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## Examining Elementary Students' Use of Electronic Readers for Independent Reading

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To the Graduate Council:

I am submitting herewith a dissertation written by Tammy Lynn Anderson entitled "Examining Elementary Students' Use of Electronic Readers for Independent Reading." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Teacher Education.

Richard L. Allington, Major Professor

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Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

**Examining Elementary Students' Use of Electronic Readers for Independent  
Reading**

A Dissertation  
Presented for the  
Doctor of Philosophy  
Degree  
The University of Tennessee, Knoxville

Tammy Lynn Anderson  
May 2012

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My dissertation is dedicated to my family for all of your support, love, and  
encouragement.

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## **Abstract**

The impetus for this study was to understand a relatively new phenomenon, elementary students' use of electronic readers for independent reading, and the impact it might have on reading behaviors. Interested in students' perspectives, I examined third grade students' experiences using electronic readers, including references to self-descriptions of reading motivation and engagement. This descriptive case study addresses the research question: In what ways does reading on electronic readers during independent reading affect third grade students' reading experiences and behaviors?

Daily observations of students' reading behaviors during independent reading were recorded in detailed field notes. In addition, transcripts of conversations during weekly book discussions where my participants shared the books they were reading and their reading experiences were gathered. Transcripts of pre- and post- interviews, annotations made on the electronic reader, and reading logs recording the number of books read were also collected. In order to create narratives of young readers portraying the details of my participants' experiences using electronic readers during independent reading, I completed descriptive analyses using the constant comparative method across my observations, interviews, and documents.

Findings from this study capture the multidimensionality of participants' lived experiences and provide insight for teachers integrating this digital tool into literacy to promote increased reading motivation and engagement. The five major findings include increased a) engagement in reading, b) motivation to read, c) positive attitudes toward

reading, d) reading volume, and e) ease of reading using the electronic reader compared to regular books.

This study illuminates the reading possibilities electronic readers offer elementary students by providing choice of and access to a multitude of reading materials based on students' interests, the opportunity to read anywhere and anytime, and a context through which to interact socially with others about reading. Obtaining documentation directly from students sharing their experiences, this research provides teachers support to pursue the use of electronic readers by offering information on the perceived benefits of incorporating this digital tool into their literacy instruction. In my opinion, the electronic reader, according to this study, is one tool we need to ignite a passion for reading.



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## **Chapter 1: Introduction**

*The greatest gift is a passion for reading.*

*-Elizabeth Hardwick*

In preparing young children to be productive citizens in the 21<sup>st</sup> century we must consider the many aspects of literacy. At first it may be tempting to think being literate simply means being able to read and write. However, the United Nations Educational Scientific and Cultural Organization (UNESCO, 2004) offers a more complete definition as the “ability to identify, understand, interpret, create, communicate, compute, and use printed and written materials associated with varying contexts” (p. 13). With the ever-increasing introduction of new technologies it is essential that our students are literate in new literacies, the skills and strategies necessary to use new digital technologies, and conventional or traditional literacies (Leu, Kinzer, Coiro, & Cammack, 2004). But ensuring our students are literate is not enough; we must also make certain they are passionate about reading and choose to read. By encouraging students to enjoy reading we hope to ensure students choose to read more, which leads to better reading and will enable children to learn about the world, think critically, understand humanity, and realize the importance of their role in society (Edwards, 2011). In this way we can help students develop the necessary skills and attributes they need in order to be successful in the future.

Only 46% of fourth grade students read for fun almost every day according to National Assessment of Educational Progress 2011 (NAEP; NCES, 2011) trend data. In addition, the typical 10-year-old only reads for pleasure 10 minutes or less a day

(Anderson, Wilson, & Fielding, 1988; Cunningham & Stanovich, 1991). Unfortunately, reading habits do not improve as students get older; instead, students' motivation to read and reading engagement decrease (McKenna, Kear, & Ellsworth, 1995). For example, compared to just under half of 9-year-olds reading for fun almost daily, less than a fifth of 13-year-olds are daily readers and a third never read for fun (NAEP; NCES, 2011). Teachers should be concerned with the decline of pleasure reading because research has demonstrated that students who read outside of school have higher reading achievement scores than those who never read outside of school (Anderson et al., 1988; Brozo, Shiel, & Topping, 2007/2008). Students who read voluntarily also demonstrate positive attitudes towards reading (Morrow, 1992). In addition, students most likely to develop lifetime reading habits are those who enjoy reading (Lesesne, 1991). I posit that helping students develop a recreational reading habit will transform their lives for the better. The core of motivation is passion, which is intrinsic and relates to a person's goals and desires. Therefore, it is imperative that we discover ways to motivate students to read and develop a passion for reading.

Research has shown that technology can increase reading motivation (McKenna & Zucker, 2009; Reinking, 2001; Strangman & Dalton, 2005). In addition, aspects of classroom instruction such as easy access to lots of self-selected reading materials, time to read, and opportunities to interact with others about books can increase reading motivation (Guthrie & Humenick, 2004; Palmer, Codling, & Gambrell, 1994). Studies also provide clear evidence that increased reading motivation leads to increased reading engagement and more time spent reading (Guthrie & Wigfield, 2000; Krashen, 2004). Furthermore, increased time spent reading in school and at home is strongly correlated

with an increase in reading proficiency (Anderson et al., 1988; Samuels & Wu, 2003; Taylor, Frye, & Maruyuma, 1990). Electronic readers create a context through which these motivational factors are provided. The device's portability provides students access to and the ability to choose a wide variety of books they are interested in reading, expanding their opportunities to read anyplace and anytime. Therefore, these separate findings suggest it is possible that integrating technology into literacy instruction and voluntary practice can potentially produce students who not only read proficiently, but who choose to read for pleasure.

### **Background and Context**

Engagement and motivation as measured by the increase in reading volume and positive attitude toward reading are key factors in developing students who can read and choose to read. Experimental research has clearly demonstrated that several classroom practices increase motivation for reading. Guthrie and Humenick (2004) in their meta-analysis of 22 experimental studies found that providing students ages 8-14 with a purpose for reading, choices in what they read, an abundance of interesting texts, and time for social collaboration impacts reading motivation and engagement. These four classroom practices made a sizeable impact on both reading motivation and comprehension. Content knowledge goals and a purpose for reading had an effect size of 0.72 on motivation and 0.87 on reading achievement and comprehension. Affording students a range of choices in reading activities had an effect size of 0.95 on reading motivation and 1.20 on reading achievement and comprehension. Providing students with interesting texts to read influenced students' reading motivation with an effect size of 1.15 and students' reading achievement and comprehension with an effect size of 1.64.

The factor of social collaboration impacted students' reading motivation and achievement and comprehension with an effect size of 0.52 and 0.48 respectively. This study provides clear evidence that reading comprehension, students' recall of what they had read, is significantly increased through these motivational classroom practices.

Additional researchers have discovered similar findings. For example, Palmer and colleagues (1994) identified four interrelated factors that influence reading motivation. According to the elementary students they interviewed, prior experience with books, opportunities to choose reading materials, access to books, and social interaction around books provide motivation and encourage students to read. Research exists on the importance of engaging children in reading by providing them choice in what they read (Edmunds & Bauserman, 2006; Gambrell, 1996; Krashen, 2004, Oldfather, 1993; Turner, 1995). Students' motivation and engagement are significantly affected. In their study, Edmunds and Bauserman (2006) examined the factors that motivated fourth grade students to read. Based on the data collected using the conversational interview portion of the Motivation to Read Profile (MRP; Gambrell, Palmer, Codling, & Mazzoni, 1996), they determined self-selection, attention to book characteristics, students' interests, access to books, and active involvement with others as significantly influential to students' motivation to read. Through observations and interviews of first grade students during literacy instruction, Turner (1995) identified choice as one of six critical features of motivating tasks. Additionally, research has shown intrinsic motivation stimulated by a personal curiosity inspires a child to read more (Fink, 2006). Fink discovered the dyslexic readers in her study each were curious and had a desire to know more about a certain topic. This passionate interest spurred

them to read voraciously in order to learn more about a certain topic. Pachtman and Wilson (2006) indicate having access to lots of interesting texts is important in motivating students. Studies have also clearly demonstrated the importance of providing students with time to engage in social interactions about books to increase motivation (Bryan, Fawson, & Reutzel, 2003). Bryan, Fawson, and Reutzel (2003) explored the influence of short literature discussions after sustained silent reading and found students' reading motivation and engagement increased.

Further, studies have shown that technology motivates and engages readers (McKenna & Zucker, 2009; Strangman & Dalton, 2005). McKenna and Zucker (2009) in their review of current research on using electronic storybooks in reading instruction highlighted the impact technology had on students' motivation and engagement in reading. In addition, Strangman and Dalton (2005) in their review of the research on using technology to support struggling readers found numerous studies that reported technology's positive effect on engaging students in literacy learning and reading.

In my 20 years of teaching elementary students, the number of students who say they do not like to read and choose not to read has discouraged me. Many students have not had the opportunities necessary to develop a positive attitude toward reading. In fact, they do not enjoy the act of reading or the texts typically found in classrooms. It is understandable that students who find reading difficult would not find it enjoyable, but there are plenty of students who are able to read proficiently and still choose not to read. Pressley and colleagues (2003) found that students with effective, engaging teachers read a lot and reading was becoming a habit for them driven by the pleasure they experienced. Unfortunately, they found these effectively engaging teachers were rare.



I have observed the difference reading motivation and engagement can make for students. It is the difference between reading because students have to read and reading because they want to read. It is also the difference between choosing to read and choosing not to read. Students who cannot read or do not choose to read simply do not develop the level of literacy needed to succeed in today's society. In turn, these students are at-risk for dropping out of high school, and being ill prepared for the entry into college, the job market, or military service. Therefore, I strongly believe all students should enjoy reading and if they do not enjoy it already, it is our responsibility as teachers to ignite that passion, ensuring all students find the joy of reading and possess the attitude and skills necessary to become readers. Reading and more importantly a passion for reading is a gift all teachers can give every student if we make that our focus. Some students' fuses for reading will be harder to ignite, but maybe an electronic reader will be the spark these disengaged students need to kindle the fire, the passion for reading. As it is imperative that we model a joy for reading, help students find books they want to read, and allow students to converse with each other about the books they are reading in hopes of igniting a passion for reading, the electronic reader may be a hook to motivate students to read and engage in reading for pleasure, creating individuals who enjoy reading. Using new technologies may be the key in connecting students and books, especially with the access to a vast variety of interesting books from which students are able to choose. I am particularly interested in electronic readers because of the special features such as adjustable font size and text-to-speech that may provide diverse readers the support they need to become engaged readers who choose to read.

To more fully understand students' reading experiences using electronic readers, it is important to examine significant research and literature in relation to various aspects of motivation and how increased motivation can lead to an increase in reading volume and enjoyment in reading. Using support from literacy research I focus on four aspects of motivation that the electronic reader may provide students in order to potentially increase reading motivation and reading volume. These four aspects include: (a) choice in the texts students read; (b) access to a wide variety of texts students are interested in reading; (c) the opportunity to read anytime and anyplace; and (d) the ability to share their reactions to what they read with others, providing a context for social interaction.

### **Problem Statement**

Teachers can teach children to read proficiently, but they do not always focus enough on fostering a desire to read for pleasure. With an increased focus on accountability and a strong emphasis on high-stakes testing to measure growth and increase student achievement, teachers have focused primarily on the reading skills measured on the test and have provided little time for reading pleasure (Sanacore, 2002; Worthy & McKool, 1996). Therefore, students are taught to read but fail to develop the habit of reading (Morrow, 1991). As a result, more than half of our students do not choose to read for pleasure (National Endowment for the Arts, 2007). The good news is teachers can make a difference by incorporating the four motivational aspects mentioned above and electronic readers may be a means to that end.

Very few studies on reading motivation and engagement have been conducted with young elementary students. In addition, due to the recent introduction of the electronic reader to the market, there is limited research currently on the use and impact

of electronic readers on reading with elementary students. There are no studies that I am aware of being conducted on the experiences of elementary students using electronic readers for independent reading and the influence it has on their reading behaviors.

### **Statement of Purpose and Research Questions**

As a classroom teacher and reading specialist, my goal is to develop an educational context that fosters reading for pleasure as I am committed to providing students with opportunities to become literate in order to live full and productive lives today and in the future. I strive to create educational experiences that build literacy proficiency as well as develop the habit of reading for pleasure. Knowing the motivational effects of technology (McKenna & Zucker, 2009; Strangman & Dalton, 2005), I recently became intrigued with how reading on electronic readers might influence young students' reading behaviors. The impetus for this study was to understand a relatively new phenomenon, elementary students' use of electronic readers for independent reading. I am interested in young readers' perspectives and with this study aim to examine readers' experiences using electronic readers, including particular references to self-descriptions of reading motivation and engagement. I hope to contribute to the current research and the conversation classroom teachers are having on using electronic readers with young readers and provide one particular piece that is missing regarding reading motivation and engagement. Can electronic readers offer a context that increases students' desire to read, creates students who choose to read, and fosters increased reading?

I am conducting this study to determine elementary students' perceptions of using electronic readers for independent reading. Understanding students' views of electronic

readers as digital tools and the impact on voluntary reading will allow teachers and parents to consider the possibilities electronic readers offer in increasing students' reading and impacting their reading behaviors. In seeking to understand students' perceptions of using electronic readers during independent reading through the narratives of young readers, I aim to construct an in-depth description of my participants' different perspectives to address my research question: In what ways does reading on electronic readers during independent reading affect third grade students' reading experiences and behaviors?

1. How is reading engagement affected?
2. What is the effect on students' motivation to read?
3. What is the effect on the students' reading attitudes?
4. How does it influence students' reading volume?

### **Significance of the Study**

The significance of this study is that it may illuminate the reading possibilities electronic readers could offer elementary students by providing choice of a multitude of reading materials based on their interests, access to a wide variety of reading materials, the opportunity to read anytime and anyplace, and a context through which to interact socially with others about the books they are reading. Electronic readers may also expand students' reading opportunities by offering them texts on their reading level as well as providing support for higher leveled text of interest through the text-to-speech feature. In addition, students' reading selections are not visible to others on the electronic reader, allowing anonymity of reading levels and allowing teachers to create individualized instructional plans to meet the needs of each student. Obtaining students'

perspectives of their experiences using electronic readers, this research provides teachers and parents documentation to justify the pursuit of using electronic readers in the classroom and at home in order to promote reading. It may also offer educators information on the perceived benefits or detriments for young readers and the possibilities of overcoming reading challenges by incorporating this electronic tool into their literacy instruction. Electronic readers may benefit students by offering more choice in reading texts, increasing an interest in reading, enhancing motivation to read, improving attitudes toward reading, and increasing reading volume or it may not make any difference.

### **Rationale**

The research conducted by Guthrie and Humenick (2004) and Gambrell (1996) and colleagues on motivational instructional factors such as students being allowed to self-select interesting reading materials, having access to a wide variety of texts, having the time to read, and being provided opportunities to interact with their peers regarding the books they are reading provides the basis for my belief that electronic readers have the ability to provide students with these motivational factors; therefore, allowing students the possibility to realize similar benefits as discovered in prior research.

Through this study and the voices of my participants, evidence of the possible impact of electronic readers on students' reading behaviors and the development of students who choose to read may be demonstrated.

Based on this research, teachers may be able to make a more informed decision about assimilating electronic readers into their literacy instruction as an option for independent, voluntary reading. Realizing the possible benefits for students, reading

specialists may also choose to use electronic readers as an avenue for scaffolding reading experiences for striving readers. It is possible that incorporating electronic readers in the classroom will help to ignite a passion for reading for students. In essence, students and teachers may profit in multiple ways using electronic readers for reading activities within and outside of the classroom.

### **Definition of Terms**

The following terms are defined in order to provide clarity for the presentation of my study.

**Differentiation-** the adjustment of the teaching process according to the learning needs of pupils (Tomlinson, 2001)

**Drop Everything and Read (DEAR)-** a fixed time for voluntary reading when everyone puts aside all other work and reads text of his/her choice without interruption and assignments

**Electronic Book-** an electronic version of a printed book, which can be read on a personal computer or hand-held device designed specifically for this purpose (Oxford Dictionary of English, 2003)

**Electronic Reader-** a device for reading electronic books, magazines, and newspapers

**Engaged Reader-** one who possesses multiple skills that enable him/her to read independently and comprehend what he/she reads (Morrow, 2003)

**Independent Reading (IR)-** similar to Sustained Silent Reading (SSR) in providing students with 30 minutes of self-selected reading time. Five key elements of IR: 1) teacher provides support in appropriate text selection, 2) students keep records of what they read, 3) students write reflections on what they read, 4) teacher and students engage

in discussions and mini-lessons, 5) teacher models reading strategies and offers feedback and guidance (Trudel, 2007)

**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)

**Kindle**- a portable electronic book reader that provides wireless connectivity to Amazon.com for electronic book downloads

**New Literacies**- include 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 problems, locate information, analyze the usefulness of that information, synthesize information to solve problems, and communicate the solutions to others (Leu et al., 2004)

**Reading Attitudes**- the feelings and beliefs an individual has with respect to reading

**Reading Engagement**- the joint functioning of motivation, conceptual knowledge, strategies, and social interaction during literacy activities (Baker, Dreher, & Guthrie, 2000)

**Reading Interests**- people's preferences for genres, topics, tasks, or contexts

**Reading Motivation**- the internal states that make people read

**Reading Volume-** the amount of reading that students engage in both during school and outside of school measured by the number of books read

**Scaffolding-** a more knowledgeable other providing support structures to facilitate the reader's development

**Sustained Silent Reading (SSR)-** a time for students and the teacher to engage in silent reading of materials of their own choosing with no accountability measures or follow-up activities-uninterrupted time for pleasure reading

**Wide Reading-** students read books, magazines, and newspapers independently. Fifteen to 45 minutes of sustained silent reading each day is an effective use of instructional time. Wide reading exposes students to more words, increases word recognition and reading fluency, facilitates word learning, and helps expand students' knowledge base (Kuhn, 2004)

### **Theoretical Assumptions**

The perspective I took in conducting my research was that of qualitative research as defined by Merriam (1998) to have the following essential characteristics: “the goal of eliciting understanding and meaning, the researcher as the primary instrument of data collection and analysis, the use of fieldwork, an inductive orientation to analysis, and findings that are richly descriptive” (p. 11). Qualitative research, more specifically case study, will provide the context from which I will interpret my findings. I position myself in the constructivist paradigm (Guba & Lincoln, 1994; Hatch, 2002) as my beliefs, values, and assumptions most align with this paradigm. Constructivists believe there are multiple realities based on individual's unique perspectives and researchers and their participants construct the subjective reality together. In order to do this, researchers



spend extended amounts of time interviewing and observing participants in their natural settings. I acknowledge reality exists for me, although I believe there are multiple realities and reality changes over time and depending on the situation. My reality and knowledge is influenced by my experiences as others are influenced by their experiences. Reality is not fixed and can change over time with influence from additional experiences. Because our experiences are different we have multiple and varied realities. More specifically, my perception of the impact of reading electronic books on an electronic reader has been constructed from my own experiences and may differ from that of my participants, especially based on the perspectives of a teacher versus a student and an adult versus a child. In spite of our different perspectives, I believe we can co-construct collective realities through conversation by looking for patterns and similarities within our realities. Therefore, I will co-construct a subjective understanding of students' perceptions (Hatch, 2002) of reading on electronic readers, the impact it has on students' reading, and the features of the electronic reader and how they influence students' reading experiences.

Evidence from multiple participants could be considered more compelling than examining the case from only one perspective and strengthen the development of robust answers to my research question, which requires a descriptive approach to understand how students perceive their use of the electronic reader. A case study also allows data collection from many different sources, strengthening the findings. One example of an educational case study is Cole's (2002/2003) interpretive case study presenting four students' literacy personalities to define what motivates these students to read.

## **Organization of the Study**

In this chapter I introduced my study, examining students' reading behaviors using technology (electronic readers) within the context of independent reading in an elementary classroom, exploring students' descriptions of engagement, motivation, reading attitude, and reading volume. Included in this introduction is the background and context of the problem, problem statement, purpose of this study, research questions, significance of the study, rationale, definition of terms, theoretical assumptions, and organization of the study. I present relevant professional literature and research in chapter two to provide a comprehensive literature review as a foundation for this research. The literature review is organized into five sections including (a) literacy in the 21<sup>st</sup> century; (b) elementary students as readers; (c) independent reading and motivational factors; (d) technology's relationship with reading; and (e) the electronic reader. In chapter three, I focus on the research design, data collection methods, and data analysis. I explain the methodology through a description of the case study methodology and research design and outline the methods of data collection and analysis I used to conduct this study. In chapter four, I present the findings of the study. In chapter five, I discuss the findings, offer implications for teachers and classroom practice, and recommend areas for future research.

