher-constructed literature prompts and ERW prompts. The literature prompts related to the unfolding plot of the e-book, while the ERW prompts encouraged reflection on the students' participation in the electronic reading workshop. The third response opportunity took place on an online message board. The students composed and posted their own discussion prompts, eliciting rich responses from their

peers. Finally, a fourth opportunity for response to e-books involved participation in a multimedia group project. Working in groups of five, students conceptualized, researched, published, and presented virtual guides to the literature, which visually represented their interpretations and understanding of the book.

Throughout the study, multiple sources of data, including audio-recorded interviews, digital photographs/video clips, and numerous artifacts and documents, were collected. Using qualitative methods, the data was inductively analyzed to explore the emergence of new literacies as technology is integrated into key components of a reading workshop.   This study illuminated the expanded possibilities for integrating technology and literacy within the context of an electronic reading workshop. Findings of the study suggest technology integration supports the emergence of new literacies, while the new literacies support students' utilization of available technologies.

Findings

Within the context of the electronic reading workshop, data were gathered, organized, and analyzed around three distinct research questions. In addition, a broad, overarching question seeking to find how integration of technology supports the emergence of new literacies, provided overall direction and guidance for this study. Findings for each of the three questions will be presented, followed by a discussion of the expansive question.

Research Question 1

How do fifth-grade students interact with and perceive literature (e-books) in an electronic reading workshop?

The students participating in this study reported no previous encounters with electronic books, or e-books. They did, however, have previous experience reading texts on a computer screen. The classroom teacher, Mrs. Stitt, explained that her fifth-grade students had spent a considerable amount of time online in the weeks leading up to this study, in preparation for the upcoming state reading assessment. The practice exercises primarily consisted of reading text passages and answering multiple choice comprehension questions about the text.

The participating fifth-grade students read e-books over 15 sessions in increments of approximately 45 minutes. During these sessions, students interacted with the e-books and the computers on which they were stored in unique and individual ways. Inductive examination of fieldnotes, student interviews, students' literature response journals, and digital photographs and video from ERW sessions revealed that students determined their own reading venues, used available e-book tools in creative ways, and adjusted the page layout to suit their individual needs.

Reading Venue

Although Mrs. Stitt often requested that students remain seated in their desks, they were occasionally allowed to choose their own reading place, reading position, and reading partners. On such occasions, students assumed their own reading styles, positioning themselves and their laptops in comfortable positions. All students preferred sitting or lying on the floor, as opposed to being seated at a table or desk. Most

commonly, students preferred to stretch out on their stomachs, with the computer placed

on the floor in front of them. Others assumed a sitting position, often propped against a

wall, with the laptop resting before them on either crossed or stretched out legs. Some of

the students preferred reading aloud with a partner, sharing only one laptop. Others also

partner read, but kept their own screens for easy viewing while seated in close proximity

of each other. Several students simply positioned themselves closely together, but read

silently at their own pace from separate computer screens. A few sought a desolate

reading spot with limited interruptions from others.

In order to create comfortable surroundings where students can read, teachers

must carefully consider the physical environment before implementing a reading

workshop (Serafini, 2001). Routman (2003) reminds us of the importance to provide

students with reading areas with room for several students, as well as small, cozy reading

corners for one or two readers. Although the size and physical dimensions of the laptops

did not seem to restrict students' ability to make themselves comfortable, finding a

comfortable setting in which they could relax and read for an extended period of time

became a priority for the e-book readers.

Use of e-Book Tools

Just like their paper-based counterparts, e-books can provide alternative formats,

scaffolds, and supports to reach all students (Weber & Cavenaugh, 2006). In this study,

students interacted with the e-books by utilizing five different e-book tools and features:

note tool, highlighter, stamps, audio recorder, typewriter tool, and find feature. The use

of tools ranged in frequency and purpose, providing students with unique ways to interact

with the e-books as the plot unfolded. All ten participants used both the note tool and the

highlight text tool. Use of the note tool allowed the reader to spontaneously respond to the unfolding plot by adding notes to the e-book pages. The notes contained typed responses and were placed in close proximity to the passage to which the reader responded.

The fifth graders had prior experience highlighting text passages on a computer screen as part of the online test preparation for the state reading assessment. Consequently, during the first ERW sessions, students highlighted passages with facts which they deemed important if there were a comprehension quiz over the book. However, as students learned that there would be no such test, their use of the highlighter changed. Instead of focusing on facts, students began highlighting interesting or unusual words and expressions; derogatory terms, vulgar language, and insulting expressions; repeated features within the book (such as the "Rules" in *Bud, Not Buddy*); or noteworthy characters or settings. Students also used the highlighter to mark any misprints or mistakes that they discovered on the pages of the e-book.

Four students used the stamp tools which allowed the reader to "stamp" the e-book pages with symbols or marks. The fifth graders used this tool to mark or flag a particular text passage. Five students used the audio recorder which allowed the reader to attach a sound file to an e-book page. My field notes indicate that students used the audio recorder to emulate a sound of character described in the book (i.e., a southern accent or a laugh), or to provide a personal commentary to the unfolding plot (*I'd rather be hot than cold...*). Only three students used the typewriter tool which allows the reader to add typed comments directly to the e-book pages. For example, Madison used the tool to mark her

place (*Bookmark 4 Thursday*) and to offer her opinion about the book (*That was an awesome ending…*)

Several students utilized the "find" feature which provided them with instant access to any word or phrase within the book. Eliminating the need to skim through future or formerly read pages to find a section of interest, the students simply typed in a single word or a key phrase from the desired passage. Students found this feature convenient when wanting to return to a previously read section to check facts or help with overall comprehension of the emerging plot.

View/Page Layout

The e-book software (Adobe Reader) supports multiple viewing options, including single page, continuous, facing, or continuous-facing page layout. Possibly because it is the default setting, a single page layout was used by all participants during the first reading session. In subsequent sessions, however, students experimented with different settings to suit their own needs as readers. In addition, the fifth graders frequently adjusted the text size by zooming in and out on a page. Because of its resemblance to a paper-based book, several students preferred a facing view in which two pages appear side-by-side. Others liked the single page view, which helped them focus on just one page at a time. Depending on the chosen text size, students viewed an entire page or simply a small section at a time. About half of the students seemed to prefer the continuous option, which allowed them to scroll down and between pages by using the arrow keys on the keyboard. Much like a paper book, some students opted to "turn" the pages one-at-a-time, by deactivating the scroll option. Regardless of personal

preferences, the fifth graders utilized the viewing options frequently and continuously while interacting with their e-books.

Reading an e-book was a new experience to all participants. Prior to reading, the students reflected on the upcoming reading experience in their electronic literature response journals. Their written reflections revealed that eight of the participants perceived the upcoming experience as positive, while one student reported mixed emotions. Another student predicted that reading and e-book would be a negative experience, stating that she would "rather read a book that is not on the computer." Five participants proceeded to explain that reading an e-book would be exciting and likely less strenuous than reading a paper copy. Three students predicted that reading an e-book would take longer and possibly be more difficult.

After finishing the e-books, all ten students reported that the experience had been positive and they would like to try it again. The two students who initially had perceived the experience as less than favorable both became strong e-book proponents. They used the e-book tools while reading and explained in their literature response journals that the experience had been better than they first expected. The participants in this study clearly viewed the e-books and their accompanying tools as "cool" and exciting. On numerous occasions, both in interviews and in response journals, the students expressed that they perceived themselves as "lucky" to be part of this study, stating that their friends in other classrooms were envious of the opportunity to read an e-book.

Research Question 2

What types of reader response emerge within and electronic reading workshop in a

fifth-grade classroom?

Building on Rosenblatt's transactional theory of reader response (1938/1995,

1978) students were encouraged to make sense of the unfolding plot by connecting

themselves to the text, their personal experiences, and other members of the reading

community. The electronic reading workshop provided multiple opportunities for

students to make sense of and respond to the text itself. Throughout the reading

experience, four particular instruments captured each reader's emotional and personal

involvement with the e-books: 1) e-book response tools, 2) electronic literature response

journals, 3) online literature discussions, and 4) virtual guide response projects. As

students utilized each of these vehicles in unique and creative ways, distinctive types of

reader response emerged.

e-Book Response Tools

First, through the use of e-book tools, the students engaged in spontaneous and

instantaneous response as the plot emerged. As discussed in Chapter Four, students

utilized six different e-book tools and features. The note tool, in particular, served as a

conduit to ongoing response writing as it continuously captured the reader's thought

process during the reading experience. Through discernible statements, students

confirmed the evolving plot, predicted future events, and agreed or disagreed with the

actions and thoughts of the book's characters.

In the traditional reading workshop, Daniels (2002) proposes the use of Post-its as

the primary vehicle for helping students "harvest their responses as they read" (p. 98), in

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addition to a reader response journal.   He emphasizes the advantage of students placing

the sticky notes right in the text.   However, he cautions that the small size of Post-it

notes may limit students' response lengths. With close resemblance to Post-its, the

electronic note tool features a continuous scrolling text feature, allowing readers to add

vast amounts of text. Careful analysis of students' use of the note tool as a mechanism to

reader response, revealed that the notes were positioned directly on the e-book page in

close proximity to the text passage to which the reader was responding.

Unconcerned with standard spelling and conventional grammar, students added

voice and expression through creative use of punctuation marks, capitalization,

abbreviations, acronyms, and letter/number substitutions. Emotional icons, such as

happy faces, were also utilized to emphasize emotional connections with the plot or

characters. Furthermore, students responded to the author's craft and specific text

features found within the e-books. At times, note responses indicated a lack of

understanding or a quest for more information, resulting in questions directed toward a

specific character or an omniscient narrator. Perhaps due to their instant and convenient

accessibility, students used the notes rather frequently and for different purposes. Much

like writing personal notes in the margin of a treasured paper book, the note tool elicited

spontaneous, personal responses as the reader offered a distinctive commentary while the

story unfolded.