## **Chapter 2: Review of Literature**

To more fully understand the impact technology can have on reading behaviors it is important to examine significant research and literature in relation to motivational aspects of independent reading, which can lead to an increase in reading volume, reading engagement, and achievement, in addition to the influence technology has on reading behaviors. By illuminating the critical terms and findings in these important studies, I provide contextual knowledge to support the significance of my study. In acquainting myself with what other researchers have discovered and have argued, I aim to extend the intellectual conversation on the electronic reader as a viable tool for integrating technology into literacy instruction and developing passionate readers. The literature and research is organized in order to provide a map for navigating the information already known about technology in relation to motivating and engaging students in reading to create passionate readers. This is my unique interpretation of the literature that will support my contribution to the conversation on exploring students' voluntary reading experiences using electronic readers, specifically the Kindle, and the effect on reading attitudes and behaviors, including particular references to self-descriptions of motivation and engagement.

First, I present the value of literacy and the skills needed to be literate in the 21<sup>st</sup> century, focusing on the integration of technology into literacy instruction to provide students with opportunities to develop a passion for reading. In addition, I include a description of four types of readers (engaged, disengaged, proficient, and striving) and the ways in which technology can impact their reading. Using support from literacy research I focus on four motivational aspects of independent reading that technology may

provide students in order to potentially increase reading motivation and engagement as measured through reading volume and students' self-descriptions of reading motivation and engagement. These four aspects include: (a) choice in the texts students read; (b) access to a wide variety of texts students are interested in reading; (c) the opportunity to read anytime and anyplace; and (d) the ability to share their reactions to what they read with others, providing a context for social interaction. Finally, the limited research on the electronic reader is highlighted in this literature review.

### **The Value of Literacy**

We value literacy because being able to read and write gives us the freedom to pursue our dreams, live life to the fullest, earn a living, understand what is going on in the world, and benefit from the accumulated knowledge of civilization (Cullinan, 2000). Being literate also allows individuals to make informed choices about where they want to go and what they want to do in life. Reading is essential and highly valued for social and economic advancement (Snow, Burns, & Griffin, 1998). Therefore, it is critical that students become literate in order to feel empowered to pursue academic endeavors and live better lives (Pressley et al., 2003). As a foundation for citizenry and right of freedom, becoming literate is invaluable (Booth, 2006). But the real value of literacy is what we do with it.

With literacy and reading being powerful commodities, we must prepare our students as informed citizens for their literate futures and ensure their freedom to pursue their interests and live a full life. "Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society" (UNESCO, 2004, p. 13).

Students must learn to access information from a variety of sources, analyze and evaluate the information, and integrate new information with prior knowledge to construct new knowledge. Access to information and the ability to effectively use information will enable our students to take advantage of opportunities and lead more satisfying, engaging, and productive lives (Leu et al., 2004).

Leu and colleagues (2004) define new literacies as deictic, meaning they change quickly depending on the temporal context in which they are used. They are dynamic, evolving, and rapidly changing as the addition of new technologies creates new possibilities for communication and information (Leu et al., 2004). New literacies include the necessary skills and strategies to navigate the new information and communication technologies (ICTs) that continue to emerge (Leu, 2002). Because new literacies are always changing, instructional practices also need to continue to evolve by including these new literacies. Gee (2003) views new literacies as multiple and attached to social and cultural practices. He explains that people need to be literate in many different semiotic domains and able to become literate in new semiotic domains. Based on the findings from their study, Balajthy, Reuber, and Robinson (2001) suggest using computer technology to integrate reading and literacy instruction into the technology-rich lives of students.

Among the most discipline changing trends in literacy education today are the use of an increasing variety of technology and the inclusion of new literacies. In fact, teachers today are charged with using technology-based practices in their teaching of reading. According to the International Reading Association (2009) and Common Core State Standards (2010), educators are responsible for integrating technologies and new

literacies, the skills and strategies necessary to use new digital technologies, into the language arts curriculum to ensure students are prepared for their literacy futures. In addition, the National Educational Technology Standards (NETS) require teachers to design and develop digital learning experiences and assessments to ensure students are successful in the ever-increasing technological world (International Society for Technology in Education, 2008).

Even though Cuban's (2008) research revealed little change in how educators teach since the introduction of new technologies, some teachers are transforming teaching and learning by providing a more personalized instructional approach through the use of various digital tools (Eib & Steele, 2004; Peterson, 2005; Pitler, Hubbell, & Kuhn, 2007). Incorporating technology into the classroom allows educators to customize and personalize learning activities and address students' diverse learning styles and needs. Therefore, the use of digital tools can help provide each child with an individualized learning plan in order to maximize student learning and achievement.

In my research, I focus more specifically on the reading component of literacy. Reading develops productive and active adults, increases their academic and economic success, and transforms their lives (National Endowment for the Arts, 2007; Ministry of Education, 1997). In order to expand one's opportunities in life, it is important to be literate in a variety of texts (Booth, 2006). In addition, we read for multiple and various purposes, which include enjoyment and relaxation; acquisition of information; development of skills and navigation; and to understand our world and ourselves today and in the past (Ministry of Education, 1997). For these reasons reading is valued.

## **Necessary Literacy Skills**

To continue this conversation on preparing students for their literate futures, it is important to determine the reading skills and attributes that are necessary for students to become confident, competent, and passionate readers. Reading and writing are the foundational skills upon which all other literacies are built (Leu et al., 2004) and teachers strive to ensure students can read and write. The foundational literacy skills include word and vocabulary recognition, decoding knowledge, comprehension, critical analysis, response to literature, the writing process, and spelling. In the past, literacy instruction has referred to teaching reading, writing, listening, and speaking. Today, it is important that teachers integrate print and electronic materials effectively so the classroom reflects the multimedia world in which students live (Strickland, 1997). The addition of new and changing information and ICTs requires students to gain new skills and competencies in order to be literate in these new literacies (Booth, 2006). Students need technology skills to communicate, investigate, access, and use information in new media as well as understand and evaluate data. New literacies encompass more than decoding and making sense of print on a page. Therefore, students must acquire skills and strategies in order to access and use information from electronic texts in the information age (Taffe & Gwinn, 2007). Students, like adults, need to know how to use the Internet to search for information, navigate between websites, collect and evaluate information using critical thinking skills, and synthesize information from multiple sources (Taffe & Gwinn, 2007).

The Internet and other ICTs such as electronic texts, wikis, blogs, and emails require students to navigate these online spaces, find and critically evaluate information, and synthesize information from various sources to communicate it (Miners &

Pascopella, 2007). The International Reading Association in the new literacy and technology position statement recommends teachers and students develop skills and abilities beyond those needed to comprehend conventional, linear text in order to navigate new and varied forms of ICTs (RAND Reading Study Group, 2002). The use of technology engages diverse learners in reading and literacy learning, helping them acquire these literacy skills.

### **Developing a Reading Habit**

Literacy instruction is focused on ensuring students are proficient readers, meaning they read fluently and understand what they read. But it is not enough to develop proficient readers, reading instruction should have two goals: developing reading proficiency and a reading habit (Learning First Alliance, 1998). Teachers must provide the opportunities, encouragement, and support needed in order for all students to become not only proficient but also passionate readers (Ministry of Education, 1997). The ultimate goal of literacy instruction should be developing students' enjoyment of reading as well as their ability to read proficiently (Malloy & Gambrell, 2010; Sanacore, 1997).

It is interesting that motivation was not one of the five components of effective reading instruction identified by the National Reading Panel Report (2000) and therefore is not often a focus of literacy instruction (Malloy & Gambrell, 2010). Motivation was not included in the five pillars of reading instruction because there are relatively few experimental studies with control groups on motivation compared to the other five pillars. The National Reading Panel looked specifically at reading instruction supported by experimental research. However, we know more effective literacy instruction does emphasize the development of a reading habit by exposing students to a wide range of



texts (Ministry of Education, 1997). Garan and DeVogd (2008) suggest that reading teachers recognize the joy they experience when reading a good book and strive to create similar experiences for their students to awaken an interest in literacy. If teachers ignite a passion for reading at school, students may be more motivated to read at home for pleasure (Danielson & Rogers, 2000). Research has shown students who do not enjoy reading, read less, and as a consequence fail to make adequate gains in reading.

Stanovich (1986) referred to this downward spiral as “The Matthew Effect” in which the rich get richer and the poor get poorer. The Matthew Effect, named after the Gospel according to Matthew, describes a phenomenon researchers observe when new readers are successful in acquiring reading skills and these early successes lead to further success. The opposite is also observed when students struggling to read begin to dislike reading and consequently read less, learn less from reading, and continue to spiral downward. The consequences of increased reading are strongly correlated with increased reading proficiency and achievement (Stanovich, 1986). Therefore, developing a reading habit early is imperative as is successful development of reading proficiency.

Recognizing the importance of developing a reading habit early, the focus of my research is on the second goal of reading instruction: developing a passion for reading by motivating students to read more and engaging them in more reading through the use of electronic readers. Consequently, my discussion focuses on the research on reading motivation and engagement and more specifically on how teachers can integrate technology into literacy instruction as one possible reading context that offers four motivational aspects including choice of books students are interested in reading, access to a wide variety of reading materials, opportunities to read, and social interaction with

others about reading in order to create a passion for reading in each of our diverse students. I argue that technology such as the electronic reader can be used with young elementary students in the classroom to support the development of reading behaviors that may allow students to become readers who choose to read for pleasure.

### **Engagement**

Reading for pleasure would benefit most students and promote lifelong reading and it is the teachers' responsibility to try to ensure students become lifelong readers (Sanacore, 2002). Even though reading engagement is crucial for developing lifelong readers, teachers do not always ensure students enjoy reading. Instructional practices primarily focus on students learning to read and reading to learn; emphasizing how to read fluently and understand what is read. With reading proficiency being the focus of literacy instruction most students will learn how to read and understand the text they have read. Consequently, what students do not always obtain in school is the passion to read. Unfortunately, creating passionate readers is not emphasized as long as students have the skill to read. In fact, after the age of 8, the frequency in which children read for fun decreases (Scholastic, 2010). Even though research indicates that students who enjoy reading read more and the amount of time spent reading has a significant affect on reading achievement, specifically reading fluency and comprehension, teachers often neglect this aspect of reading instruction. However, teachers should be concerned with creating students who enjoy reading and choose to read because research has proven engagement is necessary for long-term achievement (Baker et al., 2000). Therefore, in addition to instruction of basic reading skills, teachers must promote reading engagement to ensure students are competent readers who choose to read (Baker et al., 2000).

Scholars at the National Reading Research Center (NRRC) have contributed much of the research used to form the reading engagement theory. Their studies have concentrated on the motivational, cognitive, and social variables of reading engagement. The key elements of the theoretical framework for reading engagement are the integration of motivation, strategies, conceptual knowledge, and social interaction during reading activities in order to engage students in reading and create successful, lifelong readers (Rueda, MacGillivray, Monzó, & Arzubiaga, 2001).

In order for engaged reading to occur, readers must “*coordinate their strategies and knowledge (cognition) within a community of literacy (social) in order to fulfill their personal goals, desires, and intentions (motivation)*” (Guthrie & Wigfield, 2000, p. 404).

Guthrie, McGough, Bennett, and Rice (1996) described engaged readers:

as those who (a) are motivated by the material; (b) use multiple strategies to ensure comprehension; (c) are able to construct new knowledge as a result of the interaction with the text; and (d) draw on social interactions to mediate these literate processes. (cited in Casey, 2008/2009, p. 286)

In other words “highly engaged readers are motivated, knowledgeable, and socially interactive” (Alvermann & Guthrie, 1993, p. 2).

The ultimate state of engagement is what Csikszentmihalyi (1991) introduced as the concept of flow. He described flow as “the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it” (p. 4).

Csikszentmihalyi found that reading is the most frequently mentioned flow activity.

Krashen (2004) defined flow as “the state people reach when they are deeply but

effortlessly involved in an activity” (p. 29). Reading becomes a flow experience when the book is so interesting that the reader loses track of place and time (Malloy & Gambrell, 2010). In McKool’s (2007) study, she found several fifth grade avid readers described finding a state of flow while reading outside of school. One participant described frequently getting lost in a book during his voluntary reading time. McKool’s finding is consistent with what Nell (1988) described as ludic reading, a trancelike state that readers enter into when reading for pleasure. Ludic readers are totally absorbed in the book and able to ignore distractions around them.

Teachers can create classroom contexts that promote engaged reading and reading flow or ludic reading by providing knowledge goals, connecting reading to the real world, allowing students to make meaningful choices about what, when, and how to read, and supplying interesting texts (Guthrie & Wigfield, 2000). Students suggest teachers should provide time to read, discuss students’ interests, recommend interesting books, and allow time to talk about the books they are reading (Roettger, 1980). Researchers like Pressley and colleagues (2003) agree and suggest in order to foster a passion for reading teachers must integrate multiple literacies into classroom instruction; model reading enjoyment; incorporate social interaction into reading instruction; vary the format, level, and topic of reading materials; and include elements of choice in reading and projects. In these ways, the passion for reading can be cultivated (Lesesne, 1991).

Allington (2009) argues that students cannot become proficient readers without opportunities to engage in reading. For that reason alone, our students must have access to their choice of interesting reading materials in addition to uninterrupted time to read in order to experience reading flow and have a chance of becoming lifelong readers.

Teachers are instrumental in providing access to interesting texts, allowing students to choose what they read, and allocating time every day for students to read and discuss what they are reading with others in order to provide a context that promotes reading flow and engagement.

### **Diverse Readers**

Technology may be one tool to provide alternative reading contexts and support for the diverse readers in our classrooms (Bray, Brown, & Green, 2004; Kingsley, 2007). For many students electronic books on electronic readers may be the reading support needed to overcome reading difficulties. In order to connect what research has demonstrated regarding reading motivation and engagement to the promise technology holds in motivating and engaging students it is important to understand the diverse readers in our classrooms. I agree with Gregory and Chapman (2006) and Tomlinson (1999, 2001) and argue that each student is unique, possessing individual strengths and needs. All readers, nonreaders, and reluctant readers cannot be lumped together as these students have different reasons for reading and avoiding books. Students' attitudes and motivation to read also vary according to content, task, and text. For the purpose of this research I define the diverse readers in our classrooms based on reading engagement and reading proficiency, not to label them, but to acknowledge that there will be a range of readers in every classroom and that depending on the environment their reading engagement and motivation may vary. Knowing that these categories are not mutually exclusive, I define four different categories of readers, which include (a) the engaged reader; (b) the disengaged or reluctant reader; (c) the proficient or skilled reader; and (d) the striving or struggling reader. In fact, many students can belong to multiple and

various groups depending on the context. It is significant to realize the difference motivation can make for our diverse students in creating engaged, lifelong readers. Most importantly, it is critical to student success that all students become engaged in reading (Abadiano, Turner, & Valerie, 2010).

**Engaged readers.** A variety of names can be used to describe this group of readers such as avid, voracious, engaged, strategic, and motivated. Simply, these are the students who effectively use reading strategies, comprehend grade level text by efficiently using reading strategies, enjoy reading, and read for pleasure (Cavanaugh, 2006). Readers in the complete sense of the term are

accurate, fluent, resourceful readers who gain pleasure and insight from reading, who take pleasure in reading, who choose to read different texts in daily life, who are able to browse through the range of different texts in a literate culture. (Booth, 2006, p.10)

According to the reading engagement theory (Guthrie, 2004; Guthrie & Wigfield, 1997, 2000), engaged readers are those students who are intrinsically motivated to read and who read frequently for interest, enjoyment, and learning (Baker et al., 2000; Guthrie, Wigfield, Metsala, & Cox, 1999; Tracey & Morrow, 2006). In their study, Guthrie and his colleagues (1999) measured the motivation and reading volume of students in grades 3 and 5 using questionnaires. The results indicated students' reading motivation significantly predicted their reading volume. In fact, highly motivated students in this study read about 30 minutes per day for enjoyment. Motivation activates student behavior and is the foundational process in developing reading engagement. In addition, engaged readers are curious and seek to gain new knowledge about topics in which they

are interested (Baker et al., 2000). Not surprisingly, readers who enjoy reading spend 500% more time reading than disengaged readers (Guthrie, 2004).

Engaged readers seek to understand, enjoy learning, and believe in their reading abilities. They are mastery oriented, intrinsically motivated, and possess self-efficacy. These readers use metacognitive strategies to understand texts and interact socially with others to discuss their reading and exchange ideas based on their reading (Guthrie & Wigfield, 2000; Tracey & Morrow, 2006). Most importantly, engaged readers who enjoy reading can overcome achievement obstacles, including low family income and educational background (Guthrie & Wigfield, 2000).

Research has shown a correlation between engaged readers and increased exposure to literature (Allington, 2009; Anderson et al., 1988). More specifically, proficient readers experience enormous quantities of reading (Allington, 2002). There is a strong correlation between engaged reading and reading achievement and a strong correlation between reading volume and reading achievement (Guthrie & Wigfield, 2000). Reading comprehension is higher in readers who read widely. Ultimately, the development of a reading habit will positively affect students' lives and empower them as lifelong learners (Duncan, 2010).

In addition to engaged readers in the classroom, we also have students who can be labeled as disengaged. It is important to recognize these students early and provide necessary motivational factors such as choice in reading materials, access to texts these students are interested in reading, time to read, and social interaction with others regarding their reading to ignite their passion for reading.

**Disengaged or reluctant readers.** Disengaged readers, reluctant readers, or nonreaders are students who find little pleasure in reading and are not interested in reading or motivated to read. Another term used to describe these readers with poor attitudes who choose not to read is aliterate (Wilson & Casey, 2007). These reluctant readers may or may not be proficient readers, but either way they rarely choose to read (Beers, 1996). A nonreader (2010), as defined by Merriam-Webster Online Dictionary, is a person who cannot or does not read, especially a child who takes a long time learning to read. Guthrie and Wigfield (2000) suggest nonreaders do not find reading an enjoyable experience and rarely become absorbed in the text.

Reluctant readers may pretend to read or avoid reading by doing anything and everything except reading (Kelley & Clausen-Grace, 2009). In their action research, Kelley and Clausen-Grace (2006) used the Developmental Reading Assessment (DRA) designed for grades 4-8 and gathered data on students reading engagement as well as metacognitive awareness. The DRA Student Reading Survey assessed students' wide reading and self-assessment/goal setting. Kelley and Clausen-Grace asked third graders to list the books they had read recently both at school and at home and the authors they enjoyed reading and why. The self-assessment required students' to identify their strengths and weaknesses and create a plan to improve their areas of need. These researchers found that their students were reading mostly non-challenging texts in a narrow range of genres. In addition, many students had a limited view of reading and lacked comprehension strategies. Based on the data they collected, they restructured their Sustained Silent Reading (SSR) block to make it more purposeful, engaging, focused, and metacognitive. Their new design (R<sup>5</sup>) for independent reading included time to read,



relax, reflect, respond, and rap. Students spent 10-25 minutes three days per week relaxing into reading self-selected text, reflecting in writing their use of metacognitive strategies, and conversing or rapping about books. After four months Kelley and Clausen-Grace were excited with the progress students had made on the student survey on engagement. Seven months later they re-administered the entire DRA assessment. All of their students' motivation for reading improved. In fact, one hundred percent of the students compared to 33% at the beginning scored at the independent or advanced levels for wide reading and self-assessment/goal setting. In addition, comprehension improved with metacognitive awareness being the biggest area of growth. The most motivating factor for students who had been fake readers before the implementation of R<sup>5</sup> was the opportunity to rap or share snippets of their books. They became engaged readers by Guthrie and colleagues' (1996) definition, students who are motivated to read, enjoy reading, and are interested in reading.

Most of the time students who find reading difficult do not find reading pleasurable and therefore do not choose to read for fun. Other reluctant readers are proficient at reading, but they are uninterested in reading and do not desire to read. A student's reluctance to read may be caused by underdeveloped reading skills or a loss of interest in books (Wolfson, 2008). Some students have negative attitudes toward reading, claiming it is boring. Their attitudes toward reading keep them from engaging in reading (Beers, 2003). Bryan, Fawson, and Reutzel (2003) studied the impact of literary discussions on three non-engaged fourth grade readers during SSR, using a multiple-baseline across-subjects research design. Three non-engaged fourth graders were randomly selected to participate in the study and their behavior was observed during

silent reading time. Following the baseline establishment phase, researchers observed the first ten minutes of SSR and then met with each participant to discuss what they had read. During the phase following the intervention phase the participants returned to SSR without literary discussions. Data were collected throughout the study using observational recording in which researchers counted the number of times participants exhibited six reading behaviors: seconds to start, materials present, off-task behaviors including noise, out of place, physical contact, and any movement other than reading. According to their study, disengaged readers are passive and inactive when it comes to reading (Bryan et al., 2003). In fact, they avoid reading and invest as little energy as possible. These students are not interested in reading and often lack confidence in their ability to read (Bryan et al., 2003). Additionally, disengaged readers do not see a purpose for reading, nor do they set reading goals. Being uninterested and inattentive, they are easily distracted and distractive in the classroom (Bryan et al., 2003). Bryan, Fawson, and Reutzel found that literature discussions with an adult researcher significantly reduced the number of off-task behaviors and increased students' engagement in reading.