Electronic Literature Response Journals

The second opportunity to respond to e-books occurred in electronic literature

response journals. These journals, which consisted of Microsoft Word documents and

stored in students' individual folders on the school's student shared drive, offered a safe

space for students to respond to teacher-constructed literature prompts and ERW prompts. The literature prompts related to the unfolding plot of the e-book, while the ERW prompts encouraged reflection on the students' participation in the electronic reading workshop. In all, students wrote six journal entries, responding to a total of 34 teacher-constructed prompts. Of these prompts, 26 were coded as ERW prompts, while only eight were considered literature prompts. To inform the study of students' perceptions of the reading experience, an emphasis was placed on ERW prompts in the journal, whereas student had numerous opportunities to respond to the unfolding plot through the use of e-book tools, on the message board, and in the virtual guide response project.

A word count analysis revealed that the literature prompts, on the average, elicited longer responses than did the ERW prompts. This proved to be true for each individual student, as well as the class as a whole. Overall, the responses to literature prompts were 58% longer than the responses to ERW prompts. This is possibly due to the nature of the prompts. Reviewing the prompts, I recognized that the open-ended literature prompts elicited responses which fell closer to the aesthetic extreme on the efferent-aesthetic continuum (Rosenblatt, 1978), whereas the ERW prompts were more efferent in nature and appeared less open-ended.

The types of responses produced in the journals varied. Analysis of the journals revealed that students' responses to the e-book represented all three of Hancock's (1993a) broad categories of literature response journal entries: 1) personal meaning making, 2) character and plot involvement, and 3) literary criticism. This showed that the teacher-constructed prompts provided a framework in which each reader was able to respond in a

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unique fashion. In addition, students employed the journals as a place to ask questions about the text, the technology, and the structure of the reading workshop. The questions were addressed either individually or during subsequent class discussions.

The computer technology provided students access to multiple forms of language which they used to express their thoughts. Initially, all journal entries were written in a professional font (usually Times New Roman) and standard form. However, analysis of the electronic response journals revealed a gradual increase in the use of formatting tools and features with each journal entry. To add voice and expression to their responses the students experimented with text color; font choices and size; bold, underlined, and italicized text; numbered and bulleted lists; highlights; and visual language including emoticons, abbreviations, and number/letter substitutions. By providing students time to explore the features and capabilities of texts using technology, they invariably acquire knowledge about how language works (Labbo, 1996).

Although students' use of formatting features added personality and voice to their entries, journal responses were generally more structured and formal than the spontaneous responses produced by the e-book note tool. Because students did not have access to the response journals while reading, they seemed to view the electronic response journal as an "assignment," in which they answered questions after the reading was completed, rather than a place to explore thoughts and freely respond to the literature.

Online Literature Discussions

The third response opportunity involved interactive discussions about the literature on an electronic message board. Similar to literature circles (Daniels, 2002),

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the message board elicited lively, conversational responses to the e-books. Although, students were not given specific guidelines regarding the quality and quantity of their online posts, the message board transcripts revealed that each group established their own expectations for acceptable responses. Through praise and compliments, group members recognized insightful responses (*never thought of it that way… very nice*) but asked for clarification of vague prompts or replies (*u don't make sense*).

While the electronic literature response journals included teacher-constructed response prompts, the online message board offered students a chance to compose and post their own discussion prompts to elicit rich responses from their peers. Initially, a series of minilessons were conducted to demonstrate how to access and log on to the message board. Students also learned how to post a message, either as a new thread (or prompt) or to reply to an existing message. In addition, through direct and guided instruction students learned that a "good" response prompt should be open-ended, spark interest, and be relevant to the story.

Through the duration of the electronic reading workshop, students posted 473 prompts including 55 student-constructed prompts (or new threads). As a spring board for initial coding of the new threads, I used Hancock's (2004) four teacher-constructed literature response journal prompts: 1) experiential prompts, 2) aesthetic prompts, 3) cognitive prompts, and 4) interpretive prompts. Repeated coding of the online transcripts resulted in a fifth category, clarification prompts. The majority of student-constructed prompts (42%) fell in the cognitive category. These prompts encouraged group members to make predictions or inferences and solve problems relating to the plot and characters.

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The large portion of cognitive prompts suggests that the students found these easy to compose.

Interpretive prompts, which elicit a higher level of reasoning as they call on readers to consider moral and values and judgment of plot or characters, constituted 20% of the new threads, followed by aesthetic prompts (15%) which encourage emotional interactions with the text. On the message board, the aesthetic prompts sparked heartfelt, and sometimes heated, discussions among group members. The experiential prompts (13%) focused on the readers' prior experiences and knowledge. Not surprisingly, the experiential prompts elicited the greatest number of responses (8), as students related the book to their personal lives. The clarification prompts indicated confusion or lack of understanding. By starting a new thread with a clarification prompt, readers sought answers to specific questions relating to the text. It is worth mentioning that these prompts, which were often rather closed-ended, initiated the fewest number of replies from peers. Examination of the transcripts suggests that once a question was answered, students lost interest in the clarification prompts.

Although none of the participants had previous experience with a threaded discussion board, most were familiar with synchronous chat rooms. In informal interviews and written reflections, the students often referred to the act of posting messages on the online discussion board as "chatting" with friends. The reader response that emerged on the message board was lively and conversational in nature. Students voiced their opinions, agreed or disagreed with their peers, and gained multiple perspectives by reading the replies of others. Their use of language was rather informal, including unconventional spelling and grammar. Norton-Meier (2004) proposes that

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members of the world of online chat should experiment with language and learn how to

use icons and images to communicate with one another. She further advocates for the

right to play with and break the rules of language while participating in online

communications. In this study, the fifth graders creatively utilized capital and lower case

letters, punctuation marks, emoticons, abbreviations, acronyms, punctuation, and

number/word substitutions, resulting in vivacious responses to the e-books.

Virtual Guide Response Projects

To enhance students' delight in books and cause them to think more deeply about

the text, Kiefer et al. (2007) suggest that teachers plan opportunities for meaningful

response options. A fourth opportunity to respond to e-books arose as the participants in

this study engaged in technology-based projects following the reading experience.

Guided by the pilot study which informed this study, Mrs. Stitt elected to have the

students create a virtual guide to the literature to visually represent their interpretations of

and connections to the book. Each virtual guide consisted of a PowerPoint slideshow to

which each group member contributed individual slides over particular chapters or

sections of the book. Although the slides varied in content and format, they all sought to

represent the book through images, text, and hyperlinks to Internet destinations or within

document destinations (other slides). The two virtual guides to *Bud, Not Buddy* and *The

Watsons Go to Birmingham – 1963* included a total of 138 Internet hyperlinks and only

15 within document links. Analysis and coding of the Internet hyperlinks resulted in four

categories of link destinations: 1) dictionary/reference links, 2) map links, 3) image links,

and 4) informational links. Dictionary/reference links help explain interesting or unusual

words or phrases from the books by connecting the user to an online dictionary or reference source. Of the Internet links in the virtual guide to *Bud, Not Buddy,* 24% consisted of dictionary/reference links, compared to 31% in the virtual guide to *The Watsons Go to Birmingham* – 1963.

For both groups, the category in which fewest destinations were recorded was map links which visually represented the geographic locations of places mentioned in the story. With only two map links in the virtual guide to *Bud, Not Buddy*, it can be assumed that the geographic setting of the story did not appear of great relevance to the readers. On the other hand, as the fifth graders traced the south-bound journey of the Watsons, they included six relevant links to Internet-based maps in their virtual guide. There was also a noteworthy difference in the groups' utilization of image links and informational links. In the virtual guide to *Bud, Not Buddy,* 43% or their hyperlinks were linked to visual representations of concepts or vocabulary from the book, while only 12% of the links in *The Watsons Go to Birmingham – 1963* connected to image destinations. The large difference in image links suggests that *Bud, Not Buddy,* with its many unusual and interesting expressions, lent itself to clarification and explanation through visual representation.

Another notable difference was the students' use of informational links. Fifty percent of all links in the virtual guide to *The Watsons Go to Birmingham – 1963* consisted of informational links, compared to 29% of the links in the virtual guide to *Bud, Not Buddy.* The online transcripts, students' literature response journals, and informal conversations with the students support that the readers of *The Watsons Go to Birmingham – 1963* cared deeply about the book's general theme of Civil Rights and the

particular topic of the 1963 church bombings in Birmingham, Alabama. Many of the informational hyperlink destinations addressed these particular topics.

It appears that the type of responses that emerged within the virtual guides are strongly influenced by the literature itself. As students explored multiple technologies and new literacies to create their response projects, it became apparent that they did so with the book in mind. The fifth graders took care to select words and phrases that were relevant and meaningful to the plot and characters, and linked them to carefully chosen destinations which represented the story well.

Research Question 3

How does an electronic reading workshop support socially constructed learning in a fifth-grade classroom?

Rooted in social constructivist theory (Vygotsky, 1978), the electronic reading workshop provided a learning environment in which students interacted with each other as they made sense of and accessed the available information and communication technologies. The identified principles of a New Literacy Perspective (Leu, et al., 2004) states that "learning is often socially constructed within the new literacies" and that "social learning strategies will be central to literacy instruction in the future" (p. 1589). In today's technology-rich classrooms, it is simply unfeasible for one teacher to know all the new literacies and teach these directly to his or her students. In fact, today's students may possess higher skills in the new literacies than most adults. Consequently, socially constructed learning plays an important role in the exchange of skills and strategies demanded by the new literacies and increasingly complex technologies (Leu, et al., 2004). No longer assuming the role of the sole educator, the teacher holds a

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responsibility to orchestrate educational experience in which students seek and share knowledge and expertise in a social learning environment.