Educators are concerned with the widespread lack of motivation to read, even though students are capable of reading (Moser & Morrison, 1998). This lack of motivation to read can be problematic as one goal in literacy education is to help students become lifelong readers and we know that for students to become proficient at reading they must read (Wilson & Casey, 2007). Moser and Morrison (1998) conducted a year long study in a fourth grade classroom implementing four methods found to be effective in encouraging students to read. These strategies recommended to increase motivation among elementary students include providing time for independent reading, allowing

students to choose the books they want to read, permitting students to share what they have read with others, and modeling reading. The researchers explored the impact of these strategies on students' ability to read and motivation to read. They collected data using the Gates-MacGinitie Reading Test, timed running records measuring both accuracy and fluency, records of books read by students during independent reading, anecdotal records of classroom observations, and records of books read by the teacher. Moser and Morrison (1998) found all students' reading comprehension, reading fluency, and reading volume increased dramatically with an especially noticeable increase among students with lower reading ability. In addition, students began discussing the books they were reading more frequently. In sum, reading became a greater part of these students' lives not only at school, but also at home.

Reluctant readers suffer just as much as nonreaders by missing the multitude of benefits reading provides. In their study, McKenna, Kear, and Ellsworth (1995) sought to examine the "developmental trends in recreational and academic reading attitude"; the relationship between reading attitude and reading ability, gender, and ethnicity; and the impact of basal reading materials on reading attitude (p. 942). The reading attitude of 185 elementary students (grades 1-6) was measured using the Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990). The results of this study indicated students' recreational and academic reading attitudes begin relatively positive in 1<sup>st</sup> grade, but unfortunately decrease to a point of indifference by 6<sup>th</sup> grade (McKenna et al., 1995). In addition, students' recreational reading attitudes are related to their ability to read with students who struggle to read having the most negative attitude. They also found that girls have more positive reading attitudes than boys at every grade level.

There was no significant relationship between ethnicity or the teacher's use of basal readers and students' recreational or academic reading attitudes.

Research indicates these students who lose interest in reading and subsequently choose not to read lose academic ground because wide reading increases knowledge and reading comprehension (Anderson et al., 1988). In order to develop reading processes, students must be involved in reading (Allington, 1994). Therefore, students who choose not to read pose a real problem when we consider reading proficiency, achievement, and the goal to create lifelong readers.

**Proficient readers.** Another group of students are those students who are proficient at reading. These students may or may not be engaged readers (Kelley & Clausen-Grace, 2009; Moser & Morrison, 1998). Proficient, independent, and skilled readers possess and employ a variety of reading strategies that enable them to gain meaning from the text. These students read for the purpose of gaining meaning. They effortlessly decode and read words with automaticity, read fluently, and adjust their reading rate depending on the text. Proficient readers, sometimes referred to as good readers, have a purpose for reading, seek to understand what they read and self-monitor their comprehension while reading, read a variety of texts, respond to what they have read, and connect what they read to their life, other texts, and the world around them. Students proficient at reading use prior knowledge to understand what they are reading and ask themselves questions before, during, and after they read. Skilled readers possess a large reading and writing vocabulary and employ strategies to understand new words. These successful readers are fast, efficient problem solvers who use a variety of comprehension strategies: they are able to make predictions as they read, draw inferences

from the text, determine what is important, summarize what they read, visualize the text, and synthesize information to construct new knowledge (Beers, 2003; Caldwell, 2008; Fountas & Pinnell, 1996). Even though these students can read effortlessly, some proficient readers do not choose to read voluntarily.

**Striving readers.** Unlike proficient readers, striving or struggling readers experience significant difficulty learning to read and many times dislike reading because it is difficult. Students who are striving to become proficient readers have not yet developed all of the reading skills and processes that make reading enjoyable and effortless. Students unable to fluently read and comprehend grade level material are considered striving readers (Cooper, Chard, & Kiger, 2006). These readers are diverse and find reading difficult for a variety of reasons. Some striving readers have a difficult time decoding words, making decoding laborious (Spafford & Grosser, 2005). Other students lack an extensive sight vocabulary and therefore are not able to read with automaticity. The amount of time and effort expended to decode words leaves little cognitive energy to make sense of what they have read. Many striving students do not even expect reading to make sense and do not understand what they have read. They are unable to monitor their comprehension, seldom use fix-up strategies and when they do they tend to focus on one strategy. These readers do not read fluently and are unable to vary their reading rate according to reading purpose and text difficulty (Spafford & Grosser, 2005). For some striving readers English language structures present a challenge. I prefer the term striving readers to struggling readers as it focuses on students' strengths and abilities rather than their deficits (Fink, 2006).

When students strive to learn to read and continue to face challenges their motivation to read declines. Typically these students are less motivated to read; in fact, by the intermediate grades many students give up on school and themselves as students (Pressley et al., 2003). One of the best ways to motivate a striving student to read is to teach them how to read proficiently (Cooper et al., 2006). Students who are able to read proficiently are more likely to want to read (Cooper et al., 2006). In considering the diverse readers in our classrooms, the integration of technology into literacy instruction may be an essential medium in which to motivate students to read as well as provide the necessary scaffolds various readers need in order to become engaged, proficient readers.

### **Motivation Factors**

Research clearly indicates the significance motivation has in creating readers (Gambrell, 1996). Authors have defined motivation in a variety of ways. Guthrie and Wigfield (2000) define reading motivation as an “individual’s personal goals, values, and beliefs with regard to the topics, processes, and outcomes of reading” (p. 405). Gee (2003) views literacy as inherently connected to the practices of social groups. Therefore, the social groups readers belong to influence reading habits. Malloy and Gambrell (2010) add that motivation for literacy is “the likelihood of engaging in a literacy task and persisting in the activity despite challenges” (p. 164). Based on these definitions we see motivation as multifaceted and crucial to reading engagement (Guthrie & Wigfield, 2000).

Baker and Wigfield (1999) assessed dimensions of reading motivation and their relationship to fifth and sixth grade students’ reading activity and achievement. The researchers measured the reading motivation, reading activity, and reading achievement

of a heterogeneous sample of 576 students attending six elementary schools. Students completed the Motivation for Reading Questionnaire (MRQ), answered questions pertaining to their reading activity, and completed the Gates-MacGinitie Reading Test, performance assessment, and the Comprehensive Test of Basic Skills (CTBS) in late September and early October. Confirmatory factor analysis of complete data obtained from the results of 371 students' MRQ indicated that children's reading motivation is multifaceted. Baker and Wigfield discovered several aspects of reading motivation including self-efficacy, curiosity, involvement, and preference for challenge were significantly correlated to students' amount and breadth of reading. Results also demonstrated that children in grades five and six are motivated to read for different reasons and consequently should not be labeled either as motivated or not motivated to read. In fact, motivated readers engage more in reading and are more positive about reading according to this research. Other variables of reading motivation include reading goals, intrinsic and extrinsic motivation, and social motivation for reading (Guthrie & Wigfield, 2000). Intrinsic motivation exists within the individual and is driven by an interest or enjoyment in the task itself. Students who are intrinsically motivated in an activity will engage in the activity for the interest and enjoyment associated with the activity and not another type of reward. On the other hand, extrinsic motivation comes from outside of the individual. Extrinsically motivated students will engage in an activity for points, grades, or money.

Pressley (1998) suggests guidelines supported by research for teachers to follow to increase students' reading motivation. He insists teachers implement a variety of mechanisms including access to interesting texts, integrating literacy and content-area

instruction, and allowing students to choose the books they read. In their year-long study of elementary students' motivation to read, Palmer, Codling, and Gambrell (1994) asked 330 third and fifth grade students from 16 classrooms in two school districts about their reading preferences, habits, and behaviors. They sought to begin to understand what motivates students to engage in reading. These researchers developed a questionnaire in order to assess students' self-concept as readers, their value of reading, and the reasons they read. In addition to administering this questionnaire, Palmer and colleagues conducted conversational interviews with 48 randomly selected participants representing a range of reading proficiencies (above, on, and below grade level) and motivational levels (high to low). The third and fifth grade students' responses to the questionnaire and conversational interviews revealed four significant factors connected to reading motivation. The aspects of literacy learning that were identified as motivational factors include prior experience with books including the reading of series books, social interactions with others about books they have read, access to lots of books, and having the opportunity to self-select the books they read. The findings from this study on students' motivation to read suggest the importance of creating classroom cultures that support students' reading motivation by providing a book-rich environment with access to a wide variety of books, opportunities to self-select books, familiarity or experience with books, and social interactions with others about books. By building a context for motivating all readers, teachers can increase the number of students who are engaged readers. Increasing long-term reading motivation and engagement is not developed quickly or from one isolated teaching practice. However, providing a motivating-



enhancing context can increase students' long-term reading motivation and engagement (Guthrie & Cox, 2001).

Motivation activates student behavior and is the foundational process in developing reading engagement (Guthrie & Wigfield, 2000). Effective and engaged readers have not only learned to read, but are also motivated to read. They believe “reading is fun, informative, and interesting” (Hunter, 2005, p. 10). Increasing motivation will encourage increased reading, which positively affects competence and reading ability (Gambrell, 1996; Guthrie & Wigfield, 2000). Gambrell and colleagues (1996) explored the literacy motivation of students in first, third, and fifth grade for several years. In the first grade studies they implemented the use of the Running Start (RS) program. This reading program supports reading development by providing students with a book-rich environment, allowing students to choose the books they read, and increasing opportunities for reading at school and at home. Children were challenged to read 21 books during the ten-week program and received bookmarks as incentives and books as rewards for completing the challenge. The first of four studies Gambrell and colleagues (1996) conducted with 7,000 first graders revealed statistically significant increases in motivation and reading behaviors for the students participating in the RS program.

Using survey instruments designed to measure reading motivation and behaviors as well as individual interviews, these researchers conducted a second study with first graders from low literacy achieving schools. As indicated by the results of this study, there is compelling evidence that implementing a motivational reading program at low

literacy achieving schools can increase students' (a) motivation to read; (b) time spent reading at school and at home; and (c) engagement in discussions about books.

In a third study, Gambrell and colleagues studied the long-term effects of the RS program with students and their parents who participated in the second study. The results suggested that a book-rich classroom environment and home literacy practices seem to be linked to long-term effects on reading motivation and behaviors. Finally, a fourth study was conducted to determine the difference the RS program made on classroom culture. The observations showed that students were spending more time engaged in sustained silent reading and book discussions. Therefore, a motivational reading program can promote a classroom environment and social interactions that support students' reading development.

Gambrell and colleagues developed and used the Motivation to Read Profile (MRP), which consists of a survey and conversational interview. The survey measures the self-concept of a reader and the value placed on reading. A semi-structured conversational interview assesses aspects related to reading motivation including personal, social, and text factors (Gambrell et al., 1996). The results revealed a link between students' reading achievement and their self-concepts as readers with more proficient readers having significantly higher self-concepts than less proficient readers. In addition, third graders value reading more than fifth graders. The outcome of the analysis of the interviews with students of varying levels of reading ability (above grade level, on grade level, and below grade level) and with varying levels of motivation (highly motivated to less motivated) indicated that four key factors seem to be linked to

the motivation to read: access to books, ability to choose books, prior experience with books, and interactions about books.

Students' attitudes about reading and willingness to engage in reading play a significant role in improving reading (Wilson & Casey, 2007). Children who enjoy reading choose to read more often. As a result "motivation mediates the Matthew effect" (Guthrie & Wigfield, 2000, p. 405). In other words, motivation gives students with poor reading skills the will to engage in more reading and increased reading opportunities build competency. However, if students are not motivated to read and do not enjoy the texts they are required to read, they may become disengaged from reading and "develop an aversion to reading that may be lifelong" (Worthy, 1996, p. 206). In their study on reluctant readers, Worthy and McKool (1996) selected 11 sixth grade students who were competent readers according to their teachers but had scored low on an attitude survey. The researchers conducted two 90-minute observations to identify instructional activities used during the language arts classes and students' engagement with the tasks. In addition, they interviewed the teachers about their practices and their view of these students, the librarian about materials in the library, and the students about their reading habits, attitudes, and preferences. Students were also observed during library time and free reading time. Cross-case analyses of surveys, observations, and interviews revealed a diverse group of readers in terms of ability and achievement, possessing varied literacy backgrounds. These analyses also revealed choice, opportunity, and access significantly affected students' reading attitudes and their decisions to read voluntarily. Worthy and McKool (1996) concluded that reluctant readers rarely choose to read for pleasure because they do not have access to materials they want to read at school or at home.

“Certain elements promote a love of reading, which include freedom to choose reading materials; a print-rich environment; access to a variety of texts; time for reading in school; encouragement to readers; and quiet, comfortable places to read” (Clark & Rumbold, 2006, p. 26). Therefore, effective teaching of reading should focus on reading proficiency and developing a habit of reading. Technology has the potential to contribute the following variables that may impact the development of a reading habit: (a) opportunities to read; (b) choice of interesting text; (c) access to a wide variety of text; and (d) social interaction about books. Electronic readers offer students the opportunity to read anywhere and anytime. Students can easily carry a personal mini-library with books of their choice, which would allow them to read whenever and wherever they please. In addition, the electronic reader provides easy access to a multitude of books students may be interested in reading. Teachers can easily provide students with easy access to more books than would be feasible with regular books. Even better, students no longer need to wait for the books they want to read to be returned to the library. Moreover, students are able to sample books by downloading the first chapter for free. In this way students are able to make more informed choices about the books they read. The annotation tool permits students to record their thoughts as they read. Referring to their notes students can easily share their thoughts with others.

To continue building support for a study on the impact of the electronic reader on reading behavior during independent reading, I have examined selected research on each of these variables. These studies demonstrate the relationship between the instructional variables and reading motivation and engagement.

**Opportunities to read.** Students need uninterrupted time to read to have any chance at becoming a reader (Gallagher, 2009). This uninterrupted time to read in school is most commonly referred to as sustained silent reading (SSR), but this block of reading time has been called a variety of names such as Free Voluntary Reading (FVR), Drop Everything and Read (DEAR), Daily Independent Reading Time (DIRT), Uninterrupted Sustained Silent Reading (USSR), Super Quiet Independent Reading Time (SQUIRT), or Independent Reading (IR). This time to read for pleasure can also be referred to as leisure reading, voluntary reading, spare time reading, and recreational reading. It does not matter what it is called, students just want time to read silently, freely, and without interruption instead of being required to participate in other literacy activities such as writing journal responses and answering comprehension questions (Ivey & Broaddus, 2001; Worthy, 2000). Sustained silent reading is a block of time, usually 15-30 minutes in which students are able to read books of their choice. SSR allows students uninterrupted time to practice their reading with reading materials of their own choosing. Voluntary reading entails students selecting books of their choice and reading from a wide variety of sources (National Endowment of the Arts, 2007). The National Research Council recommends teachers support daily independent reading by providing time, materials, and resources for students to read texts based on their individual interests (Snow et al., 1998).

Students will only become passionate, engaged readers if they have time to read books they want to read; therefore, teachers must make time every day for students to develop a passion for reading (Santa, 1997). *Every Child Reading: An Action Plan of the Learning First Alliance* (1998) emphasizes the development of the joy of reading to

ensure students read frequently and widely. “Reading for pleasure refers to reading that we do of our own free will anticipating the satisfaction that we will get from the act of reading” (Clark & Rumbold, 2006, p. 6).

Consequently, giving students more time to read provides them more reading practice, which increases both their motivation to read (Gambrell, 2007) and their ability to read (Stanovich, 1986). In other words, the more children read the better they become at reading which encourages them to read even more (Padak & Potenza-Radis, 2010). Intrinsically motivated literacy learners choose to read, find pleasure in reading, and apply their knowledge and skills to increase their reading proficiency and comprehension (Guthrie & Wigfield, 2000; Guthrie, Wigfield, Metsala, & Cox, 1999). Even though this seems simple enough, Padak and Potenza-Radis (2010) suggest in order for this to happen teachers must create a literate environment for all readers that focuses on purposeful and authentic reading. A student-centered environment in which teachers provide support, choice, opportunity, and time helps students develop a sense of ownership toward reading (McRae & Guthrie, 2009). The key may be providing students with the opportunity to engage in self-directed reading.

Studies have shown that the amount of reading students engage in is directly related to reading achievement (Guthrie & Humenick, 2004; Krashen, 2004; Lewis & Samuels, n.d.). Researchers also found students’ reading fluency and comprehension increase when they are given and spend more time reading silently (Kuhn et al., 2006; Kuhn, Schwanenflugel, & Meisinger, 2010; Taylor et al., 1990). Kuhn and her colleagues (2006) examined the effects of scaffolded, repeated reading and a wide-reading approach involving scaffolded instruction on 349 second grade students’ reading

skills over the course of one school year. Both approaches used grade-level texts; however, the wide-reading approach used three different grade-level texts each week compared to just one used with the scaffolded, repeated reading approach. The wide-reading approach provided students with significantly less repeated reading. This experimental design allowed the researchers to examine the effects of the two different instructional approaches used to improve the reading fluency of second graders. In addition, they compared both approaches to a range of literacy instruction in the control classrooms within the same schools. The analysis of a number of standardized reading assessments used to measure reading efficiency, oral reading of connected text, and reading comprehension indicated an increase in reading efficiency and reading comprehension for both groups. Kuhn and colleagues (2006) concluded that extensive oral reading of grade-level text using scaffolded approaches is effective. They determined students' reading efficiency and reading comprehension will be positively impacted by increasing the amount of time children spend reading appropriately challenging texts with scaffolds.

Furthermore, researchers have found a strong correlation between the amount of time spent reading at home and school and an increase in reading achievement. Based on the 2004 National Assessment of Educational Progress (NAEP) results, students who read for fun scored higher on the reading achievement tests (Perie et al., 2005). Similarly, Anderson and colleagues (1988) found that independent reading at home and at school is directly correlated to an increase in achievement. These researchers examined the relationship between 155 fifth graders' out-of-school activities and reading achievement. The fifth graders recorded their out-of-school activities for periods ranging

from 8 to 26 weeks. Reading achievement was measured using three tests given prior to and following the collection of the activity forms. Reading comprehension was measured using the Metropolitan Achievement Test; vocabulary knowledge was measured using a checklist vocabulary measure; and reading speed was measured by words per minute read. The study revealed huge differences in the amount of out-of-school reading students engaged in. More importantly, teachers significantly influence the amount of time students spent reading outside of school. Some of the things teachers did to promote reading were to ensure students had access to interesting books, provide time for students to read, and read aloud to students. In sum, this study found the strongest predictor of reading comprehension and vocabulary development was the amount of time students spent reading.

Taylor and colleagues (1990) made similar conclusions in their study investigating the effects of time spent reading on growth in reading achievement. From mid-January through mid-May, these researchers examined the time 195 fifth and sixth grade students spent reading silently in class and at home as recorded in their daily reading logs. A stepwise multiple regression analysis was performed using the Gates-MacGinitie Reading Test and the comprehension subtest of the SRA Achievement Series as a covariate to determine the relation between time spent reading and reading achievement. They found that students' growth in reading was significantly affected by the time spent reading in school. Gambrell (2007) and Blaisdell and colleagues (1999) believe that without time to read independently students will not get the practice they need to develop their full potential as readers.



Contrary to the evidence that spending more time reading will improve reading achievement, the Report of the National Reading Panel (NRP; National Institute of Child Health and Human Development [NICHD], 2000) reported an absence of quantitative evidence that supports the implementation of recreational reading programs. The 14 short-term experimental design studies they did examine either had serious flaws in their methodology/reporting or showed no significant differences in students' attitude toward reading or achievement between students who participated in sustained silent reading and those who did not. They did not find sufficient data to substantiate causal claims. Shanahan (2006) claimed, "research doesn't show that encouraging reading improves reading and that sustained silent reading (SSR) is probably not such a good idea" (p. 12). However, the National Reading Panel (2000) failed to examine hundreds of correlational studies on independent reading (Krashen, 2001). Many researchers believe correlational studies are best in examining the effects of independent reading (Krashen, 2001; Stahl, 2004) and in fact, the large body of evidence reviewed above that supports SSR is based on correlational studies. Based on the whole body of evidence, at least 80 studies, on independent reading and teachers' professional experience the preponderance of evidence demonstrates that providing students time to read independently benefits students' reading attitude and achievement (Garan & DeVogd, 2008). Therefore, students deserve opportunities to read in and outside of school.

We cannot just offer students more time to read, in addition we must find books our students want to read and allow them to choose books according to their interests. Teachers who give children time to read self-selected books teach children that reading is important and it matters (Danielson & Rogers, 2000).

**Choice.** Students like selecting the books they read (Kragler, 2000). In fact, one of the most effective ways to motivate and engage readers is to give them choice in the materials they read by supplying texts they are interested in and that are easy enough to ensure success. Kragler (2000) examined book choices made by nine randomly selected fourth grade boys representing three different leveled readers. Student-teacher conferences over a 14-week period were analyzed using the constant comparative method to determine the reading level (independent, instructional, frustration) of the books chosen and strategies the students used to choose books. These boys chose the books they read, read for 25-30 minutes, responded to their reading for 15-20 minutes, and ended each reading period by sharing what they had read with each other. During this time the teacher conferred with the boys individually to discover why and how they selected their books and how their reading was progressing. She also monitored their accuracy and comprehension by having them read aloud to her and retell the story. Kragler identified the five reasons these students chose books were friends' recommendations, the look of the book (pictures, size of print, length), topic of interest, familiarity with the author, and previous experiences with the book. Choice as a motivating factor was evident in this study. Kragler (2000) claimed, "self-selection of books is a vital ingredient to helping students become hooked on reading" (pg. 140). Choice is motivating because it affords student control. Simply providing opportunities for choice can provide the motivation students need to read and can make a difference in students' engagement in reading.