Within the electronic reading workshop, students encountered multiple opportunities for social learning. On a daily basis, e-book readers exchanged ideas, knowledge, and support regarding the utilization of e-book tools and features. If given a choice, most students preferred to partner read, allowing them to talk about the emerging plot and discuss their continuous use of e-book tools. Throughout the study, I frequently overheard whispering conversations in which students shared what they had highlighted or recorded on e-book notes, along with explanations and rationales for doing so. As students discovered a new tool or feature, they quickly shared this newfound knowledge with their peers. Knowledge was also constructed simply by observing others' reading behaviors. While partner reading with Molly and Katie, Charlie, who up to this point had only used a facing page view, discovered that by mimicking their single page layout, he benefited as a reader. When asked about this change in an audio recorded interview, Charlie explained:

> *. . . cause we were reading in a group and they [Molly and Katie] were reading the same way [continuous single page] and I just wanted to do it the same way . . . and then, I guess I found it a little easier when I just read on one page. . .*

Students also supported one another while writing in their electronic literature response journals. Although considered an "individual" response activity, the fifth graders frequently turned to their peers to share discoveries regarding formatting tools and various forms of language made available by the computer technology. In addition,

students provided each other with technical support. As individual laptops periodically lost their wireless Internet connection, peers came to the rescue by sharing computers or assisting others to reconnect. The fifth graders disclosed strategies for logging on to the computers, locating and opening the electronic journals, and saving their documents in the correct folders. Students also shared ideas for embellishing their journals with vivid fonts and other visual representations.

The most prominent opportunities for social learning occurred through threaded discussions on an electronic message board and development of virtual guide response projects. During these components of the electronic reading workshop, students worked in groups of five to collaboratively discuss, explore, and respond to the e-books. What follows is a detailed discussion of how these two ERW components supported socially constructed learning in the fifth-grade classroom.

Online Literature Discussions

Within the context of the electronic reading workshop students encountered vast opportunities for social learning through participation in threaded message board discussions. Similar to literature circles (Daniels, 2002) or book talks (McMahon & Raphael, 1997; Calkins, 2001), the online literature discussions engaged students in e-book conversations with their peers. Each discussion group consisted of five students reading the same e-book. Adam, Elaina, Sing, Alisha, and Leah centered their conversations around *Bud, Not Buddy,* while Mick, Katie, Madison, Charlie, and Molly responded to *The Watsons Go to Birmingham – 1963.* Although the students had no previous experience discussing literature on a message board, they knew each other well and felt comfortable working together as a group.

The fifth graders were first introduced to the message board in the fourth ERW session. Realizing that the majority of the e-book readers were frequent participates in online chat sessions after school, Mrs. Stitt emphasized the expectations to use appropriate language ("this is not a chat room"), stay on topic ("talk about the book"), and be respectful to their group members ("be nice"). None of these teacher-initiated expectations, however, seemed to be of great concern as the students' own "rules" for acceptable language use, quality of responses, and appropriate conduct emerged as the conversations developed. As Heath (1982) explains, each individual group develops its own "rules for socially interacting and sharing knowledge in literacy events" (p. 50).

Analysis of the discussion transcripts revealed that students' responses were conversational and interactive. Their written expressions were rather informal and playful and often reflected synchronous chat room language. Despite the initial notification of using "appropriate" language, Mrs. Stitt and I determined that students' creative use of emoticons (☺, ☹), abbreviations (*U R so right!*), acronyms (*OMG [oh my gosh]*) capitalization and punctuation marks (*OH PLEASE!!!*), and number/letter substitutions (*If only we all could do that 2 r brothers…*) enhanced their conversations by adding voice and expression. Researchers agree that strategic use of symbols, icons, and placement of text and images help communicate the message in an electronic literacy environment (Grisham & Wolsey, 2006; Leu, et al., 2004; Norton-Meier, 2004). However, Bromley (2006) cautions, as this type of informal writing finds its way into students' school assignments, teachers will need to rethink standards for writing within the classroom in relationship to ICTs. In this study, Mrs. Stitt and I both recognized that the students were ahead of our learning curve in their use of language and new literacies.

The fifth graders complimented each other for replying to prompts and posting interesting or though-provoking comments (*Rock on your so right!!*). However, students poignantly asked for clarification of ambiguous responses and reminded each other to stay on task when conversations occasionally strayed from the literature (*Uhh... This is hilarious but answer my ???'s*). With virtually no adult interference, students assumed responsibility for creating a social learning environment in which they maintained high expectations for themselves and their group members.

Throughout the electronic reading workshop, 11 e-book reading sessions were followed by approximately 20 minutes of online literature discussions. After two sessions of replying to my initial prompt, students asked how to initiate their own conversations by starting a new thread. Recognizing that the fifth graders wanted to assume leadership roles within their own learning communities and, as a result, surpass the traditional teacher-driven discourse in the classroom, Mrs. Stitt and I adjusted our plans. The principles of a New Literacy Perspective (Leu, et al., 2004) explain that "teachers become more important, though their role changes, within new literacy classrooms" (p. 1599). As the teacher is no longer the single source of knowledge, roles of students and teachers change drastically and may even be reversed. Skilled teachers take advantage of this by constructing learning contexts in which students can freely exchange ideas and participate in social learning opportunities (Leu, et al., 2004).

Through teacher-led minilessons, students learned how to start a new thread to post a discussion prompt on the message board. Mrs. Stitt also provided the students with knowledge on what constitutes a "good" prompt. For the remainder of the electronic reading workshop, the majority of prompts were constructed by the students,

for the students. In addition to my initial prompt, I only posted two more new threads, while the fifth graders started 55 new threads collectively. By assuming responsibility for constructing the online discussion prompts, students consequently customized the discussions to enhance and extend their reading experiences. The fifth graders were able to socially construct meaning by becoming mediators of and participants in meaningful discussions with their peers.

Analysis of the message board transcripts revealed that students constructed five types of prompts, including experiential, aesthetic, cognitive, interpretive, and clarification prompts. While the responses to the different types of prompts varied, they all seemed to elicit alternative views, multiple perspective, and diverse opinions. Reflecting on the online discussions, students acknowledged the value of learning from one another.

> Mick: *Talking about the book [on the message board] really made us think about* *everything, not just the book.*
>
> Katie: *I like [the message board] because I could ask questions that I did not* *understand and ppl [people] would respond to them and answer them.*

In the traditional literacy classroom, literature discussions often involve a teacher leading the class in conversation about a particular story. Although students may contribute, they commonly only do so when called upon. Coiro, Logan, and Labbo (2004) view the traditional literacy classroom as a place in which knowledge is mostly transmitted, not constructed.   Grisham and Wolsey (2006) suggest that asynchronous discussions support socially constructed learning since all participants have an

opportunity to be heard without being interrupted. "Asynchronous communications are interactive, like discussions, but thoughtful, like written discourse" (p. 652). This sentiment appeared to be true in this study. As group members communicated on the message board, they took their time to read and carefully consider the opinions of others, before submitting a thoughtful reply. Based on observations and analysis of online discussion transcripts, it seems that engagement in an asynchronous online literature discussion encouraged students to think deeply about the literature and their responses to their peers.

Virtual Guide Response Project

An additional opportunity for social learning occurred through the development of virtual guide response projects. Following the last e-book reading session, the response project was introduced at the beginning of the fourth full week of the electronic reading workshop. Students were given a brief overview of the project and shown a few sample slides created by preservice teachers at the university. The fifth graders were asked to think creatively and feel free to change the format to suit the response needs of each group. The students continued to work within their e-book reading groups, resulting in Adam, Elaina, Sing, Alisha, and Leah creating a virtual guide for *Bud, Not Buddy* while Mick, Katie, Madison, Charlie, and Molly producing a virtual guide to *The Watsons Go to Birmingham – 1963.* Each virtual guide consisted of a multimedia PowerPoint presentation to which all group members contributed slides with hyperlinks, images, text, and sounds in response to the their respective e-book.

The process of conceptualizing, researching, publishing, and presenting their virtual guides spanned over 14 ERW sessions. Throughout the sessions, I taught a series

of minilessons emphasizing specific technology skills and applications. These lessons were delivered on a need-to-know basis to the whole class, small groups, or even individual students. Similarly, Mrs. Stitt conducted minilessons on effective publishing and presentation styles. However, most of the learning occurred as students guided, assisted, and supported each other within their groups.

In the initial planning stage of the virtual guides, students conceptualized their projects and brainstormed ideas for key concepts and vocabulary words to include in their guides. The following excerpt from a conversation about *The Watsons Go to Birmingham – 1963,* illustrates how students sought opinions from group members to help with the selection of key terms:

> Molly: *Should we include "shaving cream?"*
>
> Katie: *No, everyone knows what that is.*
>
> Molly: *Yes, but they keep talking about it in the book.*

While skimming through the e-book chapters for key vocabulary and concepts, Mick discovered that using the e-book "find" feature sped up the process of locating specific words considerably. Mick's idea spread quickly across the classroom, resulting in both groups applying his technique for rapidly locating words within the book. Leu (2002) suggests that the new literacies will be even more dependent on social construction of learning than traditional literacies. The new literacies and ICTs are simply changing too rapidly for any single person to be literate in them all. As exemplified by Mick's discovery, each user likely knows something that can be of value to others.

As students began to research Internet sites to include as link destinations, they turned to each other for support in locating sites and critically evaluating their content and relevance. The principles of a New Literacy Perspective (Leu, et al., 2004) indicate that critical literacies are central to the new literacies. Mrs. Stitt and I frequently overheard conversations among students as they investigated, compared, and finally selected texts and images. As students located the "perfect" link destination, often after reviewing and evaluating multiple options, they enthusiastically shared their discoveries with their group members. Although each student worked on his or her own laptop, congregations of four or five students around one screen were common.

Publishing the virtual guides involved the use and application of numerous multi-modal features including hyperlinks, sounds, animations, text features, background features, and the insertion of images and pictures. Eight of the ten participants indicated having prior knowledge of using PowerPoint to varying degrees, while Molly and Elaina reported no previous PowerPoint experience. A review of students' utilization of multi-modal features within their virtual guides did not seem to reflect their previous experiences with PowerPoint. Molly, who had no previous experience, were among the top users of multi-modal features utilizing nine different features. On the other hand, Charlie, who reported having made PowerPoint presentations in previous grades, only utilized five multi-modal features. In addition to my minilessons, which were often conducted with individual students who subsequently shared their knowledge, the fifth graders learned how to access and employ multi-modal features through social sharing and construction of knowledge. Reflecting on the group project in their response journals, student shared what they had learned:

Sing: *I learned how to do hyperlinks, get effects and make sounds on the Power*

Point . . . I also learned how to insert pictures

Madison: *I didn't know how to make sound and fun entrys. [Another student]*

helped me learn how to and I'm grateful that she did!

Charlie: *I never knew there were so many ways you could use the Ctrl key.*

To provide prior knowledge and spark interest in the books, the fifth graders

envisioned their final products being shared with future readers of *Bud, Not Buddy* and

The Watsons Go to Birmingham – 1963. The participants engaged in social learning to

create the virtual guides, and sharing them with others may provide additional

opportunities for social learning. Reflecting on their virtual guide and its potential

impact on future students, Madison explained:

A little guide can help you understand major things in the book. On another

thought, maybe your really interested in the church bombing, or fascinated

about 1960's hairdos, or intrigued about something else in the book, and want

to learn more about the things that interested you in some way. Virtual guides

can really help you find the info your craving. They might even inspire you to

think up your own ideas. (From Madison's literature response journal.)

Although the fifth graders' social learning ability appeared to come naturally, in-

depth conversations with Mrs. Stitt revealed her year-long support in fostering this

community of learners. Mrs. Stitt's position is supported by researchers (Labbo, 1996;

Labbo & Kuhn, 1998, Leu, et al., 2004) who believe that social learning does not come

naturally to all students. Consequently, many students will need to be guided in learning

about literacy from one another. Leu, et al. (2004) suggested that socially skilled learners

will be advantaged, while independent learners may be disadvantaged, as the new

literacies become increasingly dependant on social learning strategies. While the

findings in this study reveal that all four key components of the ERW supported social

learning, the students' engagement in online literature discussions and creation of virtual

guide response projects were prominent in the promotion of socially constructed learning.

Overarching Question

How does the integration of technology within the context of a fifth-grade electronic

reading workshop support the emergence of the new literacies?

Although a precise definition of the "new literacies" does not exist due to their

inherent characteristics of change, researchers agree that they include the skills,

strategies, and insights necessary to use the Internet and other ICTs effectively for a

variety of purposes (Leu, 2002; Leu, et al. 2004; Reinking, 1998; Street, 2003). Whereas

traditional literacies prepare for effective use of books, paper, and pencils, the new

literacies address the new skills in reading, writing, and communication required by the

rapid infiltrations of emerging technologies. It is important to keep in mind that the new

literacies do not replace traditional literacies but rather build on them. However, in

today's world, being able to read, think critically, and communicate via the Internet has

become as important as being able to read a book or write a letter (Leu, et al., 2004).

Within the context of the electronic reading workshop, fifth-grade students

encountered new literacies nearly every time they read e-books, wrote in electronic

literature response journals, engaged in online literature discussions, and created virtual

guide response projects.   The e-book technology allowed readers to engage in

spontaneous reader response by utilizing electronic tools and features. Throughout the

study, students used a plethora of e-book tools to support them in their reading processes.

The use of the e-book note provided students with instant access to Post-it-like notes,

which they carefully placed directly on the e-book pages, allowing them to spontaneously

respond to the unfolding plot. Their responses were short, yet beamed with expression as

they utilized emoticons, acronyms, number/letter substitutions, punctuations marks, and

capitalization in creative ways.

By using the "find" feature, students quickly and efficiently located their place in

the book or searched for particular words or text passages. Through critical evaluation of

the text, a few students discovered misprints or errors, which they quickly validated by

searching for similar mistakes. Through the readings, the fifth graders manipulated the

laptops and e-book software to meet their unique needs as readers. By changing the page

layout and text size, students adjusted the e-book view, allowing for comfortable reading

on the computer screen.

Integration of technology clearly transformed writing within the electronic

reading workshop. Rather than replacing one type of writing with another, Bruce (1998)

suggests that writers add to their current repertoire of process and product tools. As

students composed responses within their electronic literature response journals, it

quickly became clear that new writing styles were emerging under the influence of

technology. In their journals, students experimented with formatting tools, including

colors, fonts, and highlights to add expression and personality. They used numbered and

bulleted lists; underline, italic, and bold texts; and varying font sizes to organize and structure their responses logically. Spelling and grammar tools helped with the overall composing process. Students explained in their journals and interviews that they perceived writing on the computer as fun and less "work" than using paper and pencil.

Zammit and Downes (2002) argue that "literacy can no longer be seen as just a set of cognitive abilities or skills based on an identifiable technology, for example, alphabetic script on paper. It needs to be recognized as a social activity embedded within larger practices and changing technologies" (p. 24). Within the electronic reading workshop, the participants engaged in asynchronous message board discussions with their peers. Students' prior knowledge of and personal experiences with synchronous chat room communications influenced their written discourse on the message board. Students' creative use of emoticons number/letter substitutions, abbreviations, acronyms, capitalization and punctuation marks, and number/letter substitutions added voice and expression to their messages, allowing them to communicate effectively with their peers via the Internet.

Often, the students participated in multiple, parallel discussions as they read, evaluated, and responded to messages in several ongoing threads in a rather nonlinear fashion. Unlike a face-to-face conversation, the threaded discussion format allows participants to go back and review and reevaluate previously posted replies at a much later time. To successfully utilize the asynchronous message board students relied on new literacy skills as they logged on, posted new threads (prompts), and replied to others' messages.

Through the development of virtual guide response projects, students frequently utilized the new literacies. The technology allowed students to create multimedia presentations with hyperlinks to the Internet and within document destinations. Leu (2002) explains that "one aspect of the new literacies is that they include the new forms of strategic knowledge necessary to locate, evaluate, and effectively use the extensive resources available within complexly networked ICT such as the Internet" (p. 314). The identified principles of a New Literacy Perspective (Leu, et al., 2004) states that "critical literacies are central to the new literacies" (p. 1595). The fifth graders encountered multiple Internet sources as they researched potential hyperlink destinations for their virtual guide response projects. As demanded by the new literacies, students relied on social learning strategies, critical thinking skills, and personal insights to critically evaluate vast amounts of information in preparation for their virtual guides.

Creating the virtual guides required specific technology skills which students acquired through teacher conducted minilessons and socially constructed learning. Furthermore, development of the virtual guides offered students multiple opportunities to distribute knowledge about these new literacies both within their groups and among the classroom as a whole. Charlie, for example, explored numerous uses of the ctrl (control) key on his laptop keyboard. As he discovered new ctrl shortcuts, he continuously shared them with his group members. Mick showed his peers how to animate text while Madison became an expert on changing the slide color scheme. As pointed out by Maslin and Nelson (2002), the benefits of using technology to create literacy response products "lie not only in the process and creation of the final product"

(p. 628), but in the fact that students and teachers alike can expand their knowledge of the new literacies by working together and learning from each other.

Leu, et al. (2004) remind us that new literacies almost always build on foundational literacies rather than replace them. Similarly, the entire framework of the electronic reading workshop was built on the foundation of a traditional reading workshop. Embarking on this study, my goal was not to replace already sound literacy practices, but rather explore what would happen if aspects of technology were integrated into each of the key components of the reading workshop. The findings of this study clearly indicate that the integration of technology supported the emergence of new literacies within each of the components of the electronic reading workshop.

Central Principles of a New Literacies Perspective

While it is too early to define a comprehensive theory of new literacies, this study builds on the ten principles (Leu, et al., 2004) on which an emerging theory should be constructed. Below, I revisit the ten principles described in Chapter Two and discuss their connections to the fifth-grade electronic reading workshop.

- *The Internet and other ICTs are central technologies for literacy within a global community in an information age.* As reading comprehension takes on a different meaning on the Internet (Coiro, 2003), new skills and strategies are required to successfully navigate and comprehend the vast amounts of information available. Within the electronic reading workshop students faced multiple opportunities and

utilized new skills and strategies to search for information, evaluate search engine
results, and make inferences concerning hyperlink destinations.

- ***The Internet and other ICTs require new literacies to fully access their potential.***
  The new literacies include the skills, strategies, and insights necessary that allow us to
  use the Internet and other ICTs effectively (Leu, 2002). The participants experienced
  daily encounters with new literacies as they read and responded to e-books using e-
  book tools; utilized a word processor effectively to include text and features in
  electronic literature response journals; communicated effectively on an asynchronous
  message board; used a search engine to locate information; and created multi-modal
  presentations including hyperlinks, animations, sounds, and images. Although the list
  is not inclusive, it exemplifies the multiple encounters with new literacies that
  occurred within the electronic reading workshop.

- ***New literacies are deictic.*** Leu, et al. (2004) remind us that "technological change
  happens so rapidly that the changes to literacy are limited not by the technology but
  rather by our ability to adapt and acquire the new literacies that emerge" (p. 1591).
  With no prior e-book reading experience, the fifth graders explored the e-book tools
  and transformed the reading experience by envisioning the technology's potential. As
  new e-book technologies become available, students will need to change construction
  of literacy to adapt to these new technologies. It is vital that teachers keep up with
  technological changes to prepare students for a constantly changing perception of
  what it means to be literate.

- ***The relationship between literacy and technology is transactional.*** While
  technology transforms literacy (Reinking, 1998), literacy also transforms the

functions of technology (Leu, et al., 2004). The transactional nature of technology and literacy became apparent in this study as the participants encountered the online message board. Students quickly imagined new possibilities for literacy by constructing their own prompts. While the technology allowed for posting and replying to student-constructed prompts, new literacy skills were required for effective use of the message board.

- *New literacies are multiple in nature.* In this study, students encountered and created meaning with multiple media forms. Internet texts and e-books integrated a range of symbols and multi-media formats, as did the students' own virtual guide response projects. Within the electronic reading workshop, students also encountered multiple communications on the online message board, but only through one vehicle. Future electronic reading workshops may include multiple contexts for new literacies and communication technologies as global sharing of information and thought may become a reality.

- *Critical literacies are central to the new literacies.* Because the Internet permits anyone to publish anything, today's students must be critical consumers of the information they encounter. Within the context of the electronic reading workshop, students encountered multiple opportunities to critically evaluate information while researching Internet hyperlink destinations for their virtual guide response projects. In addition, students critically read and responded to each other's messages on the online discussion board.