Additional studies have shown students who are given choice in what they read are more motivated to read and invest themselves more fully in reading (Edmunds &

Bauserman, 2006; Guthrie & Humenick, 2004; Pachtman & Wilson, 2006; Palmer et al., 1994). In their meta-analysis of experiments to determine what motivates students ages 8-14 to read, Guthrie and Humenick (2004) found choice to benefit both students' motivation and reading achievement and comprehension.

Giving students choice of reading materials was shown to motivate students to read in both quantitative and qualitative studies. Using the conversational interview portion of the Motivation to Read Profile (MRP; Gambrell et al., 1996), 91 fourth grade students shared with Edmunds and Bauserman (2006) the importance of choosing their own books. These children were motivated to read when given a choice of what to read. Additionally, Pachtman and Wilson (2006) found choosing their own books was rated the second most important factor influencing students' reading habits according to a survey given to 22 fifth graders. The opportunity to choose what they read allowed students to pursue their interests and resulted in an increase in reading and enjoying books (Pachtman & Wilson, 2006). In a larger study of motivation to read with 330 third- and fifth- grade students, one of the four motivational factors that emerged from the results of the MRP and conversational interviews was book choice (Palmer et al., 1994). Palmer, Codling and Gambrell found that self-selecting books is clearly associated with reading enjoyment and prolonged reading experiences.

Many scholars and literacy experts argue that students must have the freedom to select books to read for pleasure and learning (Allington, 2006; Guthrie & Wigfield, 2000; Wood & Jones, 1997; Worthy & McKool, 1996) and agree that allowing children to choose the books they want to read is beneficial (Allington, 2006; Gambrell, 2007; Krashen, 2004; Trelease, 2006). There is clear evidence that choice of text increases

motivation and has a significant impact on reading achievement and comprehension (Guthrie & Humenick, 2004). The most significant benefit students may realize from opportunities to choose their own books is the development of a passion for reading, which will inspire students to read, empowering them to make informed choices, pursue their dreams, and live life to the fullest.

Additional research indicates there is a strong correlation between choice and intrinsic motivation (Turner, 1995). Using a structured observation instrument to examine the effects of literacy instructional contexts and tasks on 84 first grade students' motivation for literacy, Turner (1995) observed and recorded students' reading strategy use, learning strategy use, persistence, and volitional control. She conducted interviews with each of the students immediately following her observations of students completing the literacy tasks. The factors that seemed to influence students' motivation were tasks students chose that were challenging, interesting to them, and involved collaboration with others. By reading books they want to read, students are motivated to read more (Cunningham, 2005). Krashen (2004) suggests that students who choose what they read in an informal environment are more motivated, read more, and make greater gains in literacy achievement. In fact, students who are allowed choice in what they read and write, read and achieve more than students who are not provided with choices (Anderson et al., 1988). Therefore, if teachers want students to read more, they must allow students to choose what they read.

Allowing students to self-select what they read, we as teachers can empower our students. Students who feel they have control over their learning are more likely to be engaged than students who have no control (Guthrie & Wigfield, 2000; Strangman &

Dalton, 2005; Turner, 1995). Choosing their own books students are able to pursue their interests and we know based on additional research students are more engaged in reading books about their interests (Fink, 2008). In fact, all students, even reluctant readers, feel empowered and in control of their reading when allowed to choose what they read and therefore choose to read more (Jobe & Dayton-Sakari, 1999). Thus, I agree with Kragler (2000) that self-selection of books is a vital ingredient in hooking students on reading.

An important aspect of providing students with choice in what they read is access to reading materials they want to read. In addition to students choosing what they read, students need reading materials on topics in which they are interested and that they can read. Because children are innately curious, choosing interesting texts on topics they are curious about can inspire more frequent reading. Curiosity and interest in the topic therefore motivate students to read extensively, engage in abundant reading, and develop a deep background knowledge and contextual understanding of topics that interest them (Fink, 2006). Worthy (1996) believes personal interest is the most important factor in motivating students to read. Students are more motivated to read and make greater gains in reading when they are passionately interested in the books they are reading (Fink, 2008). In fact, a number of recent studies have indicated the importance of students' interests in motivating students to read and increasing their reading proficiency, especially comprehension of those texts (Fink, 2006; Guthrie & Humenick, 2004).

Fink (2008) suggests one of the best ways to create excitement about reading and spur children's intrinsic motivation to read is by giving students texts about their interests. Her research illustrates students with ample opportunities to read books about their interests develop an intrinsic desire to read. An abundance of high-interest texts in

the classroom motivates students to spend more time reading. By simply having access to and the choice to read books they are interested in, students are more motivated to engage in abundant reading (McKool, 2007). This in turn fosters learning by increasing fluency, vocabulary, proficiency, and confidence (Anderson et al., 1988). Access to books students are interested in may explain the high correlation between the size of the classroom library and time students' spent reading voluntarily and students' reading achievement in Elley's (1992) study of 9-14 year olds in 32 national education systems.

Reluctant readers prefer scary stories, comics, cartoons, magazines, and books on popular culture, sports, cars, trucks, and animals (Jobe & Dayton-Sakari, 1999). Reluctant readers in McKool's (2007) study preferred reading series books, scary stories, comic books, and magazines. The two top choices for reading materials were scary stories/books and comics and cartoons. McKool (2007) surveyed 149 and interviewed 40 fifth grade students to determine the factors that influence students' decisions to read outside of school. Data were collected using student activity logs, the Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990), the Motivation to Read Profile (MRP; Gambrell et al., 1996), and student interviews. She found the following three factors significantly influenced students' voluntary reading: students' self-concept as readers, television viewing, and organized activities. McKool discovered a significant positive correlation between students having access to interesting reading materials they were interested in reading and their out-of-school voluntary reading. In other words, students who were given opportunities to choose books they were personally interested in were more likely to engage in voluntary reading.

Williams (2008) in her investigation of the book selections of 293 economically

disadvantaged Black 8- to 12- year old elementary students and the reasons they chose specific books, discovered similar findings. Williams (2008) examined each participant's selection of 15 books on individual book order forms and recorded 40 participants' spontaneous talk during the time they were self-selecting their books at the book fair. In addition, Williams conducted individual semi-structured interviews with 30 students to gain additional information on why they chose certain books. The findings emphasized students' preference of fiction, series books, and books reflective of media and mass marketing interests. Williams suggests offering books representing media and mass marketing interests may increase reading engagement for economically disadvantaged, Black elementary students. Students' interests in books reflecting their everyday cultures can motivate them to want to read.

Additional researchers have studied the effects of providing students with books they are interested in. In their longitudinal experimental study, Allington and colleagues (2010) examined the effects of providing 852 economically disadvantaged students with books of their choice for summer reading over a three-year period. Students' achievement on the state reading assessment were compared to a control group consisting of students from the same schools who did not receive books for summer reading. Participants were in first and second grade when the study began and received 12 books they had chosen from a book fair on the final day of school. These researchers found that students engaged in more voluntary summer reading and increased their reading achievement as a result of having easy access to books of their choice for three consecutive summers.

In addition to these aspects, students prefer a moderate challenge when reading

and are intrinsically motivated by the challenge of certain books (Caldwell, 2008; Wigfield et al., 2004). Miller and Meece (1999) interviewed 24 third grade students of varying levels of ability (low, average, and high achievers) about the academic tasks they had completed in class. Most of the students made more positive comments when describing high-challenge academic tasks compared to low-challenge. These researchers found that students prefer challenging reading tasks and suggest teachers offer moderately challenging tasks in order to promote motivation. By reading texts slightly above their reading level, but not too difficult, students gain a sense of accomplishment in tackling a challenging text. Topping and colleagues (2008) tested 45,670 students (ages 6-12) using a computerized standardized test and Accelerated Reader. Students who were moderately challenged by the text performed better on the norm-referenced computerized adaptive STAR Reading Test, which measured reading achievement. Based on their findings, they suggest students can read a broad range of levels and increase their reading achievement. Students need to practice reading books that appropriately challenge them with exposure to new vocabulary, syntax, and concepts, but do not confront them with failure (Topping, Samuels, & Paul, 2008). Providing choices can enable students to read at more optimal challenge levels and avoid unproductive reading at levels too low or too high for effective reading practice to take place. With the appropriate level of challenge students will gain confidence in their own abilities without experiencing boredom or failure (Oldfather, 1993).

In addition to being able to choose the books students are interested in reading, another important aspect of reading motivation is access to books students want to read. They need access to books that are meaningful to them. Next, I examine the studies and



literature that suggest providing access to a variety of reading materials improves motivation and reading engagement.

**Access.** In order to ignite a passion for reading, first students must have access to a wide variety of reading materials including books, magazines, newspapers, comics, series books, and electronic texts that they are interested in and want to read (McKool, 2007; Worthy & McKool, 1996). In her research, McKool (2007) surveyed 149 fifth grade students and interviewed 20 avid readers and 20 reluctant readers to understand why some students choose to read out-of-school more than others. Students in this study were allowed to read self-selected materials daily and their teachers provided access to materials the students were interested in reading. McKool found the key to increasing reading motivation through choice of reading materials on topics students are interested in reading is having an abundance of books readily available. Therefore, access to books is an important variable that impacts reading motivation.

The evidence available indicates students are more motivated to read if they have access to high interest books (Corcoran & Mamalakis, 2009; Guthrie & Humenick, 2004). In an attempt to measure fifth grade students' attitudes toward reading and related motivational techniques used by teachers, Corcoran and Mamalakis (2009) found the 26 students they surveyed all wanted to choose the books they read. These researchers used a survey with 12 forced choice questions, which included questions on choice in reading materials, motivation toward reading, and the value placed on reading. Very few of the participants expressed that reading was something they liked to do. However, these fifth graders indicated they were more motivated to read if they had access to books of their choice. Easy and immediate access to high interest books capitalizes on students'

interests (Beckman, 1984). In fact, in Neuman's (1999) formative experiment involving 100 classrooms and 400 three and four year olds, she found that flooding childcare centers with books increased students' motivation and achievement. She suggests students need print-rich environments as well as an excellent instructional environment to increase early literacy skills. Exposure to a wide variety of reading materials helps students realize reading as a necessary part of their lives (Sanacore, 1997). In surveying and interviewing students, Pachtman and Wilson (2006) also found that having a lot of books to choose from was most important in motivating students. Not only does access and choice have a positive impact on motivation, but also on reading engagement (Gambrell, 1996; Turner & Paris, 1995).

A review of the literature conducted by Chambliss and McKillop (2000) reveals the presence of a wide range of reading materials increases motivation, promotes more reading, and improves academic achievement. Therefore, it is imperative that students have text-rich school environments with a wide variety of choice in reading materials (Corcoran & Mamalakis, 2009; Gambrell, 1996; Guthrie & Humenick, 2004). Pressley and colleagues (2003) suggest classrooms need to be flooded with books in order to engage students in wide reading. They recommend not only print books, but also books on tape and electronic text.

Providing children with access to books they want to read not only impacts students' motivation to read, but other reading behaviors as well. In a meta-analysis of 44 studies that examined the impact of giving children print materials to own, researchers found that increasing children's access to print materials improved children's attitudes

toward reading; and increased the amount of reading children participated in, their emergent literacy skills, and their reading achievement (Lindsay, 2010).

Research has found consistent correlations between the availability of books and reading achievement. According to Krashen (2004), a child's reading development is dependent on the amount of reading a child engages in, which is dependent on the amount of reading material available. Morrow (1992) in her eight-month experimental study investigated the effects of a literature program emphasizing enjoyable literature activities on the literacy achievement, use of literature, and attitudes toward reading of 166 second graders from minority diverse backgrounds. Students were given a home subscription to a children's magazine and kept track of what they read during school and at home. In her study, Morrow (1992) measured achievement using standardized and informal written and oral tests of comprehension. She also administered surveys at the beginning and end of the study to determine students' use of literature and conducted interviews to determine students' attitudes toward reading. The data was analyzed using a one-way repeated measures analysis of covariance. Results indicated significant increases in students' achievement measured by oral and written retellings, use, and attitudes toward reading. Students in this study reported an increase in reading both books and magazines at home. In fact, they identified reading and writing as fun when they could choose what they wanted to read. Morrow (1992) discovered that by increasing access to books, students read more and gained higher levels of reading achievement. Guthrie and Humenick (2004) indicate the most important implication of research on access to interesting texts is the fact that we can improve reading achievement simply by increasing students' access to a diverse range of print materials.

Allington (2006) stresses that kids need lots of books at their fingertips to easily access books that entice them to read. In fact, in Allington and colleagues' (2010) study on providing easy and continuing access to books students want to read the evidence is clear. Students indicated on a Literacy Habits Survey that with access to books they were interested in reading they engaged in more reading during the summer months. Simply by reading more during the summer students increased their reading achievement.

Unfortunately, it is not always the case that students have access to books they want to read. Research has shown students from low-income families often have less access to reading materials both at school and at home (Halle, Kurtz-Costes, & Mahoney, 1997; Krashen, 2004; Neuman & Celano, 2001). Halle and colleagues (1997) found many of the 41 third and fourth grade low-income students in their study did not have the same access to books in their homes and neighborhoods that middle-class students possess. Similarly, Neuman and Celano (2001) examined the availability of print resources in four community environments. It is not a surprise that the variation in income between differential neighborhoods corresponded to the availability and quality of print resources. Sadly, children in low-income environments have very little access to print resources at home, school, and in the community including public libraries and bookstores.

Access to reading materials is crucial as Krashen (2004) suggests that access to books children can read easily will support a lifelong reading habit. Studies by Ehri, Dryer, Flugman, and Gross (2007) as well as O'Connor and colleagues (2002) support this claim that high-success reading, in which students are reading materials they can read accurately, positively impacts a reading habit. The 64 first grade struggling language-

minority readers in the Reading Rescue tutoring program read texts with high levels of accuracy, resulting in greater gains (Ehri et al., 2007). In fact, the struggling first graders made greater gains in decoding and comprehension when they read texts at an independent level. Similarly, in their experimental study comparing the effect of text difficulty on students' reading growth using reading-level-matched materials and classroom-level-matched materials with 46 struggling 3rd-5th grade students, O'Connor and colleagues (2002) found students made the most growth when reading materials were matched to their reading levels. Thus, providing access to books students want to read and can read, as well as time to read, will increase the amount of time students spend reading and most likely increase reading proficiency and learning.

Thus far, research that supports allowing students the time to read, permitting students to choose the books they read, and providing students with access to a wide variety of books based on their interests has been examined. In the next section, research on encouraging students to converse with friends about what they are reading as it relates to an increase in reading motivation and engagement is presented.

**Social interaction.** An additional significant factor that develops motivated, engaged readers is social interactions-sharing and talking with others-around texts. Educators know the social aspect of reading is important and that students are more motivated to read when they are encouraged and permitted to engage in discussions about the books they are reading (Baker & Wigfield, 1999). In their empirical research designed to assess the dimensions of 371 fifth and sixth grade students' reading motivation Baker and Wigfield (1999) used the Motivation for Reading Questionnaire (MRQ), a reading activity inventory, and the Gates-MacGinitie Reading Test to measure

motivation for reading, reading activity, and reading achievement. Cluster analyses provided evidence that students vary in their motivational profiles and children's reading motivation is multifaceted. In addition, Baker and Wigfield (1999) found social reasons for reading to be strongly correlated to students' reported reading activity. Furthermore, in their review of the literature on the impact of dialogic discussions on students' comprehension and understanding of text, Almasi and Garas-York (2008) found research that indicated social interactions with others promote achievement and an intrinsic desire to read. More specifically, participation in peer discussions led to significant growth in students' comprehension. Guthrie and Humenick (2004) in their review of 22 empirical studies found social collaboration to be one of four classroom practices that had a sizeable impact on students' motivation to read and their comprehension of texts.

Almasi (1996) in her chapter in *Lively Discussions! Fostering Engaged Reading* also suggests that students who have opportunities to talk about the books they have read are more likely to engage in reading. Guthrie and colleagues (1995) agree that interacting with others about the books students are reading fosters wide, frequent reading. In their study, Guthrie, Schafer, Wang, and Afflerbach (1995) analyzed data from 926 nine year olds collected using the 1986 National Assessment of Education Progress (NAEP), a nationally representative survey. These researchers applied conceptual criteria and factor analysis to identify five constructs that influence the amount of students' reading activity. Using path analyses they found the amount of reading these nine year olds participated in was highly associated with the levels of social interaction surrounding their reading. Students who discussed the books they were reading with friends and family were more motivated, active readers. Similar findings

were realized in Gambrell and her colleagues' (1996) motivational studies with first, third and fifth graders. One of the four factors identified by these students as being highly motivational was having social interactions about books. Therefore, students benefit from talking about the texts they are reading because discussion increases motivation and engagement, promotes additional reading, and enhances literacy skills (Guthrie et al., 1995; Gambrell, 1996; National Reading Panel, 2000).

Students are not only more motivated to read, but they also become more active readers when they participate in discussions about books (Almasi, 1996; Almasi & Garas-York, 2008). In their study of three non-engaged fourth grade readers during independent reading, Bryan and his colleagues (2003) found the addition of short literature discussions to sustained silent reading increased the students' reading engagement. Ensuring students have others to converse with about the books they read is important in helping students become active readers (Guthrie et al., 1995; Palmer et al., 1994).

These opportunities to discuss what they are reading motivate students to read books recommended by their peers. In their review of the research, Clark and Rumbold (2006) also found that primary students acknowledged that reading groups with friends and talking about books made them want to read more. For example, in their study Clark and Foster (2005) analyzed the data collected from 2,331 primary students using the Reading Connects survey. Students were asked to choose from a list of 12 which reading activities they would like to do to help themselves and others read more. These students stated reading groups with friends and talking about their favorite books would make them want to read more.

Providing students opportunities to interact socially around books they have read also enhances literacy skills. Through social interaction and collaboration students are able to share the knowledge they have gained through reading (Guthrie et al., 1995); extend their thinking and engage in high level thinking (Almasi & Garas-York, 2008); and construct meaning (Vygotsky, 1978). After examining the research supporting independent reading and the motivational aspects of the classroom context, it is important to illustrate the connection defined by research between technology and support for diverse learners. Technology may enable teachers to meet the needs of individual students by providing opportunities for students to engage in a variety of text at all levels that they are interested in reading and allowing students to participate in voluminous amounts of reading and/or listening to books. Educators may succeed in scaffolding reading instruction and meeting the diverse needs of all learners in new and innovative ways. Given the many considerations necessary and the challenge of matching children with appropriate books, the use of digital tools may aid teachers in leaving no child behind (Strangman & Dalton, 2005).

### **Technology and Diverse Learners**

It is the teachers' responsibility to provide appropriate literate environments and instruction for every reader (Padak & Potenza-Radis, 2010). Technology can assist teachers in offering a variety of instructional approaches and materials to meet the various and diverse needs of their students (Strangman & Dalton, 2005). Research has shown striving, reluctant readers are more interested, motivated, and positive toward reading when using multiple literacies such as electronic texts (Adam & Wild, 1997). Electronic books can support five techniques identified by West-Christy (2003) in



assisting reluctant and striving readers by offering a wide range of reading texts, incorporating large print materials, engaging multiple modalities, teaching vocabulary, and supporting reading strategies such as predicting, questioning, and making connections.

Many, but not all, of our students today are digital natives, meaning they have been surrounded by digital technology since they were born (Prensky, 2001). These students have been immersed in the use of computers, video games, cell phones, and a multitude of other digital toys and tools; therefore, they do not fear but embrace new technologies (Schrock, 2006). Even though students have grown up in the digital age they possess a wide range of technology skills and use. Therefore, it is critical for teachers to evaluate students' specific skills and literacies rather than assume that because these children were born in the digital age they are equipped with new literacy skills needed for their digital future. It is important that teachers integrate the use of technology in the classroom especially for the students who have not been exposed to digital tools from an early age and have not had opportunities to discover new literacies.

Research has shown that technology can have a positive impact on student motivation (Kamil et al., 2000; McKenna & Zucker, 2009; Reinking, 2001). Kamil and colleagues (2000) reviewed 256 articles in two reading journals and found several studies that support computer use by children could increase their involvement in and enjoyment of reading. The use of technology provides a novel experience, which initiates interest and can be highly motivating (Balajthy et al., 2001). In their study of a tutoring program at the university integrating computer-based instruction, Balajthy and colleagues (2001) investigated implications of the use of technology in delivering literacy instruction to

students ages 7-12 by 37 graduate students. The students enrolled in the tutoring program had severe difficulties in acquiring literacy and were not proficient in reading. Data were gathered through observations of 90 minute tutoring sessions conducted by clinicians four days a week for five weeks. The findings indicated computers were used for a variety of purposes including drill and practice, word processing, reading electronic books, research, graphics, and simulations. The researchers and clinicians observed, noted, and commented on the students' high motivation to use computers. However, the drill and practice programs were motivating for only 10 to 15 minutes. Based on this research, Balajthy and colleagues suggest the use of computer technology can offer potential benefits for reading and literacy instruction including student motivation.

In her case study, Short (2010) visited a second grade classroom on three separate occasions during the spring semester to observe 7 and 8 year olds' use of the computer during their reading period. Data collection included observations and field notes of students' actions and engagement levels, as well as interviews with the classroom teacher after each observation. Students participated in one of five reading centers each day for 30 to 45 minutes. One of the centers was reading electronic books on the computer. In addition, five students were allowed to read electronic texts during silent reading. These second graders claimed reading on the computer was one of their favorite activities. Short (2010) observed the ease and speed of students moving from one book to the next without spending time that is typically used to browse for a new book to read. She noted that second graders were motivated to read electronic texts during reading centers and silent reading. In fact, these students were excited about reading on the computer and viewed reading electronic texts as a privilege. The classroom teacher claimed his

students all wanted to be in the group assigned to the computers. Short (2010) concluded that technology motivated her participants to read more.

In their review of the literature, Strangman and Dalton (2005) noted that some researchers using interviews and observations found that technology positively impacted student engagement. In the context of literacy instruction, students benefited from engaging with new technologies. However, other researchers have documented no change in motivation or task enjoyment. Some researchers believe the novelty of technology will dissipate and students' motivation will not increase as technology use increases (Strangman & Dalton, 2005). In fact, many researchers control for technology's novelty effects. Even though there is support for the argument that the novelty of technology may diminish, it can make a positive impact on students' attitudes toward reading (Strangman & Dalton, 2005). Students who are unmotivated and uninterested in applying their literacy skills are choosing to engage in learning tasks accessed through new technologies (Coiro, 2003). By combining reading and technology we may be able to create the perfect kindling to ignite a passion for reading.

Not only does technology provide motivation (McKenna & Zucker, 2009), but it also offers students the opportunity to participate in grade level activities by scaffolding their reading as well as helping develop word recognition and vocabulary (Taffe & Gwinn, 2007). Teachers realize that technology levels the playing field for students by providing additional support in acquiring literacy (Taffe & Gwinn, 2007). For students who find reading more difficult the electronic reader eliminates the uncomfortable feelings struggling readers have in choosing books at their own reading level (McKenzie, 2009). The text a student is reading will not be evident to others, removing the stigma

associated with reading below grade level books and allowing students to enjoy reading materials at their level to increase their reading success and progress. In order for children to become accomplished readers, they need to be involved in lots of reading practice with texts that are accessible to them (Allington, 2006). If students experience more enjoyable reading, the amount of reading students engage in may increase. Increasing engagement through the use of electronic texts is desirable because it also increases self-confidence and improves reading attitudes (Strangman & Dalton, 2005). In this way, the electronic reader supports the self-efficacy, a student's confidence in his or her ability to read, of students reading texts that other students consider too easy (Karasoteriou, 2009).

Taffe and Gwinn (2007) also claim because technology, such as the Internet and other ICTs, is motivating and engaging it can increase students' self-efficacy. Students who believe they can read seek more opportunities to read compared to students without self-efficacy (Taboada, Guthrie, & McRae, 2008). In addition, students who are confident and believe they can do well possess increased self-efficacy, which impacts their motivation to read (Pressley et al., 2003). It is our responsibility as teachers to help students develop positive, confident attitudes toward reading, foster their self-efficacy, and promote a reading habit (Taboada et al., 2008).

Electronic text features support diverse learners in a variety of ways. Horney and Anderson-Inman (1999) demonstrated that electronic text features provide needed scaffolds for readers such as text-to-speech, online glossaries, graphics, and search and note-taking capabilities. Electronic texts with the use of the text-to-speech feature have the ability to engage and support readers, providing a scaffold for students who struggle

or lack confidence and allowing them to access text that may be too difficult to read alone (Kara-Soteriou, 2009). Labbo and Reinking (2000) claim the features of electronic storybooks afford greater access to a wide range of books for reluctant and emergent readers. The text-to-speech feature used in conjunction with headphones enables students to read and listen to more age appropriate and interesting books in addition to grade level texts, encouraging students to participate in class discussions. It removes the restraints of word recognition and decoding, allowing students to focus on the meaning of the author's words (Wolfson, 2008). In helping students compensate for a lack of strong decoding skills, the electronic reader levels the playing field (McKenna & Zucker, 2009). No child is marginalized in the activity or excluded from the opportunity to acquire higher-order literacy practices from a lack of reading proficiency.

In addition, the use of headphones offers privacy to reading, eliminating the barrier of embarrassment in reading lower leveled text, and in turn promotes motivation to read. It is critical that students read texts at their reading level in order to make the greatest gains in reading achievement (Allington, 2006). However, the text-to-speech scaffold can and should be removed when the reader no longer needs it to prevent students from over relying on the computer to read the story and slowing the process of developing their own reading abilities (McKenna & Walpole, 2007). In sum, the text-to-speech feature supports a diverse group of students including students with poor decoding skills in addition to students who love being read to by providing a model for fluent reading and supporting vocabulary acquisition.

Contrary to the positive effects of using text-to-speech, Strangman and Dalton (2005) found several studies that reported that text-to-speech provided no advantages

over traditional books, for example, they did not improve students' decoding or sight word recognition. In addition, the literature did not support using text-to-speech for developing phonics or word recognition. In their literature review, these researchers did not find solid evidence that text-to-speech compared to other reading practice increased students' reading fluency. However, it may be possible that the teachers' purpose for using text-to-speech is the difference in whether this feature is considered to be advantageous or detrimental for young and/or striving readers. In my opinion text-to-speech allows students to access text they are interested in reading but is too difficult for them to read independently. Similar to other assistive technologies, the text-to-speech feature allows teachers to provide necessary scaffolds for striving readers and promotes greater independence for these students. If our goal is to encourage reading enjoyment, text-to-speech may provide access to books that may hook students on reading and motivate them to read more.

Oakley and Jay (2008) investigated the use of electronic talking books (ETBs) to encourage reluctant readers to engage in reading at home. Based on the fact that features of ETBs such as text narrations and animated illustrations help to ensure successful reading experiences these features add to the motivational value of ETBs. The 41 students participating in the study ranged in age from 8-11 and were nominated by their teachers as reluctant readers. Oakley and Jay (2008) verified their reading status by administering the Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990) and interviewing each child about their reading habits. In addition, the researchers surveyed the parents about their children's reading behaviors and attitudes. Parent feedback was collected once a week and at the end of the 10 weeks follow-up interviews

were conducted with students, parents, and school personnel (Oakley & Jay, 2008). Based on the data they collected, Oakley and Jay (2008) found students enjoyed the ETBs and read more than usual at home during the project. Even though sometimes students chose just to listen to the narrations and not read in the same way they would read a traditional book, these reluctant readers engaged in and enjoyed text. Parents believed reading ETBs had improved their children's reading abilities and attitudes and commented that their children preferred ETBs to traditional books. However, parents did question the novelty effect and some did not think the ETBs had increased their children's interest in reading traditional books. One parent in particular worried that the ETBs might cause harm in turning her child away from reading traditional books. The findings did indicate four boys still did not find reading traditional books or ETBs enjoyable at the end of the study. Oakley and Jay (2008) speculate that the project may have been enhanced if classroom teachers were more involved by following up on what students were reading at home and making connections to literacy in the classroom. To ensure ETBs are at the appropriate reading level, the researchers felt in the future students should have the opportunity to preview the books before taking them home. The limitations of this study were the relatively short time frame and lack of involvement of classroom teachers.

In another study investigating the integration of technology and literacy instruction, Fitch (2010) implemented the use of iPods with a group of 12 fourth grade striving readers. Her students were expected to read along in a chapter book as they listened to the story on the iPod. Data collection included observations, anecdotal notes, parent and student surveys, and videotaped student interviews. She observed an increase

in students' motivation to read and on task behaviors when using the iPod. Based on the survey, she found students believed the iPods made them better readers by helping them figure out unfamiliar words. Students self-reported they were able to recognize hard words the next time they experienced them in their reading. In addition, they also commented that by not having to struggle with words comprehension was easier. Not only were students more motivated to read, but Fitch (2010) also observed an increase in comprehension during class discussions, interviews with students, and on comprehension tests based on the books they read.

Similarly, Doty, Popplewell, and Byers (2001) investigated 39 second grade students' reading comprehension when reading interactive CD-ROM storybooks compared to conventionally printed books. These researchers used a univariate analysis of variance to compare these young students' ability to orally retell a story and answer comprehension questions. There was no significant difference in the students' oral retellings of the story. However, when the students' comprehension was measured by answering comprehension questions about the story there was a significant difference between the two groups. Students reading interactive eStorybooks scored significantly higher when asked oral comprehension questions compared to students reading traditional texts. Doty and colleagues (2001) discovered reading interactive electronic texts positively affected young children's reading comprehension.

In their experimental study, Adam and Wild (1997) investigated the effect of CD-ROM storybooks on elementary students' attitudes toward reading. Students read the computer storybooks every other day for four weeks, equaling over 200 minutes of access to these electronic texts. According to data collected from reading logs, most of the third



graders read at least ten of the eleven computer storybooks. To measure the degree of change in 45 third grade students' attitudes toward reading after reading computer storybooks, Adam and Wild (1997) used a Likert-type questionnaire in their experimental pretest-posttest design, interviewed 16 reluctant readers, and observed each of the reading sessions. As a result of the use of interactive CD-ROM multimedia books struggling, reluctant readers developed strong positive attitudes toward reading both electronic books and traditional books. These researchers discovered that the attitudes of students who were not reluctant readers did not increase as much as the attitudes of the reluctant readers. In addition, the overall attitudes of the experimental and control groups toward reading did not differ significantly. However, the results do suggest electronic books may provide a motivating reading context for struggling readers.

Lefever-Davis and Pearman (2005) examined the use of electronic books to support oral reading practice in an economically and culturally diverse first grade classroom with 11 students ages 6-7. The researchers took running records and observational field notes as each student read two CD-ROM storybooks, noting the electronic features used. The electronic features each of the participants used differed; however, there were common behaviors among the students, which included using the mouse to track as they read, clicking on unknown words for digital pronunciations, and becoming distracted by the animations. Lefever-Davis and Pearman (2005) discovered that electronic books have the potential to support readers, promote reading skills, and benefit struggling and proficient readers. One advantage of CD-ROM storybooks is the model the digital pronunciations provided for struggling readers, increasing their self-confidence and persistence. One disadvantage of CD-ROM storybooks they found was

the multitude of animations could be distracting to the reader.

With the use of the electronic reader, teachers may be able to meet the needs of individual students. One example is the point-and-click definitions provided by the built-in dictionary may support a child with low vocabulary while also supporting a proficient reader accessing more challenging books. In addition, the electronic reader has the potential to provide flexibility not only allowing students to access high leveled text, but by providing lots of practice with text at their reading level. Teachers can supplement more than one textbook with additional reading materials to include multiple and varied points of view, enhancing critical analysis of a topic. Using books on the same theme with varying reading levels allows teachers to differentiate instruction for all learners. With this digital tool, educators may experience success in scaffolding reading instruction and meeting the diverse needs of their students in new and innovative ways. Kara-Soteriou (2009) argues “teachers must realize the potential technology has in addressing the needs of students who are ready to be challenged more and in helping students learn what they could not learn without technology-driven differentiated instruction” (p. 90).

The portability of the handheld digital tools can extend learning beyond the classroom and the school day (Tomasino, Doubek, & Ormiston, 2007). In fact, students can read anytime and anyplace with these devices. In Tomasino and colleagues’ (2007) experience over the past five years with mobile tool initiatives involving over 3,000 students and hundreds of teachers in 40 school districts, the common feedback from students with access to portable digital tools is that these devices make learning more “personal, flexible, and engaging, and assists in organizing and accessing information” (Tomasino et al., 2007, p. 31). In their study they discovered these digital tools with

access anytime and anyplace can be important learning tools, an integral part of the learning process (Tomasino et al., 2007).

Grams (2003) was not prepared for the passion students developed for reading in class and outside of class in his study on the implementation of Palm m130 electronic readers. Grams integrated the use of the Palm m130 with 23 sixth grade students in his reading and language arts classes. His students used the handhelds for both word processing and electronic book reading. As Grams tracked the books he downloaded for students daily, he noticed students' interest in books and reading increased, even students with little interest in reading prior to the study were choosing to read on their own. Results from a survey Grams (2003) administered at the end of the year indicated 17 of 23 students read more electronic books than traditional books. In addition, these students appreciated the electronic reader's portability and ease of bookmarking their place. Grams contributed some of the students' increased motivation to read using the Palm to the fact that they were allowed to choose books that were of interest to them.

Having several features that may enhance reading by making it more engaging and instructionally appropriate (Schrock, 2006) electronic texts present learning opportunities that build on individual student's strengths, address his/her needs and interests, and therefore benefit every student by maximizing learning (Taffe & Gwinn, 2007). In addition to increasing motivation and engagement by allowing students choice of reading materials, electronic texts have the potential to increase reading proficiency skills including fluency, vocabulary, and comprehension.

Based on previous research, technology and more specifically electronic texts have the potential to increase reading motivation, engagement, and self-efficacy by

providing students access to a wide range of texts, choice of texts they are interested in reading, the opportunity to read anytime and anyplace, and a reason to interact socially with others. Therefore, students with electronic readers and electronic texts may benefit from technology's ability to increase motivation to read, to scaffold reading for diverse learners, and to differentiate instruction to meet the needs of all learners, potentially leading to improved fluency, expanded vocabulary, increased comprehension, and added reading engagement (Krashen, 2004). Since most students are interested in technology (McKenna & Zucker, 2009), integrating electronic texts into the classroom may spark students' interest in reading, increase engagement in reading, build self-confidence, and improve attitudes toward reading (Strangman & Dalton, 2005). The possibility of getting nonreaders or reluctant readers to read is a significant reason to add electronic text and electronic readers to the classroom library.

In addition to a review of research on the relationship between technology, reading, and motivation it is important to investigate the research that has examined the use of electronic readers in educational settings to provide background knowledge and support for my study.

### **Research on Electronic Readers**

Research on electronic readers is in its infancy due to the relatively short time they have been on the market. Various professionals in the field of education have conducted a limited number of studies that span a range of educational levels from second grade to college. Seven of the studies using electronic readers have been published in peer-reviewed journals. Several of the papers listed in Appendix A were

presented at conferences such as the Society for Information Technology and Teacher Education International Conference (SITE) in 2010.

These few studies conducted thus far on electronic readers include both qualitative and quantitative data with only two studies using an experimental design. Most of the researchers studying electronic readers at the college level collected data through surveys and interviews compared to the studies done in grades 2-8 with data collected through observations and interviews. The participants' ages ranged from seven to adult. In addition, the purpose of the studies differed depending on the academic levels of the participants. Studies carried out at the college level sought to determine the suitability of the electronic reader for use in higher education as well as to explore environmental sustainability. At the middle school and elementary school level the research focused on the impact the electronic reader and its various features had on reading.

Overall, the studies on electronic readers demonstrated favorable results for recreational reading using the Kindle, increased engagement with text, and self-reported improved reading habits (Barack, 2010; Clark et al., 2008; Hearn & McCaslin, 2010; Larson, 2010; Maramelli & Ringle, 2010; Maynard, 2010). Students' experiences using electronic readers were mostly positive and indicate the Kindle and its specific features may prove to be a promising teaching and learning device (Larson, 2010). The initial research indicates students would recommend the Kindle for recreational reading, finding it comparable to reading a traditional book and enjoying the additional support from the various Kindle features (Maramelli & Ringle, 2009; The E-reader pilot, 2010). However, many participants at the college level did not prefer reading textbooks on the Kindle DX

(Maramelli & Ringle, 2009; The E-reader pilot, 2010). To provide a visual of the few studies conducted to date using the Kindle, I have created a table including the authors, participants, methodology, purpose, findings, and publication source (see Appendix A).

At the college level, Allmang and Bruss (2010), Clark and colleagues (2008), and Dietering, Lawhead, and Rielly (2010) studied the use of electronic readers, mainly Kindles, with staff and students. Allmang and Bruss (2010) chose the Kindle 2, Kindle DX, and Apple iPod Touch because these brands are the most recognized by their customers and these electronic readers are the “sexiest” electronic reading devices available today. Through the use of focus groups, these researchers gathered feedback about the participants’ experiences and overall impressions. Participants were impressed with the ease of downloading books and becoming immersed in a book. Some of the challenges of reading on an electronic reader mentioned included location numbers, the organization of books on the electronic reader, and the unavailability of certain features (annotation, dictionary, font size) when reading PDF files. In the study conducted by Dietering, Lawhead, and Rielly (2010) at Oregon State University five participants would borrow a Kindle again or recommend it to a friend.

Additionally, seven universities participated in Amazon.com’s Kindle DX project during the fall semester of 2009 to study the viability of electronic readers used to replace or complement the traditional texts used in university courses, to discover the effects on the learning and teaching process, and to explore the environmental sustainability (“7 Things You,” 2010; Iverac, 2009). Students found the Kindle DX to be quite legible, comfortable to hold for hours of reading, durable, easy to browse and download books, and designed specifically for reading without other distractions (Marmarelli & Ringle,

2010). As a result of the Kindle pilot study, 90% of the MBA students at University of Virginia's Darden School of Business liked the Kindle DX for personal reading. Students at Princeton agreed that the Kindle DX is great for pleasure reading (The E-reader pilot, 2010).

Hearn and McCaslin (2010) conducted a study using the Kindles with 21 college students enrolled in READ 100, a remedial reading course, at The University of Tennessee at Martin. The purpose of their study was to determine if implementing the Kindle would improve reading achievement and attitudes. There was no significant difference in average academic gain. However, a significant difference was found on two questions on the attitude survey. Students' responses to the open-ended questions about using the Kindle were mostly positive. The researchers inferred that students thought reading was easier with the use of the Kindle.

Wines and Bianchi (2010) explored and identified the teaching and learning potential of the Kindle. Students blogged on Blackboard about the Kindle's features and the impact on students' engagement in critical reading and writing. The participants found the highlighting and annotation tools to be helpful in writing a paper on the book they were reading. One issue students discovered was citing these quotes, as the Kindle does not display page numbers, just location numbers. Wines and Bianchi (2010) concluded the electronic reader is a promising teaching and learning device theoretically.

At the K-12 level, Siko's (2010) study designed to examine the use of the Kindle in a university tutoring program with tutees age 5-12 and conducted at the University of North Carolina Wilmington found only one tutor chose to use the Kindle with his/her tutee. Even though 15 of the 41 tutors said they would use a Kindle for personal,

pleasure reading and 28 of the 41 would use it for educational purposes in the future they chose not to use a Kindle in this tutoring program for various reasons such as lack of pictures, limited selection available, lack of understanding of the device, lack of time, and preference for traditional books. In addition, 21 of the tutors believed their tutees would not use electronic readers in the future because of lack of access and quality of pictures. The limitations of this study included tutors not being required to use the Kindle and the selection of books loaded on the Kindle (they were all free).

Parker, the librarian at Seneca Middle School, introduced her seventh and eighth grade students to the Kindle in 2009. Her pilot program was so successful she received funding to buy a Kindle for every eighth grader to use in the fall of 2010. She observed that students responded positively to being able to change font sizes, use the text-to-speech feature, and track percentages of the book they had read (Barack, 2010). In addition, after asking eighth grade students what they thought about reading on the Kindle, Parker noted, “The bottom line for me is the Kindles have generated a love of reading among those students who would not have otherwise picked up a book” in an article published in *School Library Journal* (Barack, 2010, para. 5).

At the elementary school level, Isley implemented the use of Kindles in her third grade reading block January 2010. Her purpose for initially writing a grant to purchase Kindles was her observation of lower achieving readers being rarely afforded the opportunity to hold meaningful, critical discussions about texts in their guided reading groups, mainly because the books they were able to read did not have in-depth plots to discuss. She believed using the Kindles and the text-to-speech option might actually enable students to “keep up with the book (like having their own teacher reading aloud



the book) and then discuss it in a heterogeneous book club group” (D. Isley, personal communication, March 27, 2010). She had observed these students discussing texts that had been read aloud without any trouble.