- *New forms of strategic knowledge are central to the new literacies.* Leu, et al. (2004) predict that there will be many types of strategic knowledge important to the

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new literacies. Through a series of minilessons and socially constructed learning, the students in this study gained important skills and strategies to help them locate, evaluate, and utilize the technology available to them.

- ***Speed counts in important ways within the new literacies.*** Although an important consideration as teachers seek to prepare students for a society valuing the speed it takes to acquire information, this did not seem of great concern within the context of the fifth-grade electronic workshop. Students were frequently encouraged to "slow down" and given large amounts of time to locate, evaluate, and communicate information.

- ***Learning often is socially constructed within the new literacies.*** As increasingly complex technologies become available, social learning plays an important role in the exchange of new skills and strategies needed to approach and utilize these technologies (Leu, et al. 2004). Within the context of the electronic reading workshop, students encountered multiple opportunities to socially construct learning including threaded discussions on an electronic message board and development of virtual guide response projects.

- ***Teachers become more important, though their role changes, within new literacy classrooms.*** In the new literacy classroom, roles between students and teachers may sometimes reverse as all learners share their expertise with others (Leu, 2002). The electronic reading workshop exemplifies how the teacher orchestrated a context in which socially constructed literacy learning could take place rather than being the sole dispenser of literacy skills. As students were encouraged to share their knowledge and voice their opinions, the teachers' learning curve increased.

This study supports and contributes to the ten central principles of a New Literacy Perspective (Leu, et al., 2004). Furthermore, it hopes to serve as a framework for educators seeking to integrate instructional technologies into their current curricula and, consequently, encourage the emergence of new literacies within their classrooms. What follows is discussion of implications for classroom practice that resulted from this study.

Implications for Classroom Practice

Building on the concept of a traditional reading workshop in which students collaboratively read and respond to quality selections of literature, this study explored the conceptualization and implementation of an electronic reading workshop. While the findings of this study are confined to the fifth-grade classroom in which they occurred, implications for classroom practices may be extended to other contexts. What follows are ten considerations for the development and implementation of an electronic reading workshop that emerged from the data collected and analyzed within this study. Recognizing that all schools have distinct needs and resources, teachers and administrators seeking to integrate technology into their current literacy curricula are encouraged to carefully consider and utilize these recommendations to best support the emergence of new literacies within their unique contexts.

- *Teachers need technical support.* In this study the process of downloading the e-books proved to be difficult and frustrating. The school district's firewall blocked initial download attempts, and subsequent efforts were only successful on a few of the

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school's laptop computers. Although the school district's technology personnel and administrators were supportive and understanding, the technical problems were never fully resolved. As teachers integrate technology into their classroom, they will inevitably encounter technical challenges.   To not allow potential problems to dissuade teachers from using technology, they need to know where to turn for support and assistance.   Furthermore, it is imperative that teachers, administrators, and technology personnel work collaboratively to solve technology-related issues.

- ***Computer-based assessments restrict students' access to technology.*** In a position statement of multi-modal literacies, the National Council of Teachers of English (2005) recognized that an over-emphasis on testing may deprive students of the kinds of multi-modal experiences they deserve. This study took place during the spring semester in a K-6 elementary school in which all students in grades three through six participated in the state's online reading and math assessments. Consequently, access to the school's computer lab and mobile computer carts was limited and students did not have access to their e-books between scheduled reading sessions. As school districts move toward computerized assessments, it is important to keep an open dialogue concerning the time and technology involved.

- ***Teachers should consider multiple book formats.*** Alternative reading selections may be considered within the context of an electronic reading workshop. Electronic books come in several forms ranging from toy-inspired stories, CD-ROM story books, electronic textbooks, and various versions of downloadable e-books. Many can be viewed on desktop computers, laptops, or handheld devices. In addition to text and illustrations, electronic books may employ interactive features including

tools, animation, sound, and hypertext. Furthermore, the Internet offers a large

selection of both free and fee-based websites with children's books. Many of these

do not need to be downloaded on a computer or handheld device, but rather accessed

online. When selecting books for the electronic reading workshop, teachers must

consider book format and features as well as available technologies to best meet

diverse needs of students.

- *Classroom environment and available technologies must be carefully considered.*

  The setting of an electronic reading workshop will invariably fluctuate depending on

  the available space (classroom, computer lab, or media center) and access to

  technology (desktop computers, laptops, or handheld devices). In this study, students

  prioritized finding a comfortable setting in which they could relax and read for a

  prolonged period of time, which often involved moving their laptops to a nearby

  hallway where they could stretch out on the floor. Teachers must carefully consider

  the physical environment and available resources before implementing an electronic

  reading workshop.

- *Students need multiple response opportunities.* Within the electronic reading

  workshop, the fifth graders encountered four distinct opportunities to respond to the

  literature. Each response opportunity elicited diverse responses as the students

  reacted to the story through multiple means and perspectives. Particular response

  opportunities may be adapted or modified to accommodate individual needs and

  resources. An ongoing blog, for example, may replace the electronic literature

  response journal while e-mail exchanges may provide a sensible alternative to

  asynchronous message board discussions.   Multiple response opportunities within the

electronic reading workshop are vital, although alternative mechanisms for response may be considered.

- ***Students need time and opportunity to explore the new literacies.*** Prior to reading the e-books the participants in this study were given a brief overview of a few of the available e-book tools. While keeping the instruction to a minimum, students were encouraged and given time to freely explore the e-book tools. Consequently, students discovered and accessed the tools without preconceived notions or limitations of their potential use. Similarly, students were only shown a few sample slides to a virtual guide response project and encouraged to think creatively and deviate from the format. For students to discover the full potential of the new literacies and technologies, teachers need to provide them with time and opportunities to explore.

- ***Students need time and opportunity to reflect on their use of the new literacies.*** In their electronic literature response journals, students responded to teacher-constructed prompts about the literature and the ERW experience. While multiple opportunities to respond to the literature were provided through online literature discussions and e-book tools, the focus of the electronic response journal fell on the ERW prompts. These prompts elicited valuable insights to students' engagement in and perceptions of the electronic reading workshop. Students shared their desire to construct their own message board prompts, their prior knowledge of technology, and their utilization of ICTs and new literacies within the context of the electronic reading workshop. By reviewing the journals in a timely manner, students' questions and concerns were addressed appropriately. Allocating time and opportunity to reflect on ERW experience can provide valuable insights for both teachers and students.

Furthermore, recognizing the journal's dual purpose, the traditional literature

response journal must now be expanded and renamed to an "ERW Journal" within the

context of the electronic reading workshop.

- ***Students need time to play with language, text, and technology.*** Within the

  electronic reading workshop students experimented with language through the use of

  icons, text features, images, and unconventional grammar and spelling. By providing

  students of various linguistic backgrounds repeated opportunities to use technology to

  explore the features and capabilities of texts, they gain an appreciation for and

  understanding of how language works.

- ***Teachers need to reconsider traditional standards for writing.*** As this study began,

  teachers expected the students to use conventional spelling and grammar in their

  writing. As students used technology to develop their own written discourse, teachers

  recognized that their playful use of language helped communicate their written

  message in a digital literacy environment. Consequently, we reconsidered our

  expectations in response to the new literacies. As students write within an electronic

  reading workshop, teachers need to rethink standards for writing.

- ***Teachers need adequate and ongoing professional development.*** Within the

  electronic reading workshop, the teacher's role changed from sole provider of

  knowledge to facilitator of carefully orchestrated contexts of literacy and learning.

  Because the teacher's role changes in the world of new literacies, greater attention

  needs to be placed on teacher education and professional development. The

  International Reading Association (2002) advocates for sufficient time and training

for teachers to develop proficiency in the new literacies of information and communication technology.

Educators should strive to meet their diverse literacy needs by considering available resources, distinctive circumstances, and unique contexts.   Consideration and application of these classroom implications may support integration of technology and literacy in universal classroom settings as they provide insights gained from this study.

Recommendations for Future Research

The arrival of the new literacies and integration of technology provide unprecedented opportunities for teachers and students alike. Yet, it is imperative that educators and technology professionals provide ongoing evidence of technology's positive impact on education. The International Reading Association (2002) recommends continued research that identifies "new skills, strategies, and insights essential for successful literacy performance with different information and communication technologies" (n.p.). The National Technology Leadership Coalition (NTLC) supports the need for "rigorous research that identifies specific learning issues best addressed by specific technologies and that illuminates best practices for teaching with technology" (Knezek, Christensen, Bell, & Bull, 2006, p. 18). It is my hope that this study encourages further field-based research that exemplifies sound literacy practices within technology-rich environments.   What follows are suggestions for future research, based on the data gathered and analyzed for this study.

- ***ERW research must be replicated on a wider scale in diverse setting with diverse populations.*** This study took place in a classroom with low representation of ethnically, culturally, and linguistically diverse students. To determine widespread applicability, study of diverse settings and more diverse participants are needed. By extending the ERW to different settings, will participants' utilization of technology and new literacies change?

- ***Challenges in using technology merit further investigation.*** When aspects of technology are less than 100 percent reliable, it is difficult to make them part of daily instruction. Future research should address the challenges that come with ICTs and, consequently, veer teachers away from their curricular integration. What support systems or mechanisms are in place as teachers cope with problems relating to technology use?

- ***Research should examine assistive technology within the context of the electronic reading workshop.*** The electronic reading workshop may provide cost-effective means for special needs students to receive individualized instruction within the regular classroom. It is likely that forms and functions of electronic books can support struggling readers and linguistically diverse students, while online literature discussions may offer a safe forum for students with diverse language needs. How does technology assist and support special needs students within the ERW?

- ***Research should consider adequate means of assessment.*** Within the electronic reading workshop students received continuous and constructive feedback from their teacher. Students also reflected on their engagement and performance by responding

to ERW prompts within the electronic literature response journal. The focus of this study was not to evaluate individual students' performance as much as to gain overall insights. The International Reading Association (2002) suggests that to evaluate students' literacy learning and inform instructional practices, reading and writing assessments must begin to include the new literacies. How can assessment inform new literacy instruction?