Each week Isley gave her third graders an assignment to read on the Kindle. Students were allowed to choose to read with or without assistance from the Kindle’s text-to-speech feature or the dictionary feature. She found that students often wrote notes on their Kindles as they were reading (D. Isley, personal communication, March 27, 2010). Isley explains that for students who struggle with fluency and decoding the voice reading the text as they follow along is enough support to foster comprehension. The dictionary feature, according to Isley, has been great, allowing students to scroll over a word instead of moving away from the text to get a dictionary and spending more time looking up a word than reading the text. She states:

I have definitely seen an increased level of engagement with struggling and less engaged readers in my classroom. What has been most powerful in this experience is observing the group discussions. When outsiders come in to watch, they cannot tell who is a high reader, who's on grade level, and who's below based on their comments in the discussion. The Kindle has really leveled the playing field. A lot of the kids who have major anxiety about reading and do not like it, have really enjoyed the Kindles because they take away the fear of laboring over each word and being far behind the rest of the group. (D. Isley, personal communication, March 27, 2010)

Larson (2010) at Kansas State University is also studying the use of Kindles in the elementary classroom. Larson (2010) conducted a case study with two second grade diverse readers. She observed the two girls for three weeks reading on the Kindle. Data collection also included interviews with students, parents, and the classroom teacher in addition to the digital notes by the students. Both girls interacted with the text using the Kindle's tools and features adjusting the font size, listening to the text using the text-to-speech feature, highlighting passages and vocabulary, using the built-in dictionary, and annotating as they read. These students used the pronunciation guide in the dictionary to help decode words (Larson, 2010). Larson (2010) claims the interactive features of electronic readers encourage children's reading. The electronic reader has an advantage over conventional books, she believes, because it encourages and allows students to interact with the text. Prior to the study one of the second graders voiced her dislike of reading; however, the girl's mother reported her daughter's excitement about reading on the Kindle and her increased confidence as a reader. The other student preferred reading on the Kindle because she could take notes in it unlike a conventional book. An additional result of this study was the insights the teacher was able to make about each girl's reading behaviors and skills. The digital readers proved to be a valuable tool in assisting the teacher in differentiating reading instruction and providing students with individualized support (Larson, 2010).

Unlike the studies reviewed above, Maynard (2010) conducted her pilot study of three electronic reading devices, the Kindle, DS-Lite, and Apple iPod Touch, with three families each with two children reading at home. The children, ages 7-12, read on each electronic reader for at least twenty minutes per day for two weeks, and recorded their

experiences daily in a paper diary. Maynard interviewed the children and their parents prior to introducing the devices to discover their current reading habits. She also interviewed them following each two-week reading experience with one of the electronic readers. At the end of the study, Maynard asked the families to express their attitudes toward the devices and the impact they made on their reading engagement. All of the participants found the Kindle easier to use and therefore preferred it to the other two devices. One student, self-identified as a reluctant reader, was enthusiastic about reading on the Kindle and voluntarily read instead of watching television. This was the first time he had ever asked his parents if he could read. Therefore, this research indicates electronic readers might benefit reluctant readers.

The most recent research published on electronic readers examined 31 fourth grade students' comprehension on books read on the Kindle and regular books over an eight-week period. Milone (2011) found no statistically significant difference in students' understanding of books read in the two formats. This implies that students with differing levels of reading achievement can comprehend books read for pleasure on electronic readers as well as regular books. In addition, similar to participants in the studies mentioned above, the majority of fourth graders indicated on a survey at the end of the study that the Kindle was very easy to use and specified they would prefer to read using the Kindle rather than a book.

Despite significant research on motivational aspects of classroom contexts on reading, including some research on technology, and a few studies on electronic readers, there is a gap in the literature on the impact of electronic readers on students' reading behaviors. I argue that with limited research available there is a need for research on the

effects of electronic readers on elementary students' reading behaviors. My study will add to the current research in this literature review by illustrating elementary students' experiences using electronic readers including specific references to their description of the influence on reading behaviors such as motivation and engagement.

### **Chapter Summary**

My purpose in this chapter was to provide a review of the literature as it relates to examining the use of electronic readers for independent reading with third grade students. The review of literature provides a framework for understanding students' experiences when this relatively new technology is integrated into literacy, the methodology, data collection, and most importantly the analysis of findings obtained from my study. First, I discussed why literacy is valued and the skills and strategies necessary to navigate new literacies; focusing on the prospects technology creates in fostering a reading habit. Next, I focused on independent reading and the diverse readers (engaged, disengaged, proficient, and striving) in the classroom followed by research on four motivational aspects that support reading and technology may provide. These include: (a) choice in the texts students read; (b) access to a wide variety of texts students are interested in reading; (c) the opportunity to read anytime and anyplace; and (d) the ability to share their reactions to what they read with others, providing a context for social interaction. Third, I described technology's potential to increase motivation and engagement supported by previous research and the impact technology could have on the reading habits of diverse readers. Finally, I concluded this literature review with a description of the limited research conducted on the use of electronic readers in educational settings.

This literature review was designed to acquaint my readers with the research available on reading on electronic readers and motivational factors of reading contexts in order to provide a foundation to understand my study on the effects of using electronic readers for independent reading. Even though the results of this review indicate technology environments appear to be a motivating literacy context, further research is needed to discover the specific factors that increase motivation in the technology environment (Kamil et al., 2000). Therefore, a relevant line of research to consider is the effect of electronic readers on students' reading behavior by providing students with motivational aspects such as increased access to a variety of high interest texts, freedom to self-select their reading materials, substantial opportunities to read recreationally, and social interactions with others about books (Gambrell, 1996; Guthrie & Humenick, 2004; Jensen, Papp, & Richmonds, 1998; Krashen, 2004; Worthy, Turner, & Moorman, 1998). In Chapter 3, I describe aspects of my study's methodology including data collection and analysis.

## **Chapter 3: Methodology**

### **Overview of the Study**

In this qualitative study, I observed and interviewed 15 third grade public school students in order to explore, describe, and represent the children's experiences using electronic readers during independent reading. Participants in my study each received an electronic reader and were allowed to choose electronic books to load on it and read. In this way, the electronic reader provided students with access to a wide variety of high interest books, freedom to self-select their reading materials, substantial opportunity to read recreationally, and through weekly book club meetings social interactions with others about books (Gambrell, 1996; Jensen et al., 1998; Krashen, 2004; Learning First Alliance, 1998; Worthy et al., 1998); all of which research have demonstrated increases motivation and engagement in reading. I observed my participants 30 minutes each day during independent reading time in the classroom and met weekly for six weeks with students after school for 45 minutes to engage in conversations about the books they were currently reading on their electronic readers and in doing so provided a social context in which they could share their reading.

I approached this research from a constructivist paradigm because my beliefs, values, and assumptions most closely align with this paradigm. I believe there are multiple realities and they change depending on the situation (Hatch, 2002). These multiple realities are constructed, subjective, and relative. In addition, they may change as knowledge increases. Our subjective understanding of experiences influences my reality and those of others. Thus, we each construct our realities as we interpret the world in ways unique to each of us. For example, participants viewed the phenomenon (reading

on an electronic reader) from their own points of view, experiencing different realities. Reality is not permanent and can be modified or altered over time with the influence of additional experiences. Constructivism involves the co-construction of knowledge between the researcher and participants, assuming there are meaningful and different interpretations of the same data (Guba & Lincoln, 1994). My participants and I literally co-created meaning and/or explanations of the experience of reading on the electronic reader. Through conversation and interactions, we looked for patterns and similarities within our realities, co-constructing shared understandings. Illustrative of this process was our conversation during the second book club meeting when we discussed what it was like to read on the electronic reader. Students discussed their reading experiences, comparing what they found easier about reading on the electronic reader in relation to regular books. As individuals, through our interactions with each other and our environment, together we constructed knowledge. In this way constructivism allowed my participants and I to conceptualize the electronic reading experience.

### **Rationale for Case Study Methodology**

A case study is compatible with a constructivist research paradigm (Guba & Lincoln, 1994) when the emphasis is focused on the lived experiences of the participants in constructing knowledge about the phenomenon (Hatch, 2002). I chose a descriptive case study approach for this research in order to provide illustrative contextual details and represent students' voices in ways that make the findings credible, dependable, transferable, and confirmable (Denzin & Lincoln, 2000). "A descriptive case study in education is one that presents a detailed account of the phenomenon" (Merriam, 1998, p. 38). Merriam (1998) defines a qualitative case study as an "intensive, holistic description

and analysis of a single instance, phenomenon or social unit” (p. 21). A descriptive case study provides an in-depth description and analysis of a bounded system. In this case, the phenomenon or bounded system was third grade students reading on electronic readers during independent reading in the classroom. There are many different types of case studies, but I believe a descriptive case study was an ideal methodology for exploring and describing third grade students’ experiences as they utilized electronic readers to access, choose, and read books for independent reading based on their interests. The descriptive case study approach was an appropriate choice, as it allowed me to probe, understand, and expand the information in this relatively new area of education “where very little research has been conducted” (Merriam, 1998, p. 38). In fact, much can be learned about innovative educational practices from a particular case (Merriam, 1998). The main advantage of a descriptive case study is the rich, thick description and analysis of a contemporary phenomenon within its real life context from many different viewpoints and using multiple sources of evidence (Yin, 2003).

A case study also supported my research questions, which necessitated a descriptive approach to understanding the effects of third grade students using electronic readers for independent reading and engaging in weekly social interactions to discuss their reading. Each student was an individual case, the unit of analysis (Merriam, 1998). According to Bogdan and Biklen (1992), a case study is appropriate when a particular event is studied from the points of view of all participants. My goal in this qualitative investigation was to understand the complexity of my participants’ experience and behavior from their point of view. The desired outcome of this in-depth case study was to generate descriptions of the effects of using electronic readers for independent reading



on students' reading behaviors, including reading engagement, motivation to read, reading attitude, and reading volume and the students' perspectives, which I collected by meeting with them weekly and through interviews.

### **Participants and Site**

I selected my participants from a third grade classroom in a large suburban multi-track year round public elementary school. There were 846 students in grades PreK-5. This school served a diverse population with 31% minority students including Hispanic, Asian, American Indian, and African American students from diverse socioeconomic backgrounds and 8% of the children received free or reduced lunch. There were 99 English Language Learners and 75 students in special education. A description of participant selection is included below in the section on study design.

**Rationale for participant selection.** I chose beginning third grade students (ages 7-8) for several different reasons. First, there is a wider variety of books on the Kindle for this age group compared to primary-age students. More specifically, there are far more books in the 300-800 lexile level range compared to books leveled below 300. Currently, there are 5,059 books available for children age 4 to 8 and 6,207 books available for students age 9 to 12 with new books being added daily. These books range in price from .80 to 9.99 and include hundreds of popular titles and series books such as *Junie B. Jones*, *Magic Tree House*, *Horrible Harry*, and *Cam Jansen* (see Appendix B). This allowed my participants more access to and choice in reading materials. Second, it is imperative that students develop a passion for reading early as research has demonstrated it promotes increased reading and increased reading achievement (Krashen, 2004). Developing voluntary reading habits early in a student's life will promote

enjoyment of reading by increasing a student's engagement in and attitude toward reading (Gambrell, 2007). If students enjoy reading, they willingly read more and will potentially improve their reading proficiency. In fact, the research conducted by Blaisdell and colleagues (1999) in which they implemented teacher read alouds, Sustained Silent Reading (SSR), and parental involvement in reading at home and at school in first through fourth grade classrooms demonstrated an increase in students' choice of reading as a free time activity. The data collected and analyzed in Blaisdell et al.'s (1999) action research studying the effects of sustained silent reading with 105 students in two elementary schools indicates that if we catch disengagement early, then students who can read proficiently will not lose ground based on aliteracy.

An additional reason I chose third grade is because it is the first year students take the state reading assessment and in this era of high-stakes testing importance is placed on students scoring proficient. Increasing motivation and engagement early is imperative, but not always seen as a means of ensuring students read proficiently. My final reason for choosing third graders is the fact that I will be able to track my participants' progress over the next three years of elementary school. This is important to me even though it is not part of this particular study, as I am interested in studying the long-term effects of using technology to increase reading engagement.

### **Electronic Readers**

Electronic books read on electronic readers are one of many avenues educators are choosing to integrate technology and new literacies into the classroom. According to Anderson-Inman and Horney (1997) the definition of an electronic book includes four criteria (a) it must have electronic text, visible to the reader; (b) the software must

resemble a book in a significant way; (c) it has to have a focus or theme; and (d) included media must enhance the text. Even though electronic books are nothing new, they are adding a new dimension to technology-driven learning. Electronic books are being read on dedicated devices known as electronic readers, portable electronic devices specifically designed to display versions of books, magazines, newspapers, and other printed materials (“7 Things You,” 2010). The Kindle is one of many similar low-power, high-resolution devices. After evaluating each of the electronic readers and their features much consideration was given to my decision to use the Kindle versus other electronic readers. Some of the determining factors include a greater selection of children’s books, the text-to-speech feature, the use of electronic ink, the ease of downloading books, the price, and the QWERTY keyboard. For a rich description of the Kindle, its specific features, and the potential this digital tool has for young readers see Appendix C.

Many of our students, as digital natives (Prensky, 2001), have grown up with technology and use it easily. According to Penguin’s David Shanks, a growing number of students today do everything on a screen (Levy, 2007). For those students that face income and access barriers in their everyday lives providing technology in the classroom may allow students to cross the digital divide. Students without computers and technologies at home will benefit from school provided portable devices they can take home and use for learning. In addition, research has demonstrated technology motivates students to read (McKenna & Zucker, 2009; Strangman & Dalton, 2005), so why not entice them to read with electronic books? In fact, students who proclaim to dislike reading find reading on an electronic reader more enjoyable (McKenzie, 2009). Six out of ten children ages 9-17 indicated they are interested in reading on an electronic device

such as a Kindle or iPad in the *2010 Kids and Family Reading Report* published by Scholastic, Quinley Research, and Harrison Group. One out of three children surveyed also expressed they would read more for fun if more books were offered on a digital reader (Scholastic, Quinley Research, & Harrison Group, 2010). Getting nonreaders to read by offering electronic books is reason alone to pursue the use of electronic readers with elementary students. According to the Center for Applied Special Technology (CAST; 1998) “to reach learners with disparate backgrounds, interests, styles, abilities, disabilities, and levels of expertise” educational materials need to be flexible and adaptable for all learning styles (cited in Cavanaugh, 2002, p. 57). With adjustable font size, the text-to-speech feature, interactive dictionaries, and note taking capabilities, students of all reading abilities may be able to access information more easily. In fact, text in digital form may provide readers with advantages and accommodations to enable successful learning. In other words, electronic books may be able to effectively meet the needs of many diverse learners as Cavanaugh (2002) claims.

### **Study Design**

After obtaining IRB approval, school district approval to conduct research, and permission from the school principal; a third grade teacher interested in my study contacted me after the principal presented the idea to the third grade team. I met with this teacher June 6, 2011 to explain my study, offer an information letter explaining the study (see Appendix D), and request her help in conducting this study with her students. I asked this teacher to identify students with varying levels of reading proficiency (above grade level, on grade level, below grade level) according to the Developmental Reading Assessment, Second Edition (DRA2; Beaver, 2006) given at the end of second grade in

May 2011. A week prior to school starting, July 6, 2011, the teacher sent home a letter (see Appendix E) to all of her students describing the study and inviting them to participate as well as student assent forms (see Appendix F) and parent consent forms (see Appendix G). An informal meeting during the school's back-to-school ice cream social was held on July 8, 2011 for parents who had additional questions about the study. Two students' parents stopped by the classroom to ask a couple of clarifying questions prior to signing the consent forms.

After receiving the consent and assent forms from 15 students, I contacted the students' parents who returned the forms by phone to re-introduce myself and answer any questions, comments, and concerns they had and to schedule the initial interviews. I obtained additional information on each participant from the teacher and verified the students' reading engagement status by observing the students on four separate occasions during independent reading to assess their reading behaviors and determine their levels of reading engagement. Using Kelley and Clausen-Grace's (2008, 2009) Silent Reading Behaviors Observation Checklist (see Appendix H) as a guide, I made detailed field notes of the students' reading behaviors during independent reading time, which was 30 minutes each day. Within this initial observation period, I also collected information on the number of books each student read. Data on each participant's race, ethnicity, socioeconomic status, and reading proficiency level according to the Developmental Reading Assessment 2 (DRA2; Beaver, 2006) was gathered July 11, 2011. Each child's reading proficiency was important in ensuring Amazon.com offered enough books at the student's reading proficiency level, which ranged from DRA level 12 to DRA level 38.

During this initial observation period from July 11, 2011 to July 18, 2011, I

interviewed each student individually using the guiding questions in Appendix I and administered a reading interest survey (see Appendix J) to learn more about my participants as readers, including reading behaviors, attitudes toward reading, motivation to read, and the topics about which they were interested. The reading interest survey administered this first week of school helped guide me in recommending electronic books that matched students' interests.

After data had been collected on current independent reading behaviors, I exposed all of the students to a wide range of text in a short amount of time, about 30 minutes. In the classroom during the time designated for independent reading on Friday, July 15, 2011, I conducted a "read around" (Layne, 2009, p. 119) in which students previewed 20 different books available on the electronic reader by looking at the cover, title, graphics, chapter titles, back of book and reading the first page of the actual book and then passing it to the next child in the circle after one minute. Students then selected three books they wanted to read on the electronic reader. This process allowed me to download books the students wanted to read on their electronic readers over the following weekend. On Monday, July 18, 2011, I demonstrated the use of the electronic reader including how to turn it on and off, select a book, turn the pages and its various features, such as the annotation, highlighting, and dictionary tools. Students were allowed to practice using the features to ensure they were comfortable using the electronic readers and the various features before sending the electronic readers home with the students that afternoon.

Electronic readers possess many features that allow readers to engage in the reading experience. These features permit readers to access multitudes of text, read text

of their choice based on their interests, shop for new books, sample the first chapter of books they are interested in reading, listen to books, interact with text by highlighting and annotating, learn new vocabulary, search the text by keyword, and share books with others. All students in the classroom had the opportunity to preview and sample books they were interested in reading. After consulting with their teacher, parents, and me, students selected different books based on their interests, meaning they were not all reading the same book unless that is what they chose. Students were encouraged to create a list of possible books they wanted to read in the future. During independent reading in the classroom and at home students read on their electronic readers.

I observed my participants reading for six weeks during independent reading on a daily basis for 30 minutes each day, taking field notes and checking in with them to discover the books they were reading and answering any questions they had about books and using the electronic readers. Using Kelley and Clausen-Grace's (2008, 2009) Silent Reading Behaviors Observation Checklist (see Appendix H) as a guide, in my daily observations I noted if students were reading or not reading every 5 minutes during the 30 minutes of independent reading. In addition, almost daily I took a status of the class (Atwell, 1998) at the end of the independent reading time, having students indicate the book they were reading and the page location or number they ended on. During independent reading the teacher provided students with approximately 30 minutes to read and some guidance in selecting appropriate text. Each day students were expected to record what they read by noting the name of the book, the page they ended on, date they started and finished reading each book, and a reaction to the book in a reading log (see Appendix K). However, not all of the students remembered to complete their reading

logs every day. I looked for attributes of reading involvement in student behavior during independent reading such as on/off task behaviors, text choices, discussions about text, and students' responses to the books they were reading (Trudel, 2007/2008). Some examples of on task behavior that I observed during independent reading were students reading, responding to text, and discussing a book with a peer or teacher. Students were permitted and encouraged to take their electronic readers home to allow for at-home reading as well as in-school reading. In this way electronic readers provided students with ample, appropriate, and accessible texts (Padak & Potenza-Radis, 2010).

In addition, I conducted an optional book club meeting every Friday after school in the school library. In this way, students had the opportunity to meet weekly to discuss the books they were reading and their electronic reading experiences. On average 10 students attended each of the six book club meetings. All of the students attended at least one book club meeting except for Trixie who had to ride the bus home. At these meetings, students were eager to share the books they were reading on the electronic reader and information about their reading experience. In fact, students fought for their turn to use the iPod and record their comments. Energy coursed around the room as these students discussed their favorite books and the features of the electronic reader that made reading easier. They were also compelled to express any dissatisfaction they experienced while reading on the electronic reader. These students chose to fit book club meetings into their busy after-school activities such as football practice, swimming, and sleepovers. It was apparent they enjoyed this social opportunity to share their reading experience.

After teaching students how to annotate on the electronic reader, I encouraged them to respond to their reading on the electronic reader using the annotation tool.



Copies of their annotations were made weekly. The absence of information was also recorded.

A second interview with each student was completed six weeks later, between August 27, 2011 and August 31, 2011 at the end of the study. During this interview the format of a conversational interview allowed me to explore the students' perspectives on their reading experiences using the electronic readers, reading habits, and seek elaboration on information the students shared in previous conversations and discussions. "The conversational interview offers maximum flexibility to pursue information in whatever direction appears appropriate depending on what emerges from observing a particular setting or from talking with one or more individuals in that setting" (Patton, 2002, p. 342). Since each reader was unique and his/her reality was based on personal experiences this type of qualitative interview was best suited for this study. The first two questions in the interview were "Tell me what it is like to read on an electronic reader" and "What have you read on the electronic reader?" The conversational interview provided flexibility in shaping subsequent questions to match what the students shared in order to explore meaning construction regarding the interview topic (Kendall, 2008). The dialogic nature of this type of interview enabled me to attempt to understand my participants' experiences from their perspectives (Kendall, 2008). Basing the questions on my observations and discussions during independent reading and my knowledge of the child increased the salience and relevance of my questions (Patton, 2002). Consequently, it was imperative that I listened carefully, interpreted my participants' answers, and framed other questions to obtain more in-depth and relevant information. In addition, I had to be reflexive about possibly leading the child during the interview and I was

“prepared to explore the authenticity of the expressions during analysis and validate meaning in subsequent interviews” (Irwin & Johnson, 2005, p. 827).

During my weekly meetings with students my role was to manage and observe the various facets of this study. I realize my identity and positionality colored my interpretations, but hopefully, through our discussions my participants and I were able to co-construct meaning of the use of the electronic reader and the possible impact on reading behaviors during independent reading. I continually checked my understandings of their experiences with them during our book club meetings to verify the accuracy of my interpretations.

### **Data Collection Methods**

Situated in the constructivist paradigm, I used qualitative methods (Glesne, 2006; Hatch, 2002) to investigate students’ perspectives on the use of electronic readers and their reported impact on reading behaviors and engagement. Several sources of data were collected during the first quarter of the school year to obtain a rich description of students’ views of their experience using the electronic readers to read during independent reading. I integrated data from these numerous sources to allow for triangulation of data, since collecting data from multiple sources adds confidence and trustworthiness to the report of findings (Glesne, 2006).

First, I kept a research journal to record detailed field notes of my observations and experiences in the third grade classroom. Second, I interviewed each third grade participant on videotape before and after using the electronic reader for six weeks during independent reading. Students were encouraged to share their reading behaviors by answering a series of specific questions about their reading interests and habits and open-

ended questions allowing students to describe themselves as readers.

A third data source was videotapes of the weekly optional book club meetings held in the school library. At these meetings students took turns sharing the books they were reading or had read on the electronic readers and their reading experiences. Students included comments about reading at home as well as in the classroom. A fourth data source was entries students made in their reading logs including the title of the book, page or location number they were on each day, length of time spent reading, and a response to what they read. A fifth data source was annotations made on the electronic reader itself. Students recorded questions, comments, and connections as they read using the annotating tool. A final data source was the reading journal students used to record responses to their reading or write letters to me to ask questions or make comments on their reading experiences.

**Observations.** I documented in-depth observations during daily periods of independent reading using field notes to record students' reading behaviors. As a facilitator/observer in this study I immersed myself in the classroom setting (Glesne, 2006) and observed independent reading in the classroom in addition to meeting with participants weekly at the school library to discuss their reading experiences. Participating as a facilitator allowed me to see the reading experience through my participants' eyes (Hatch, 2002). Placing myself in the setting also permitted me to observe the discussions and add my own experience to the analysis of the phenomenon (Hatch, 2002). In turn, my observations provided a more detailed picture of the research setting and aided my understanding of the students' participation and interactions (Glesne, 2006). Involvement in the research setting afforded me the opportunity to co-

construct with participants the perceptions and experiences of reading on electronic readers. In addition, discussion and conversation added cognitive and emotional reflections of in-common experiences, adding “context and layers to the story being told” (Gubrium & Holstein, 2002, p. 854). In order to capture the multiple interactions and contributions, detailed field notes were taken while observing independent reading each day in addition to videotaping and transcribing book discussions once a week.

**Interviews.** Besides observations, I interviewed my participants using qualitative conversational interviews, as it was important to hear students’ voices to understand their unique perspectives of their electronic reading experiences. By pairing interviews with observations of reading behavior, I was able to check my interpretations and “investigate the meaning of observed behaviors” (Kendall, 2008, p. 138). Interviews are one of the most important types of data collected in a case study (deMarrais & Lapan, 2004).

“Qualitative researchers have demonstrated that children as young as 4 years can provide important insights into their daily lives” (Irwin & Johnson, 2005, p. 822). This method of data collection provided multiple students’ perspectives on using electronic readers and highlighted participants’ descriptions of their experiences. The use of open-ended guiding interview questions allowed students to elaborate on their own assessment of the use of the electronic reader and its impact on their reading habits (see Appendix I). The purpose of qualitative interviewing was to understand the experience of others and their construction of meaning (Bogdan & Biklen, 1992; Seidman, 1991; Weiss, 1994).

Spending time interviewing students enabled me to reconstruct the realities my participants used to make sense of their experiences (Hatch, 2002). I used an active interviewing format or conversational interview. This format allowed the interview to be

a “meaning-making” conversation (Holstein & Gubrium, 1995, p. 76). “Conversational give-and-take around topics of mutual interest is a way of conveying to the respondent that the interviewer is sensitive to, and interested in, the ongoing line of talk” (Holstein & Gubrium, 1995, p. 77). Conversational interviews also permitted students to go off on a tangent, which provided valuable perspectives about their experience (Irwin & Johnson, 2005).

**Documents.** The third method of data collection I employed was collecting data from reading logs kept by students, indicating the books they had read, their reading volume, and reactions to books. The students started keeping a reading log when they began using the electronic reader during independent reading. Prior to that the teacher had not required students to document their reading. In addition, I gathered annotations made on the electronic readers and notations made in the students’ reading journals. According to Hatch (2002), encouraging participants to reflect on their experiences is a powerful way to obtain their perspectives. This data came directly from the participants. The electronic reader’s annotating feature provided participants a medium to share their understanding of the experience and the researcher a direct channel to the participants’ insights as these data came directly from the participants (Hatch, 2002). Weekly, I copied the students’ annotations and journal entries in addition to collecting the students’ reading logs.

In sum, the data collection methods used in this study to answer my research questions included discussions and observations; conversational interviews; documents from annotations made on the electronic readers; and entries made in students’ reading logs and journals. Table 3.1 presents the data collection methods correlated to my main

research question and four subquestions. Through an interpretive lens, I aimed to co-construct meanings of the use of electronic readers for independent reading from multiple voices and multiple sources of description (Bogdan & Biklen, 1992; Hatch, 2002).

**Table 3.1: Research Questions, Data Collection, and Data Analysis**

<b>Research Questions</b>	<b>Data Collection</b>	<b>Data Analysis</b>
<p><b>Overall Question:</b> In what ways does reading on electronic readers during independent reading affect third grade students' reading experiences and behaviors?</p>	<p>Observations/field notes of independent reading Reading logs Choice of books Audio recording of conversational interviews with participants Videotapes of book discussions Reading interest survey Status of the class during independent reading Annotations made on the electronic reader</p>	<p>Transcribe/review audio and video recordings from book club meetings and interviews. Look for trends and patterns. Categorize and code reading behaviors within the context of independent reading based on data gathered from interviews observations, field notes, reading logs, and annotations on the electronic reader. Construct rich descriptions based on findings of collected data.</p>
<p><b>Research Questions #1:</b> How is reading engagement affected?</p>	<p>Observations/field notes Time on task Audio recording of conversational interviews with participants (Questions 5-8, 10, 18)</p>	<p>Transcribe/review audio and video recordings from book club meetings and interviews. Categorize and code reading engagement within the context of independent reading based on data gathered from interviews observations, field notes, reading logs, and annotations on the electronic reader. Construct rich descriptions based on findings of collected data.</p>
<p><b>Research Question #2:</b> What is the effect on students' motivation to read?</p>	<p>Observations/field notes Reading logs Audio recording of conversational interviews with participants (Questions 4, 6, 11, 13, 18)</p>	<p>Transcribe/review audio and video recordings from book club meetings and interviews. Categorize and code reading motivation within the context of independent reading based on data gathered from interviews observations, field notes, reading logs, and annotations on the electronic reader. Construct rich descriptions based on findings of collected data.</p>
<p><b>Research Question #3:</b> What is the effect on the students' reading attitude?</p>	<p>Observations/field notes Reading logs Audio recording of conversational interviews with participants (Questions 9, 13, 14, 15, 16, 17)</p>	<p>Transcribe/review audio and video recordings from book club meetings and interviews. Categorize and code reading attitude within the context of independent reading based on data gathered from interviews observations, field notes, reading logs, and annotations on the electronic reader. Construct rich descriptions based on findings of collected data.</p>
<p><b>Research Question #4:</b> How does it influence students' reading volume?</p>	<p>Observations/field notes Reading logs (number of books read) Choice of books Status of the class Audio recording of conversational interviews with participants (Questions 1, 2, 3, 5, 8)</p>	<p>Transcribe/review audio and video recordings from book club meetings and interviews. Categorize and code reading volume within the context of independent reading based on data gathered from interviews observations, field notes, reading logs, and annotations on the electronic reader. Construct rich descriptions based on findings of collected data.</p>

## **Data Analysis Procedures**

My primary goal for data analysis was to create an in-depth description of students' experiences using electronic readers during independent reading and the impact it had on their reading experience and behavior. Data for this study came from my observation field notes, transcripts of the interviews I conducted, transcripts from the videotapes of weekly book club discussions, and copies of the annotations made on the electronic readers and in students' reading logs and journals.

Data analysis began with my first classroom observation and continued with each observation, interview, and interaction with my participants, as my data analysis was ongoing and simultaneous throughout the study (Merriam, 1998). After each observation, interview, and interaction with my participants I read my field notes and transcripts to get an overall sense of the data as it was being collected. As I reviewed the data I added personal reflections and insights.

A digital voice recorder (iPod) was used to capture my participants' voices. Following each recorded interview and book club discussion, I listened to the recording of the interview or meeting as I transcribed the digital audio files. Repeatedly hearing my participants' voices immersed me in the data and helped me identify patterns, consistencies, discrepancies, and anomalies.

In the process of collecting data, I created the descriptive case study database, which consisted of separate files for each of the 15 students. These files contained pertinent data sources for each individual student, including observations of reading behaviors during independent reading in the classroom, transcripts of individual interviews (both pre- and post-), videotapes and transcripts of individual student's



comments in book club meetings, individual reading logs, annotations made on the electronic reader, and copies of personal reading journal entries. In order to create a narrative for each student's use of an electronic reader, I completed thematic analysis using constant comparative method across my observations and interviews (Bogdan & Biklen, 1992).

In the second phase of data analysis, I listened to each interview as I followed the transcript. After listening to the interview, I reread the transcript and began open coding the data focusing on each participant's comments in relation to their reading behaviors including reading engagement, attitude about reading, motivation to read, and their reading volume. Noticing patterns in the students' perceptions of their electronic reading experiences and the impact on their reading behaviors, I began labeling sections of the data with both in vivo codes taken directly from participants' actual words, and sociologically constructed codes (Strauss, 1987), labels the researcher formulates and assigns. This process assisted me in identifying initial patterns in the students' perceptions of their electronic reading experience and the impact on their reading behaviors. In a separate notebook I recorded key phrases, ideas, and themes that I generated from the data.

In the third phase of analysis, I watched the videotapes of the book club meetings and followed the transcripts, taking notes and refining my initial themes. In addition, I added each student's comments during the book club meeting to their individual data files. In analyzing each piece of data for individual students it was important that I understood each individual case. As I collected data from field notes, transcripts, and videotapes of the weekly book club meetings I followed the same process, examining the

new data as well as the entire data set. I added to my list of key phrases, ideas, and themes constantly comparing them to the previously identified ones. As I read each additional piece of data I checked for themes identified in prior data in addition to making a new list of key phrases and ideas. I compared each list in order to create a master list.

In the fourth phase of data analysis, each week I analyzed additional data sources including the students' individual reading logs, annotations made on the electronic reader, and notes made in their personal reading journals. As each new data (transcript, field notes, or document) were collected, they were examined using the same process in addition to rereading the entire data set. I continuously compared my observations, participants' responses and comments, looking for segments of data relevant to my research questions. It was important that I strived to understand each case as I analyzed the data (Merriam, 1998). Specifically, I looked for the impact the use of electronic readers had on students' reading behaviors (motivation, engagement, attitude, and volume) during independent reading.

In the fifth phase of analysis I studied the data I had collected for each third grader. I examined all of the data in each student's file including field notes pertaining to the daily observations of one particular student, the transcripts from his/her pre- and post interviews, the student's comments made during each book club meeting, notes made on the reading log, annotations made on the electronic reader, and notes made in the student's reading journal. Specifically, I looked for the impact reading on the electronic reader made on each student's reading behaviors (engagement, motivation, attitude, and volume).

In order to complete the with-in case analysis and understand the case holistically (Merriam, 1998), in the sixth phase of analysis data from each participant was read separately to create a narrative for each individual student. I used descriptive analysis of field notes and transcripts from interviews and book discussions to create narratives that portrayed details of my participants' experiences using electronic readers during independent reading and answered my research questions. I began writing these individual narratives the first week of data collection and continued to develop each story as I collected and analyzed data on a weekly basis. My last step was to find powerful examples of each of my findings in my data. Quotations were used in the final product to highlight the students' experiences and perceptions of using electronic readers for independent reading. These salient quotes allow my readers to hear the voices of my participants.

In the seventh phase of data analysis I looked across all of the cases to find recurring patterns in the data. I created codes for the descriptors and examples of students' perceptions of their electronic reading experiences and the impact on their reading behaviors. From these patterns across the data I established themes relevant to my research questions. For example, a recurring theme was how using the electronic reader made reading easier. I labeled this theme "Reading Is Easier". Within this theme, I noticed students identified various features of the electronic reader and how each feature made reading easier from reading the text, to turning the page, to looking up a word in the dictionary, to finding their place in the text. In addition, I looked for powerful examples of each finding in my data. Furthermore, I created data summary tables with data from each participant to allow me to visualize the frequency of each

category within each theme. In the following multi-voiced text, I created rich narratives or representations using third grade students' voices to describe their experiences and perceptions as readers engaged in independent reading of text of their choice on the electronic reader.

Heeding Hatch's (2002) warnings, I was reflexive about my position in creating these narratives. Hatch (2002) explains that all voices will be interpreted through my voice because I was the one who decided what to ask, what to record, what to analyze, and what to include in the participants' narratives. In my analysis, my objective was to present a multi-voiced text about the electronic reading experience.

Findings from this study include rich narratives as representations of elementary students as readers using electronic readers to engage in independent reading of text of their choice. I hope I have captured the multidimensionality of my participants' lived experiences and through these representations provide insight for teachers and parents into using this digital tool during independent reading to promote reading engagement.

**Trustworthiness.** In order to establish the integrity of my study I addressed four issues of trustworthiness, ensuring it is credible, transferable, dependable, and confirmable (Lincoln & Guba, 1985) by employing the following techniques: prolonged engagement in the field, triangulation of the data, rich description, and peer debriefing.

To ascertain credibility, I employed four techniques. First, I ensured prolonged engagement in the field by observing my participants during independent reading for seven weeks. In addition to the observations of independent reading, I met with students after school to discuss what they were reading on their electronic readers and their experiences using the electronic readers. The time spent in the classroom and at the

library with my participants provided insight into reading behaviors of these students using electronic readers. Moreover, I spent time with each participant during an interview at the beginning and at the end of the study. Prolonged engagement was achieved through observations, book discussions, and interviews.

Second, involving multiple participants and collecting data from multiple sources added to the trustworthiness of my study. Data for the study included field notes and videotapes from observations during independent reading and book discussions, transcripts of interviews with students, and annotations made on the electronic readers and in students' reading logs. These data sources were analyzed to discover and confirm themes in the students' perceptions of their experience and the impact on their reading behaviors. Triangulation of data contributed credibility to my study.

Third, peer debriefing conducted with the classroom teacher at least once a week after school strengthened the trustworthiness of my study. I met each week with the classroom teacher to discuss and evaluate the study's progress. These meetings allowed the classroom teacher and I an opportunity to discuss the early findings that were generated. I also continued to verify my interpretations of my participants' experiences by member checking with them weekly.

Fourth, I enlisted the help of a peer debriefer from the university, seeking feedback in order to judge the accuracy and credibility of my analysis and findings.

To address transferability, I present an extensive narrative description of the case and its context based on data analysis. This rich, thick description of the context of the study as well as detailed descriptions of procedures and findings will enable readers to transfer information to other settings.

## **Positionality**

The pieces of my identity, the lenses through which I viewed my research, continually influenced my perceptions and interpretations. Therefore, it was extremely important for me to listen to the varied voices of my participants. Some of the lenses, such as reading specialist and avid reader, influenced my research on reading on the electronic reader to a greater extent than the other pieces of my identity. I am passionate about reading and helping students learn to read and enjoy reading, thus it was hard for me to understand my participants' lack of motivation to read, especially when they were proficient readers. Knowing that my beliefs and values are enmeshed in my work, it was important that I practiced reflexivity in interpreting my data. To do this I kept reflective field notes throughout the research process to continually monitor my subjective perspectives. I was cognizant of my positionality as I studied the impact of using the electronic reader on reading engagement and knew I could not avoid interpreting students' expressions through the lenses of my identity. I tried to ensure my participants' voices and perceptions were reported as naturally as possible by including many of their direct quotes and that I was transparent to my readers about my own subjectivity.

From the inception of this study I have been extremely excited about the possibilities the electronic reader can offer students to increase reading. I believed students would be excited about reading on electronic readers and this excitement would ignite a passion for reading. I acknowledged my enthusiasm for the electronic reader and the enjoyment I realized while reading on my Kindle as I interpreted my data, knowing that this may not have been reflected in my participants' perspectives and experiences and may have even influenced my findings.

## **Ethics and Politics**

At the planning stages of this study there were many things to consider. I contemplated the implications of only certain students choosing to participate in the study and how students not reading on the electronic readers would react. Additionally, what would be the implications of having only a limited number of electronic readers with only a limited number of students having access at one time? To answer these questions and try to eliminate any potential issues of unequal access to the electronic readers, every third grader in one classroom with consent from his/her parents was allowed to read using an electronic reader, but only 15 students chose to participate in the study. Every student read at school during independent reading and at home on electronic readers. Data was not collected on students without consent to participate in the study. My ultimate goal would be to provide every student an electronic reader with a personal library of his or her own to provide a context that promotes independent reading and eliminates the issue of access.

Another ethical issue I was cognizant of conducting this research was protecting my young participants' confidentiality. I allowed the students to choose their own pseudonyms from the beginning of the study and referred to them by their pseudonyms in my ongoing analyses. The videotapes were kept on my password-protected home computer.

## **Benefits and Risks**

Some of the potential benefits of conducting this study included students becoming more engaged in reading throughout the study and therefore developing a positive attitude about reading. There was a potential for igniting a passion for reading.

Ultimately, this study may have encouraged disengaged readers to read more. In addition, through the presentation of this research at local schools and reading conferences, other teachers may realize the importance and impact of independent reading, offering students choice of books to read, increasing access to books students want to read, and encouraging students to talk about the books they read. There were no foreseen risks for students participating in this study.

### **Implications**

This study may have implications for both educators and parents integrating technology with literacy and voluntary reading to ignite a passion for reading. The research will present the possibilities of promoting reading engagement through the use of a digital tool by offering choice, access, opportunity to read, and social interaction. After reading students' perceptions of reading on an electronic reader, teachers may be inspired to implement the use of electronic readers in their classrooms in order to connect students and books.

### **Chapter Summary**

This study was a descriptive case study of the perceptions of third grade students using electronic readers for independent reading. Weekly observations of students' reading behaviors during independent reading were recorded in detailed field notes in addition to conversations during weekly book discussions where my participants had the opportunity to talk about the books they were reading and their reading experiences on electronic readers. In addition to taking field notes, these discussions and observations were videotaped and transcribed to supply the data for the study. Moreover, data were collected from conversational interviews with each student, annotations made as students



read on electronic readers, and reading logs. Careful analyses of the field notes from observations, transcripts of weekly reading discussions, student interviews, annotations, and reading logs were performed throughout the course of the study to maintain a focus on the phenomenon and create narratives of young digital readers. Findings from this study are presented as individual narratives of each young reader's experience using an electronic reader for independent reading and themes in participants' perceptions of their electronic reading experience and the impact on their reading behaviors.

## Chapter 4: Findings

### Introduction

Is it possible that integrating electronic readers into literacy instruction, specifically independent reading, will produce students who not only engage in reading, but also enjoy reading and choose to read? The purpose of this study was to examine third grade students' experiences using electronic readers for independent reading and the influence it had on their reading experiences and behaviors including reading engagement, motivation to read, reading attitude, and reading volume.

This descriptive case study was conducted the first quarter of the 2011-2012 school year, between July 6 and August 31, in a third grade classroom in the western part of the United States. The first week of the study, 20 third grade students read regular books and magazines selected by the teacher for independent reading. During the following six weeks, students read books of their choice on electronic readers during independent reading. Even though every student in the class used an electronic reader for independent reading, only 15 students returned signed consent and assent forms and therefore participated in the study. All of the students were allowed to take their electronic readers home to complete their 20 minutes of reading homework each night. Participants also had an opportunity to meet after school on Fridays in the school library to discuss their reading experience and the books they were reading.

A descriptive case study design was used as it provided illustrative contextual details and represented students' voices in ways that made the findings credible, dependable, transferable, and confirmable (Denzin & Lincoln, 2000). This approach allowed me to probe, understand, and expand the information in this relatively new area

of education. Through ongoing review and careful analysis of field notes from observations, transcripts of weekly reading discussions and student interviews, annotations, and reading logs I sought to create in-depth narratives, portraying the details of my participants' experiences using electronic readers during independent reading to answer my research questions that guided my study.

In what ways does reading on electronic readers during independent reading affect third grade students' reading experiences and behaviors?

1. How is reading engagement affected?
2. What is the effect on students' motivation to read?
3. What is the effect on the students' reading attitudes?
4. How does it influence students' reading volume?