- ***In-depth examination of each ERW component is recommended.*** During this study, four key components of the electronic reading workshop were investigated over a relatively short period of time. Extensive study of each distinct ERW component (e-book readings, electronic literature response journal, online literature discussions, and virtual guide response projects) may reveal deeper insights and understandings of the effects of technology integration and students' use of the new literacies. How do individual components of the electronic reading workshop support the emergence of new literacies?

- ***A comparative study of a traditional reading workshop and an electronic reading workshop needs to be conducted.*** To learn more about the effects of integrating technology into key components of a traditional reading workshop, a comparative study between the two workshops should be conducted.   How is learning socially constructed as students interact with and respond to literature within the two contexts?

- ***Variations and adaptations of the ERW must be considered.*** To support widespread applicability of the electronic reading workshop, research should inform ways to modify and adapt the ERW to suit unique needs and contexts. Exploration of

multiple reading forms and genres, available technologies for journaling, various means of electronic communications, and diverse response options may reveal the emergence of additional or alternative literacies. How can the electronic reading workshop best be adapted to suit diverse needs and contexts?

- *Globally constructed learning warrants further investigation.* Technology enables teachers and students to collaborate with others from surrounding communities or across the world.   By establishing communicative partnership with other classrooms or schools, students may develop empathy, cultural awareness, and global knowledge. How can the electronic reading workshop support socially constructed learning over global distances and cultural boundaries?

Closing Thoughts

To become fully literate in today's world, students need proficiency in the new literacies. The rapid infiltration of the Internet and other forms of information and communication technology are changing and redefining what it means to be literate. Traditional definitions of best practice literacy instruction, derived from a longstanding tradition of books, paper, and pencils, are no longer sufficient (IRA, 2002). Reading and writing in a digital environment differs greatly from reading and writing paper-based texts only (Leu & Kinzer, 2000; Turbill & Murray, 2006). Labbo and Reinking (1999) explain that there are many ways to view these inevitable changes, but it is not possible to ignore them. Educators from all content areas, grade levels, and backgrounds need to acknowledge, and hopefully embrace, these profound transformations. Students have a

right to teachers who are skilled in teaching new literacies and a "literacy curriculum that integrates the new literacies of ICT into instructional programs" (IRA, 2002, n.p.).

This study integrated aspects of technology into all key components of the reading workshop, resulting in the conceptualization and implementation of an electronic reading workshop. Within the ERW, students engaged in e-book readings, electronic literature response writing, online literature discussions, and development of virtual guide response projects. It is my hope that the electronic reading workshop will serve as a framework for teachers who seek meaningful ways to integrate technology, but, discouraged by this seemingly overwhelming task, may not know where to begin.

Results of this study suggest that the integration of technology support the emergence of new literacies within the context of a fifth-grade electronic reading workshop. The participating students found reading electronic books motivating, engaging, and enjoyable. Utilizing a series of e-book tools, students interacted with the book, both aesthetically and efferently. Throughout the ERW, students encountered four distinct opportunities to respond to the e-books. The e-book note tool elicited spontaneous responses as the plot unfolded. The electronic literature response journal contained two types of teacher-constructed prompts: literature prompts and ERW prompts. The literature prompts encouraged students to think deeply about the readings while the ERW prompts promoted self reflection on students' participation in the ERW experience. Although heartfelt and genuine, students' journal responses appeared relatively structured and formal. The third response opportunity occurred as students participated in asynchronous message board discussions with their peers. Discussions were sparked by student-constructed prompts which produced lively, conversational

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responses to the e-books. The fifth graders engaged in a final response opportunity through the development of virtual guide response projects. Working in groups of five, students conceptualized, researched, and published multimedia projects that visually represented their understanding and interpretations of the e-books.

While the findings of this study are limited to the context in which the study took place, implications for classroom practices may be extended to other contexts. It is my hope that teachers seeking to emulate the electronic reading workshop presented in this study do so with their unique needs and resources in mind. The findings of this study support an emerging body of research stating that learning is socially constructed within the new literacies. Students clearly rely on each other for guidance, support, and construction of knowledge, within the technology-rich environment, and so should educators. By helping one other, sharing ideas, and supporting future research, teachers can provide their students with the literacy futures they deserve.

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Appendix A - NETS for Students

ISTE National Educational Technology Standards for Students

http://cnets.iste.org/students/s_stands.html

NETS for Students

Technology Foundation Standards for All Students

The technology foundation standards for students are divided into six broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. These categories provide a framework for linking performance indicators within the Profiles for Technology Literate Students to the standards. Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

Technology Foundation Standards for Students

1 Basic operations and concepts
   ➢ Students demonstrate a sound understanding of the nature and operation of technology systems.
   ➢ Students are proficient in the use of technology.

2 Social, ethical, and human issues
   ➢ Students understand the ethical, cultural, and societal issues related to technology.
   ➢ Students practice responsible use of technology systems, information, and software.
   ➢ Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

3 Technology productivity tools
   ➢ Students use technology tools to enhance learning, increase productivity, and promote creativity.
   ➢ Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

4 Technology communications tools
   ➢ Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
   ➢ Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5 Technology research tools
   ➢ Students use technology to locate, evaluate, and collect information from a variety of sources.
   ➢ Students use technology tools to process data and report results.
   ➢ Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

6 Technology problem-solving and decision-making tools
   ➢ Students use technology resources for solving problems and making informed decisions.
   ➢ Students employ technology in the development of strategies for solving problems in the real world.

Appendix B - NETS for Teachers

ISTE National Educational Technology Standards for Teachers

http://cnets.iste.org/teachers/t_stands.html

NETS for Teachers

Educational Technology Standards and Performance Indicators for All Teachers

Building on the NETS for Students, the ISTE NETS for Teachers (NETS•T), which focus on preservice teacher education, define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. All candidates seeking certification or endorsements in teacher preparation should meet these educational technology standards. It is the responsibility of faculty across the university and at cooperating schools to provide opportunities for teacher candidates to meet these standards.

The six standards areas with performance indicators listed below are designed to be general enough to be customized to fit state, university, or district guidelines and yet specific enough to define the scope of the topic. Performance indicators for each standard provide specific outcomes to be measured when developing a set of assessment tools. The standards and the performance indicators also provide guidelines for teachers currently in the classroom.

1   TECHNOLOGY OPERATIONS AND CONCEPTS.
        Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:

- ➢ demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education Technology Standards for Students)
- ➢ demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

2   PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.
        Teachers plan and design effective learning environments and experiences supported by

technology. Teachers:

- ➢ design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- ➢ apply current research on teaching and learning with technology when planning learning environments and experiences.
- ➢ identify and locate technology resources and evaluate them for accuracy and suitability.
- ➢ plan for the management of technology resources within the context of learning activities.
- ➢ plan strategies to manage student learning in a technology-enhanced environment.

3   TEACHING, LEARNING, AND THE CURRICULUM.
        Teachers implement curriculum plans that include methods and strategies for applying

technology to maximize student learning. Teachers:

- ➢ facilitate technology-enhanced experiences that address content standards and student technology standards.

- ➤ use technology to support learner-centered strategies that address the diverse needs of students.
- ➤ apply technology to develop students' higher order skills and creativity.
- ➤ manage student learning activities in a technology-enhanced environment.

4   ASSESSMENT AND EVALUATION.
   Teachers apply technology to facilitate a variety of effective assessment and evaluation

strategies. Teachers:

- ➤ apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- ➤ use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- ➤ apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

5   PRODUCTIVITY AND PROFESSIONAL PRACTICE.
   Teachers use technology to enhance their productivity and professional practice. Teachers:

- ➤ use technology resources to engage in ongoing professional development and lifelong learning.
- ➤ continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- ➤ apply technology to increase productivity.
- ➤ use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

6   SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.
   Teachers understand the social, ethical, legal, and human issues surrounding the use of

technology in PK-12 schools and apply those principles in practice. Teachers:

- ➤ model and teach legal and ethical practice related to technology use.
- ➤ apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- ➤ identify and use technology resources that affirm diversity
- ➤ promote safe and healthy use of technology resources.
- ➤ facilitate equitable access to technology resources for all students.

Appendix C - IRB Approval

K·STATE
Kansas State University®

University Research
Compliance Office
203 Fairchild Hall
Lower Mezzanine
Manhattan, KS 66506-1103
785-532-3224
Fax: 785-532-3278
http://www.ksu.edu/research/comply

TO: Marjorie Hancock   Proposal Number: 4183
Elementary Education
246 Bluemont Hall

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: February 16, 2007

RE: Approval of Proposal Entitled, "A Case Study Exploring the "New Literacies" During a Fifth-Grade Electronic Reading Workshop."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. **This proposal is approved until** February 16, 2010.

In giving its approval, the Committee has determined that:

☒   There is no more than minimal risk to the subjects.
☐   There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file. Any change affecting human subjects must be approved by the Committee prior to implementation. All approved proposals are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by a member of the University Research Compliance Office staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if appropriate and if the subjects are KSU students, to the Director of the Student Health Center.

When deemed appropriate by the IRB and prior to involving human subjects, properly executed informed consent must be obtained from each subject or from an authorized representative, and documentation of informed consent must be kept on file for at least three years after the project ends. Each subject must be furnished with a copy of the informed consent document for his or her personal records. The identification of particular human subjects in any publication is an invasion of privacy and requires a separately executed informed consent.

It is important that your human subjects project is consistent with submissions to funding/contract entities. It is your responsibility to initiate notification procedures to any funding/contract entity of any changes in your project that affects the use of human subjects.

Appendix D - Parent Letter/Letter of Informed Consent

Dear Parents and Students:

My name is Lotta Larson and I have been a teacher in the Manhattan-Ogden School District since August, 2000. I am currently on professional leave from USD 383 to complete a doctoral degree in the program of Curriculum & Instruction at Kansas State University. Besides working on a Ph.D., I teach Language Arts Methods courses at K-State and supervise many undergraduate education students as they gain teaching experience in "real" classrooms at Amanda Arnold and Marlatt Elementary Schools.

I am writing to seek your consent in a research study that will investigate fifth-grade students' participation in an Electronic Reading Workshop. The purpose of the study is to investigate ways technology can be used in the reading curriculum to increase student motivation and engagement. The study will take place in Mrs. Stitt's classroom from February to May, 2007. During this time frame, Mrs. Stitt and I will integrate reading instruction and technology to engage your child in four components of a reading workshop.

Reading of e-books. Your child will use the school's laptop computers to read and interact with an electronic book (e-book). The students will read either *Bud, Not Buddy* or *The Watsons Go to Birmingham - 1963*. Both books are written by Christopher Paul Curtis and have received numerous awards. Paper copies of the books will be available for review in the classroom throughout the study.

Literature Response Journal. Throughout the reading experience, your child will respond to the book in an electronic literature response journal. The journal will be kept as Microsoft Word document in your child's individual computer file on the Amanda Arnold server. Mrs. Stitt and I will read and respond to your child's journal entries.

Literature Conversations. Similar to being a member of a "book club," your child will discuss the book he/she is reading with a small group of peers. In this study, the conversations will take place on an online message board where students post their opinions about the book and then respond to their group members' comments. K-State will provide us with our own electronic message board (part of K-State Online) which can *only* be accessed by Mrs. Stitt's fifth-grade students. The online literature conversations will be closely monitored by Mrs. Stitt and me to make sure that the conversations are appropriate and relate to the books.

Literature Response Activities: After reading and responding to the book, your child will work in a small group to create a technology-based project that relates to the book he/she has read. During this time, the students will use different Internet sources and various computer applications.

Classroom sessions may be audio/video recorded and copies of the students' written responses will be obtained by the researcher for analysis. All collected responses will remain confidential. Actual student names will not be used in the final research report or any subsequent publications. Participation is voluntary and the student may withdraw from the study at any time. Participation on nonparticipation will have no effect on grades earned.

If you have questions, please call me at (785)293-4419 (home) or (785)410-3516 (cell) or e-mail me at ell4444@ksu.edu. You may also contact Dr. Marjorie Hancock, my major advisor, at (785)532-5917 (KSU) or at mrhanc@ksu.edu for any questions or concerns about the study. Questions regarding the rights of human subjects should be addressed to Rick Scheidt, Chair f the Committee on Research Involving Human Subjects, or Jerry Jaax, Associate Vice Provost for Research Compliance and University Veterinarian at (785)532-3224.

A parent or guardian/student consent form is attached to this letter. After reading carefully, please sign and return one copy of the consent form to Mrs. Stitt as soon as possible. I have included an extra signed and dated coy of the consent form to keep for your records. I look forward to working with Mrs. Stitt and her students as they explore new ways to integrate technology and reading instruction.

Sincerely,

Lotta C. Larson

<div align="center">**Parent or Guardian/Student Informed Consent Form**</div>

PROJECT TITLE: A Case Study of Multiple Dimensions of Literacy During an Electronic Reading Workshop

APPROVAL DATE OF PROJECT: **EXPIRATION DATE OF PROJECT:**

PRINCIPAL INVESTIGATOR/INFORMATION: Dr. Marjorie R. Hancock, Ed. D./KSU Professor, (785)532-5917 or mrhanc@ksu.edu

CO-INVESTIGATOR/INFORMATION: Lotta C. Larson, Doctoral Candidate, (785)293-4419 (home) or (785)410-3516 (cell) or ell4444@ksu.edu

CONTACT NAME AND PHONE FOR ANY PROBLEMS/QUESTIONS:
- Dr. Marjorie R. Hancock, 785.532.5917
- Lotta C. Larson 785.532.5550 or 785.410.3516

PURPOSE OF THE RESEARCH: To identify and describe ways a reading workshop can be delivered electronically to encourage and support literacy learning/instruction in a fifth-grade classroom.

PROCEDURES OR METHODS TO BE USED: Mrs. Stitt will integrate technology and components of a reading workshop. The participants (Mrs. Stitt's fifth-grade students) will read electronic books; respond to the literature in literature response journals (Microsoft Word documents); engage in asynchronous online literature discussions; and create and present technology-based literature response projects. The co-investigator, Lotta Larson, will collect and analyze data including transcripts of online literature discussions, literature response journals, and literature extension projects as developed by participants. The co-investigator will also take field notes throughout the study. Class sessions may be audio/video recorded.

LENGTH OF STUDY: February – May, 2007.

RISKS OR DISCOMFORTS ANTICIPATED: None

BENEFITS ANTICIPATED: The students will learn to use technology to increase their reading/literacy skills. The reading of e-books and participation in online literature discussions may motivate students to read and respond to additional books.

EXTENT OF CONFIDENTIALITY: All references to names and identifiable locations will be changed or omitted in the final transcripts and in any documents or publications relating to the study.

TERMS OF PARTICIPATION: I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled. We verify that our signatures below indicate that we have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that our signatures acknowledges that we have received a signed and dated copy of this consent form.

PARTICIPANT'S NAME (STUDENT): _____

PARENT/GUARDIAN SIGNATURE: _____ DATE: _____

PARTICIPANT'S SIGNATURE (STUDENT): _____ DATE: _____

WITNESS: _____ DATE: _____

Appendix E - Pre-Reading Journal Entry Prompts

Name:

Date:

Please answer the following questions. Please provide as much information as you can.

Have you ever read an eBook before?

Are you looking forward to reading an eBook? Explain why or why not.

How do you think reading an eBook will be different from reading a regular book?

Do you think you will enjoy reading an eBook more or less than a regular book? Explain.

What questions do you have for Mrs. Larson or Mrs. Stitt about this project?

Thanks for your help! Please save this document by clicking the save icon on the tool bar.

Appendix F - Electronic Literature Response Journal Prompts

Pre-Reading Entry
1. Have you ever read an eBook before? **[ERW Prompt]**

2. Are you looking forward to reading an eBook? Explain why or why not. **[ERW Prompt]**

3. How do you think reading an eBook will be different from reading a regular book?
   [ERW Prompt]

4. Do you think you will enjoy reading an eBook more or less than a regular book?
   Explain. **[ERW Prompt]**

5. What questions do you have for Mrs. Larson or Mrs. Stitt about this project? **[ERW
   Prompt]**

Journal Entry 1
1. Good job reading so far! Please explain how you feel about the book so far? What do
   you like best? What could be better? **[Literature Prompt]**

2. Explain how Bud reminds you of someone you know? What do you like best about Bud?
   (*Bud, Not Buddy*) **[Literature Prompt]**

   Explain how Kenny Watson reminds you of someone you know? What do you like best
   about Kenny? (*The Watsons Go to Birmingham – 1963*).

3. Do you think Bud did the right thing by leaving the Amos house? Explain why. (*Bud,
   Not Buddy*) **[Literature Prompt]**

   Think about the part where Byron's lips were frozen to the mirror of the car. What would
   you have done if you were Kenny? Explain why. (*The Watsons Go to Birmingham –
   1963*).

4. What do you think about reading on the computer? Explain what the experience has been
   like so far. **[ERW Prompt]**

5. What do you think about using the K-State Message Board to talk about the book? Why
   or why not do you like it? Do you have any suggestions for making these discussions
   better? **[ERW Prompt]**

Journal Entry 2
1. In chapter 9, Bud asks the question, "I mean what other reason could there be for
   Momma to keep all those things I have in my suitcase and treat them like treasures, and
   why did I know way down in my guts that they were real, real important, so important
   that I didn't feel comfortable unless I knew where they were all the time? What is Bud

talking about? Explain why you think these things are so important to Bud? (*Bud, Not Buddy*) **[Literature Prompt]**

In chapter 7, Byron gets in trouble after making some permanent changes to his hair without asking for permission. Think about a time when you did something that you got in trouble for. Explain what you did. What happened? (*The Watsons Go to Birmingham – 1963*).

2. How did chapters 9 and 10 make you feel? Why? (*Bud, Not Buddy*); How did this chapter make you feel? Why? (*The Watsons Go to Birmingham – 1963*). **[Literature Prompt]**

Journal Entry 3 (after finishing the book)
1. Please explain what you thought about the book. **[Literature Prompt]**

2. Would you recommend this book to other kids? Why or why not? **[Literature Prompt]**

3. The last few chapters are very intense and emotional. Give some specific examples from the book that made you "feel something" (angry, sad, happy, worried). Explain how you felt and why. **[Literature Prompt]**

4. Explain what you have enjoyed most about using the message board on K-State Online? Please give two or three examples. **[ERW Prompt]**

5. Do you think kids in other classrooms would enjoy using a message board to discuss books? Explain why or why not. **[ERW Prompt]**

6. In a future novel study, would you prefer to read a "regular" paper book, or would you rather read the book on the computer (ebook)? Explain why. **[ERW Prompt]**

Journal Entry 4
1. Congratulations on finishing your PowerPoint slides! Explain what you thought about making a Virtual Guide to the book. (Did you like it? Why or why not?) **[ERW Prompt]**

2. What do you think other kids can learn from using your PowerPoint guide when they read the book? Include specific examples. **[ERW Prompt]**

3. Do you think it would have been helpful for you to have a similar guide when you were reading the book? How could it have helped you understand or enjoy the book better? **[ERW Prompt]**

4. What were some specific skills that you learned from creating your slides? **[ERW Prompt]**

5. Before doing this project, did you have experience working with PowerPoint? **[ERW Prompt]**

6. What kinds of PowerPoint projects have you done before? How was this project different? **[ERW Prompt]**

7. Explain how you decided on what vocabulary words or ideas to use from the book? **[ERW Prompt]**

8. If you could select one link or slide that you are the most proud of from your slides, what would it be? Why? **[ERW Prompt]**

9. If you could start all over again with your virtual guide, would you do something different? Why and how? **[ERW Prompt]**

10. Thank you for all your hard work. What are you looking forward to most about the upcoming presentations? **[ERW Prompt]**

   Journal Entry 5
1. Does using technology motivate you to learn? Explain how. **[ERW Prompt]**

2. What were some specific things that you learned from the virtual guides (your own or those created by other groups)? **[ERW Prompt]**

3. Which of the following parts of the ERW did you *enjoy* the most? **[ERW Prompt]**
   1. Reading the book (ebook or paper copy)
   2. Discussing the book on the message board on KSOL
   3. Writing journal entries on the computer (like this one)
   4. Creating the Virtual Guide (the group project)
   Explain why:

4. From which part of the ERW did you *learn* the most? **[ERW Prompt]**
   1. Reading the book (ebook or paper copy)
   2. Discussing the book on the message board on KSOL
   3. Writing journal entries on the computer (like this one)
   4. Creating the Virtual Guide (the group project)
         Explain why:

5. What suggestions do you have for other teachers who would like to start an ERW? **[ERW Prompt]**

6. What advice do you have for students who may be part of an ERW in the future? **[ERW Prompt]**

Appendix G - ERW Minilessons

Date*	Minilesson Topic/skills**
2/19	Effective response writing
3/26	Message board basics e-book basics
3/27	Posting messages
3/29	Effective prompt writing
4/4	Review effective prompt writing
4/5	Writing an effective reply to a prompt
4/10	Group message board activity/response quality
4/11	Social studies connection
4/12	Review writing an effective reply to a prompt
4/13	Epilogue and "About the Author" text features
4/19	Transferring ideas from paper to PowerPoint slide
4/24	Creating/inserting hyperlinks
4/25	PowerPoint features and tools
4/26	PowerPoint color scheme and layout PowerPoint title slide components
5/3	Presenting information from a PowerPoint slide

*Additional minilessons were provided to individual students and small groups throughout the electronic reading workshop.
** See Table 3.1 for instructional details and/or roles of teacher and researcher.

Appendix H - Student Interest Questionnaire

Name: _____ How old are you? _____

What kinds of things do you do after school? (hobbies, sports, music lessons, etc.)

_____

_____

What grades have you attended at Amanda Arnold? (circle) **K 1 2 3 4 5**

List three words that describe you: 1. _____

2. _____ 3. _____

How many siblings do you have?   _____ brothers   _____ sisters

How old are they? _____

What is your favorite subject in school? _____

Explain why: _____

_____

Do you have access to a computer at home? **Yes   No**

If yes, how much time do you spend on the computer at home? _____

Explain what you do on the computer (games, MSN, etc.): _____

_____

What other technology "gadgets" do you use? (iPod, games, DVD player, etc.)

_____

_____

What else would you like for Mrs. Larson to know about you? (What makes you special and unique?) _____

_____

_____

Appendix I - Field Notes

- **Wednesday, March 28, 2007 9:45-11**
- Noticed Charlie reading slowly. I suggested he'd make the font larger and only keep one page on the screen (scroll). He said he wanted smaller font so it would "look like a book."
- New girl, ██████, moved here from Texas. No previous experience with technology.
- End of lesson: Mrs. Stitt called each name and asked if students were done reading and done with journal prompts. Extra time will be given during band later today.
- 8:30-9:00 PM: Phone conversation with Kathy. Discussed how to improve the prompts. Kathy suggested that we should do a separate minilesson on prompt writing.
- E-book readers back to using tools today, I'm wondering what motivates them to use the tools? How do they decide when/how to use them?

- **Thursday, March 29, 2007**
- Arrived at AA around 12:30. Copied the handout KSOL prompts 3-29 for the students and got the computers ready. As students arrived in the room at 1:00 PM from lunch, things were ready.
- *Minilesson on prompts*: Kathy explained to students about open-ended prompts and how to write questions that spark discussion. Words like why, explain, tell me about… were written on the board as examples of how to start an open-ended prompt.
- Students were given handout KSOL prompts 3-29; students needed to write two prompts each and post one.
- Demonstrated (using laptop/projector) how to start a new thread. Also showed students how to use "print" to view the entire discussion.
- As students finished writing prompts and began posting on the computer, there was a lot of conversation in the classroom. Kathy told the students to "close your eyes and imagine yourself at home in front of your computer… it is quiet and you are the only one in the room. You are online, chatting on IM, but no one else is there… now open your eyes, but stay in that place…" It worked. The students worked quietly and began new threads as they posted their own prompts. The quality of their postings were much better than the previous days. Students were asked to respond to each group member's prompt. (Repeat this direction tomorrow.)

- **Friday, March 30, 2007, 8:45-9:45**
- Continued to read. Watsons chapter 5 (64-74) and Bud 60-72 in chapter 8. Realized that the computer version of Bud had different page numbers. Used search feature to locate where to break.
- Problems with Adam's computer. Interrupted lead tech teachers while she was teaching to ask for help. She didn't know what to do either.

Monday, April 02, 10:30-11:30
Spent the morning redoing the groups on the message board. Smaller groups (2-4 students). Posted prompts and worked on lesson plans for the week. Arrived at AA at 10:00. Set up computers while Wide Horizons students were talking about doves.

Elaina's e-book:
HL: I'd practiced on the back.. live girl (p. 49)
HL: And that smell…every night p. 51
Note: he says woop, zoop, sloop (p. 51 toward bottom of page)
HL: Someone yelled…brother p. 53
HL: Shuh-shuh-shuh p. 53
HL: You lily-livered rats p. 53
HL: The only good thing…kissed a girl p. 55

Observed e-book reading in hallway with partners
Charlie: I'll need to write a note about that…
Cameron to Molly: What did you write?

Appendix J - Student Interview Questions

Student Interview Questions

Tell me about you as a reader.
- Do you like to read?
- What kinds of books do you enjoy
- What do you struggle with as a reader

Describe yourself as a technology user.
- What all do you do with technology?
- How do you learn how to use new technologies?

What do you think about reading on the computer? Explain how this experience is similar or different to other reading experiences that you've had.

What do think about using the KSOL message board to talk about books? Explain what this experience has been like for you.

Does using technology motivate you to learn? Explain why or why not.

How does technology help you learn? Please give examples.

Appendix K - Prompt Writing Instructional Handout

Name: _____

Book title: _____ Group #: _____

1. Think about the part that you read today in your book.
    What did you like?
    What questions do you have?
    What did this chapter make you feel or think about?
    What would you have done if you were in a similar situation?

2. Write two quality prompts (questions) that can be used to start a good discussion in your group. Your prompts should relate to the book.

3. You will post your BEST prompt on the K-State Online Message Board. Your prompt must be approved by Mrs. Stitt or Mrs. Larson BEFORE you post.

Prompt 1:

_____

_____

_____

_____

_____

_____

Prompt 2:

_____

_____

_____

_____continue on back

260

_____

_____

_____

_____
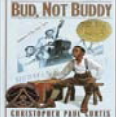
Check your work:

❑   My prompts relate to the book.

❑   My prompts are open-ended and cannot be answered with a simple "yes" or "no."

❑   My prompts make my group members *think* about what they have read.

Appendix L - Virtual Guides

Sample slides from *Bud, Not Buddy*

Bud, Not Buddy
by Christopher Paul Curtis

By Lani, Alyssa, Alaina, Sung, and Alex

Chapter 1
- 1930's
- Orphanages
- Flint, Michigan
- Giant Fiddles

Flint, Michigan now

Chapter 12
- Log Cabin
- Labor organizers
- Ethyl gasoline
- Packard

1930 Packard 740 Sedan

Chapter 13
- Snaggletooth
- Dollars to Doughnuts

Giant fiddle

More About the Book
- http://eduscapes.com/reading/bud/
- http://www.carolhurst.com/titles/budnotbuddy.html
- http://www.amazon.com/Buddy-Coretta-Scott-Author-Winner/dp/0385323069
- http://www.readingmatters.co.uk/book.php?id=200

Sample Slides from *The Watsons Go to Birmingham – 1963*

A Virtual Guide to….

The Watsons go to Birmingham 1963
by Christopher Paul Curtis

Show created by Nick, Morgan, Cameron, Makenzie, and Kaitlyn

Chapter 2

- Poindexter
- Egghead
- Flunking
- Penning

- Lazy Eyes
- Gods

Meet Poindexter, Felix the cat's best friend! They were in a cartoon Kenny loved.

Chapter 6

- Peons
- Welfare
- Genies
- Mourning Dove
- Knobs

- Swedish Crème Cookies
- Animal Funerals

Yum! You can find the recipe for these Swedish Crème Cookies by clicking on the link!

Chapter 10

- Kool Aid
- Ohio
- Outhouse
- Mountains
- Sears

Main Idea

Break time

Icky outhouse

Icky outhouse

Chapter 14

- Flint
- Sunday School
- Bomb
- Remembrance

Main Idea

- Bomb the church

The 16th Street Baptist Church in Birmingham.

Chapter 15

- Bat Fink
- Felix the Cat
- Pet Hospital
- Basketball

- Spiritual Healing

Kenny and Byron start bonding by playing sports

Appendix M - Virtual Guide Instructional Handouts

A Virtual Book Guide – Here is what you'll do:

1. Review your assigned chapters. Look for vocabulary words and events that are important in these chapters.

2. Think about the parts of the book that were difficult to understand or confusing. How could other students use a virtual guide to help them understand these parts? What information would have been helpful for you as you read the book?

3. Think about the parts of the book that were fun and exciting. How can you share these parts with other students who are reading this book?

4. Identify and **record** important vocabulary words (please include page numbers). You may highlight or underline these in the book.
   a. *Words that are difficult to understand*
   b. *Words that are often used or described in the book*
   c. *Tools, things, foods, places that are mentioned in the story*
   d. *Other words?*

5. Identify and **record** main events or big ideas.
   a. *Historical events (Civil Rights Movement or the Great Depression)*
   b. *Geographical areas or places (states, regions, cities)*
   c. *Big ideas and concepts (homelessness, racism)*
   d. *Other ideas?*

My name: _____ Book: _____

Group Members: _____

_____

What to Include in the Virtual Guide?

☆ In your large group, go over your notes from each chapter and decide what you'd like to include in your PowerPoint presentation. Discuss ideas for pictures, types of links, etc.

☆ Each chapter should have its own PowerPoint slide. As a group, decide who is responsible for creating each slide.

☆ Make sure you have *different* words and ideas in *each* chapter (don't include the same vocabulary word in more than one chapter).

Chapter: **Who's responsible?**

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____ continue on back