I begin this chapter with a description of third grade students' reading behaviors using electronic readers during independent reading. Next I provide narratives or representations of eight year olds as readers using electronic readers to engage in independent reading of text of their choice. Through rich, thick description I aim to provide narratives of young participants' experiences using electronic readers for independent reading, allowing a closer view to better understand the impact these digital tools made on students' reading behaviors. Finally, I define and discuss patterns and themes in the students' perceptions of their electronic reading experience and the impact on their reading behaviors supported by their own words in italics. In order to capture the voices of my participants, students' responses have been left untouched with clarifications shown within brackets [].

In this chapter I present key findings obtained from 30 in-depth interviews (pre- and post), 28 thirty minute observations during independent reading, videotapes of six 45 minute book club discussions, six weeks of reading logs with daily entries, and annotations made on the electronic readers as well as in the students' reading journals.

My analyses of 15 third grade students revealed five major findings:

1. Children were engaged in reading. An increase in reading engagement was observed in all of the 15 participants. In addition, the majority of students self-reported an increase in reading for a variety of reasons including access to more books, ability to choose the books they read, and increased ability to concentrate.
2. Children were motivated to read. All 15 participants were more motivated to read on the electronic reader because of one or more of the following reasons: they had access to the books they wanted to read, chose what they read, had a purpose to read, or thought reading on the electronic reader was more fun.
3. Children had a positive attitude toward reading. As a result of reading on an electronic reader, a majority of my participants reported an increase positively in their attitudes toward reading. They claimed they preferred reading on the electronic reader to reading regular books.
4. Children read more. A majority of third grade participants indicated an increase in their reading volume as a result of reading on the electronic reader. Students finished between six and 19 books during the six-week study.
5. Reading was easier. All of the students noted that reading on the electronic reader was easier than reading regular books for a variety of reasons. The

dictionary, annotating tool, text-to-speech, adjustable font size, button to turn the pages, and flexible reading positions made reading easier for students. In addition, with the electronic reader it was easier for students to access books, turn the pages, keep their place, hold in their hands, and carry lots of books with them.

The following is a discussion of the findings with details that support and explain each finding.

### **Independent Reading with Regular Books**

The first week of the study students read regular books during independent reading. This allowed me to gather some base-line data on the third graders' reading behaviors prior to introducing the electronic reader. In a multi-track school, teachers are required to pack up their classrooms every nine weeks and move to a new classroom when they return from their three-week break. Consequently, some teachers store their classroom libraries at home and bring in books as needed. Instead of browsing a classroom library for books to read during independent reading, the third graders were given a Ziploc bag with two books in it including *Werewolves Don't Go to Summer Camp (Bailey School Kids #2)* and *101 Back-to-School Jokes*, and a magazine, *National Geographic: Fantastic Frogs*. The first day students sat at their desks during independent reading. However, the following four days students were allowed to sit anywhere in the room. Two boys chose to remain sitting at their desks, while the other students either sat or sprawled out on the floor of the classroom. Students changed positions, flipped through their books, whispered to each other, subvocalized while reading, looked around the room, switched books, and left their seats to go to the

bathroom in addition to reading the books provided. On Friday, July 15, 2011, I introduced students to 20 different books by allowing them to preview the books in order to assist them in choosing books they were interested in reading and they could read independently. Each student chose three books for me to load on his/her electronic reader.

### **Independent Reading with Electronic Readers**

I introduced the third graders to the electronic readers the following Monday, demonstrating briefly how to turn it on and off, find a book, change the font size, and turn the page. Tuesday, July 19<sup>th</sup> students began using the electronic readers for independent reading. They were also allowed to take them home if their parents signed an agreement stating if the electronic reader was damaged or lost they were responsible for replacing it. The students' behavior during independent reading changed considerably this first day of reading on the electronic reader compared to reading regular books the week prior. I thought this change may be due to the novelty of the experience and students would revert back to the off-task behaviors I had seen before. However, throughout the study students demonstrated reading behaviors indicating they were actually engaged in reading. The silence in the classroom during independent reading was noticeable as you could clearly hear the teacher next door delivering her lesson. The third graders' eyes rarely lifted from their electronic readers, even when students grabbed a Kleenex. One comment in my field notes about my observation of Madison reading on July 27, 2011 was *totally engrossed*. Also documented in my field notes were my observations of students reading, annotating, looking up words in the dictionary, finishing a book, and selecting another book to read without distracting others around them. For example, I

noted on July 21, 2011, *Trixie finished her book, picked another book, and seamlessly kept reading.* The transition from one book to another was seamless and no time was spent looking for another book to read. An occasional giggle and the expressions on students' faces revealed the engagement students experienced while reading. It did not matter which day of the week it was or even if it was the last day before the students' three-week vacation, students' engagement in reading remained consistently high.

On most days students were allowed to read anywhere in the classroom. Two students, Ed and James, consistently chose to stay seated at their desks. However, all of the other students found a place on the floor around the room to either sit or lie down while they read for 30 minutes. Students did not choose to sit in the same spot day after day; instead they tried various places in the room. However, once they chose their spots they remained there for the 30 minutes. I also chose to sit in different places in order to observe from various vantage points. I wrote in my field notes on July 25, 2011, *I chose to sit on the other side of the room today for a different view. I like to be able to see students' faces and hands to see what they are doing.* In addition, I didn't stay in the same place the entire 30 minutes. I moved around the room making sure I could observe each child reading. I used Kelley and Clausen-Grace's (2008, 2009) Silent Reading Behaviors Observation Checklist, documenting students' on or off task behaviors every five minutes.

After the 30 minutes of independent reading the teacher asked students to complete their reading logs and I took a quick status of the class, recording the book each student had read and the page or location they ended on. I also had a few minutes to

interact with students about what they had read and gather requests for books they wanted loaded on their electronic readers.

### **Narratives**

In the next section I describe individual student's perceptions of their experience using the electronic reader during independent reading. I selected the following narratives because they represent diverse groups of students in the classroom including striving, disengaged, proficient, and engaged readers. The narratives are indicative of patterns across the 15 data sets, and two outliers that did not reflect any of the other narratives. The first narrative, TJ, is representative of data from the experiences of three students who were striving readers. The electronic reader made reading easier for these students, increasing their motivation to read, engagement, positive attitude toward reading, and reading volume. Narrative two, Grayson, is representative of patterns produced in three additional narratives of disengaged readers. For these students having lots of books they were interested in reading increased their motivation to read and increased their levels of reading engagement. The third narrative, Ed, is indicative of patterns produced in seven other narratives of proficient and engaged readers. Even though these students liked to read and were engaged in reading, they proclaimed an increase in their reading motivation, positive attitude toward reading, and reading volume. Both narrative four, Trixie, an engaged but striving reader and narrative five, Nick, a disengaged, striving reader, were outliers. Trixie was more motivated to read on the electronic reader and chose to read more often, even on her long bus rides home. With the additional support the electronic reader provided Nick, reading was easier for him and he was able to engage in reading more than before. My intent is to portray the



impact using electronic readers had on diverse students' reading behaviors including engagement, motivation, attitude, and reading volume.

**TJ.** TJ (pseudonyms are used for all children throughout this paper and were chosen by the children) is a small third grader who wears glasses and could be considered a striving reader. At the end of second grade, he read a level 28 on the Developmental Reading Assessment, Second Edition (DRA2; Beaver, 2006), which was considered grade level in this district. However, he was on an Individualized Educational Program (IEP) and met with the reading specialist. It was apparent that TJ struggled with reading comprehension. However, when I interviewed TJ at the beginning of the study he indicated he liked to read because it was really fun. He enjoyed reading non-fiction books and thought they were really fun because you can learn new things. For example, he liked to read about dogs; his dog is an Ori Pei named Molly. Some of the series books TJ liked to read include *Diary of a Wimpy Kid* and the new series from Dav Pilkey, *Ricky Ricotta's Mighty Robots*. He also likes picture books and books that are funny. His positive attitude about books and reading were evident when he explained independent reading as fun because he gets to read non-fiction books. When asked what he liked about reading he said *getting to learn new stuff from them* and then he whispered *the non-fiction ones*. TJ was very honest, saying *like sometimes I wanta read and sometimes I don't*. Instead of reading he would rather do science sometimes. He explained *I really like science. It [reading] really isn't easy* he said, *but it is easy enough that I can read*. TJ seemed to know himself as a reader and voiced that *if it [a book] is too hard I'll do another book that I like*. He prefers to read at home because when he wants to read he can read as long as he wants, but at school they say times up when he still wants to read.

The first few days of independent reading he had two books, a magazine, and some poems in his book bag. Each day he chose to read something different from his book bag. Choosing a spot to read and getting started was hard for TJ, as was staying in the same spot while he was reading; he moved around in his spot. For example, he would start out sitting on the floor to read, but soon lie down on his stomach, then switch to lying on his side in a fetal position, and end up sitting on his knees. He looked at Trixie's books a couple of times and didn't seem interested in the books in his book bag that the teacher had chosen for him. Similarly, the first week of reading on the electronic reader TJ started several different books. He finished *Mr. Putter and Tabby Catch the Cold* at home. His reading level was a 28, so this book was probably easier for him to read than the others he had chosen. On the third day he asked if he could read it again and he was engaged in the book, giggling as he read. In fact, he got out of his seat to come tell me about a funny part in the book. He continued to be engaged as he read on the electronic reader; he was no longer looking at other students' books or at me. During independent reading with the electronic reader, TJ was totally immersed in the books he was reading.

One day he read aloud from *Mr. Putter and Tabby Stir the Soup* with his teacher and I could hear joy in his voice as he read. It was apparent that TJ was enjoying his reading experience using the electronic reader. After loading several *Step Into Reading* books on TJ's electronic reader, he shared at book club he was reading more on the electronic reader because there were more books to choose from than before. During our third group meeting, he shared with the group that reading on the electronic reader and having lots of books to choose from made him want to read more saying *I sorta want to read more as I read on the Kindle*. TJ's engagement in reading was observable each day

as he chose a spot in the classroom to read and read the whole time. He continued to move around in his spot, but his eyes were glued to the text. One day he sat in the teacher's chair and spun in circles as he read. At times it looked as if he might fall out of the chair, but I am not sure he would have even noticed. TJ shared his reading experience on the electronic reader one day, saying *one time I was so interested in reading I was like this and like when you called to stop, Tulo, Mario, and me didn't even hear ya.*

One of the things TJ liked about reading on the electronic reader was that *you don't have to flip the pages; you just push a button to turn the page.* However, he didn't like that it took a half second to refresh the new page. Of all the students, TJ was the only student to comment on this. When TJ had read all of the electronic books at his reading level, he chose to read *Stink and the Great Guinea Pig Express.* The text-to-speech feature provided TJ access to this text that was above his reading level. Not having to turn the pages at all while listening greatly appealed to TJ. However, he made several comments about the way the voice read on the electronic reader. He did not like the way it read some words like ha-ha-ha, saying each letter instead of the word ha. TJ noticed the electronic reader's lack of prosody when he explained its failure to pause at the periods.

During several book club meetings TJ mentioned the various features of the electronic reader like being able to change the font, look up a word in the dictionary, and make notes on it. All of these features influenced TJ's positive attitude toward reading on the electronic reader. During the six weeks he read on the electronic reader, TJ finished several books including: *Mr. Putter and Tabby Stir the Soup, Shampoodle, The*

*Best Place to Read, Roscoe Riley Rules #5: Don't Tap Dance on Your Teacher, My New Boy, Roscoe Riley Rules #3: Don't Swap Your Sweater for a Dog, Cat on the Mat, Mr. Putter and Tabby Catch the Cold, Roscoe Riley Rules #1: Never Glue Your Friends to Chairs, and Stink Solar System Superhero.* He also started but did not finish the following books: *Stink the Incredible Shrinking Kid, You Read to Me I'll Read to You, Stink and the Great Guinea Pig Express, Horrible Harry and the Dragon War, Calendar Mysteries #5 May Magic, Stowaway Adventures at Sea, The Little Red Hen, and Go Dog Go.*

During my final interview with TJ, he conveyed that his feelings about reading had changed since he started reading on the electronic reader. Specifically, he noted that he had started to read more and that he felt more confident about reading. When asked if he had changed as a reader and if so how, he replied *a lot, because I wasn't so much of a reader when I just didn't read on the Kindle. But ever since I got the Kindle I started to be more of a reader fan than when before.* At the end of our interview, he commented *but the only thing I don't like is that I don't want to return the Kindle in like just one week.*

**Grayson.** Grayson is an active third grader who is interested in playing sports, both baseball and football. At the end of second grade he was reading a DRA level 30. When asked if he liked to read he said *sort of.* He did not read over summer break because he had lots of fun stuff to do. He likes books with action and books about sports. He said he didn't like anything about reading and would not choose to read if he didn't have to. In fact, he said, *I don't like it. I don't like reading at all.* He could be identified as a fake reader. Grayson pretended to read the first week of independent reading,

holding *Werewolves Don't Go to Summer Camp (Bailey School Kids #2)* the first three days and on day three he was on chapter 11. I was surprised because other students reading the same book were not that far yet. He chose to read a *National Geographic for Kids* magazine on the fourth day, but mostly flipped pages and moved to different spots to read. The first book he chose to read on his electronic reader was *Baseball Flyhawk* and he wrote *awesome* on his reading log. The second day he read *The Chameleon Wore Chartreuse*, annotating that he liked it so far. During book club he said reading on the Kindle was awesome because it was electronic. Readers like Grayson need books that compel them to read. After he finished reading *The Chameleon Wore Chartreuse*, he chose to read *A to Z Mysteries: The Zombie Zone (A to Z Mystery)*. While observing Grayson reading in the first few weeks, I noted that he never looked like he enjoyed reading. He was constantly aware of my presence in the room. On July 28<sup>th</sup> I recorded in my field notes *not always reading, looking at teacher*. Many times he sat in his chair with the Kindle on his lap and his forehead resting on the edge of the desk.

About three weeks after he had started to read on the electronic reader he was more engaged in reading. He enjoyed reading the *A to Z Mysteries* and *Stink* series. I observed and noted Grayson *laughing at his book* on August 5, 2011. He also wrote a note in his reading journal asking for *A to Z Mysteries: The Vampire's Vacation (A to Z Mystery)*. When I asked him if his feelings about reading had changed, he answered *Yeah. Sometimes I don't get interested in books and ever since I started reading A to Z Mysteries I keep on reading them because they are good*. After reading on the electronic reader for five weeks, Grayson shared at book club, *I never used to like reading*. He also

noted on his reading log *I loved it* in reference to *Ballpark Mysteries #1: The Fenway Foul-up*.

When I interviewed Grayson at the end of the study, I asked him if he liked to read and why. He replied *Yeah, because the Kindle is more easier and better*. He found the electronic reader to be *fun and better than a regular book* and therefore he believed he read more on the electronic reader than he did before. He described the difference explaining *I sometimes looked away when we were reading on a regular book, but now I don't*. But on the electronic reader because it was new and he liked it more he read more. He said the electronic reader was easier to get, read, and switch books. In his own words he explained *I like reading more on the Kindle than I ever liked reading because you get tons of books and you don't have to pick them*. He found it easier to flip the pages and when he was listening to the text-to-speech he did not even have to flip the pages. One of the things Grayson liked about reading on the electronic reader was that he could be independent. He could go to the menu, choose a book he wanted to read, and begin reading. In addition, if he wanted to be read to he could use the text-to-speech feature instead of asking someone to read to him.

Grayson commented on how he had changed as a reader since he started reading on the electronic reader. His self assessment included *because I never used to like reading because like if you got done, if you were reading a whole series and it was like A, B, C, and you went A and you didn't have B, or all the other ones you would have to wait instead of reading. And on the Kindle you can just download it so you can read it right away*. He explained that he was a *more fluent reader because I never used to read on the regular books*. My observations of him reading regular books would confirm his

assessment. In contrast, when I observed him reading *Stink and the Guinea Pig Express* to his teacher he was indeed reading the text fluently, in other words he read effortlessly, accurately, quickly, and with expression. It sounded as if he were just speaking to the teacher.

**Ed.** Ed likes to read for entertainment. When he is bored or at night to help him fall asleep, he chooses to read. Over summer break he read *Diary of a Wimpy Kid* and claimed he had read all of the books in this series twice. He enjoys reading familiar books, especially mysteries and wanted to read more of the *A to Z Mysteries*. He also enjoyed non-fiction books about sports and animals. When asked what do you like about reading, he replied *there's some cool stuff in the books and you can learn stuff from non-fiction books and you can learn how to make stuff*. Ed prefers a quiet reading environment *because the quieter it is, the more faster I get it done*. Finishing the book seemed to be his goal for reading. He preferred reading at home to reading at school because he was able to choose the books he wanted to read. A person talking while he reads is bothersome to Ed. When he chooses a book that has too many hard words in it, he says he will *just put that book down and read another book*. The first week of independent reading Ed chose to read at his desk so other students would not bother him. As he read *Werewolves Don't Go to Summer Camp (Bailey School Kids #2)* he made interesting facial expressions, demonstrating that he understood what he read. He was engaged the entire time. Ed chose to read *A to Z Mysteries: The Zombie Zone (A to Z Mystery)* as his first book on the electronic reader and finished it the first night at home. For his second book he chose *A to Z Mysteries: The White Wolf (A to Z Mystery)*. He continued to be engaged as he read on the electronic reader.

For the six weeks he read on the electronic reader, I loaded a new *A to Z Mystery* of his choice on the electronic reader each day, as he would finish a book at home the same day he started it. The third week I started to load two and three books on his electronic reader at a time. He continued to choose *A to Z Mysteries*, but he did not read them in order of the alphabet. Like TJ, Ed did not like using the text-to-speech feature because of the way some words were pronounced. Every day during independent reading, Ed chose to sit at his desk reading intently so he could reach his goal of reading all of the *A to Z Mysteries*. He came very close to succeeding. Ed read 24 of the 26 mysteries, finishing 19 of them. Ed would be described as an engaged reader who is stuck in a series according to Kelley and Clausen-Grace (2008). Kelley and Clausen-Grace describe readers like Ed as students who have found a series they enjoy reading and will read every book in the series. These engaged readers are reluctant to move beyond their comfort zone and try other books. Ed had his mind set on finishing the series and found success in finishing a book every day. He did read some of *Stone Fox*, *Roscoe Riley*, and *Undercover Tailback* when he finished an *A to Z Mystery* and didn't have any other mysteries to read. Having various books loaded on his electronic reader enabled Ed to continue to read other books after he finished the book he had chosen. It also introduced him to a variety of books he may not have chosen otherwise.

Ed chose to read between 30 and 60 minutes each night at home. Reading on the electronic reader was much easier than a regular book Ed thought because it was easier to find the books, turn the pages, and carry lots of books around with you. *You don't really need a bookmark on the electronic reader; it won't lose your page.* He also claimed the electronic reader was more fun to read on because he could change the size of the font



and *read it with headphones*. He believes he reads more now than he did prior to using the electronic reader because he has new books to read, not the same chapter books he has at home. He described how his feelings about reading have changed since he started reading on the electronic reader saying, *I used to not really want to read whenever I went off track. So now I want to more. Now I would want to read off track* [the three week vacation between instructional blocks in a year round school]. *I like to read more on my Kindle*. Reading on the electronic reader *gives me much more practice because I read more* and as a result Ed claims he is a better reader.

**Trixie.** Trixie stated she liked to read a lot because *my teacher told me if you read you will become a better thinker and plus it's just like free time; you can read whenever you want*. For Trixie reading can be challenging as she is also trying to learn English as her second language. She has only been living in the United States for less than a year. Over summer break she said she read sometimes, but mostly her family had vacation plans. Trixie really enjoys *Cam Jansen* mysteries saying *they are books that are so nice that whenever I see a Cam Jansen I just took it*. She also likes reading non-fiction books like cooking books; she even makes dinner from these cookbooks. In addition, she said she likes to read books on her dad's iPhone. The first week of school she brought *Three Little Pigs* from home, explaining *I really like those fairy tales*. The quietness of independent reading is a plus for Trixie. She shared *it's like you are having a little silent time, no one is talking, all you have to do is reading, you are free with silence*. When asked what would make reading better, Trixie replied *if you got more reading time, if you got to experience a book, more time to finish*. For her having more time to experience a book and finish reading it would make reading even better. Also, reading more favorite

books would make it better. *I think reading is just something for you to enjoy.* She liked to pick her own books because she does not like the books her dad picks for her.

During the week of reading regular books during independent reading Trixie had a hard time staying focused on reading *Werewolves Don't Go to Summer Camp (Bailey School Kids #2)*. She looked at the book's cover, asked another student what page he was on, changed reading positions, fixed her shoe, kept looking at me, and it appeared that she was not reading. She only glanced at the book and then seemed to be more interested in what was going on around her.

After she finished reading her first book, *Mr. Putter and Tabby Make a Wish*, on the electronic reader, she exclaimed in a very quiet voice *I finished my first book.* Then she quickly chose to read *Cam Jansen: The Mystery of the Television Dog* and continued reading within seconds. The transition from reading one book to the next was seamless, allowing Trixie to continue the flow of reading and not disrupt others around her while finding a new book to read. She wrote on her electronic reader *it was amazing.* There is a possibility that Trixie and the other students wanted to please me, even though I tried to make it clear that I wanted their honest opinions. Each day I observed Trixie totally engaged in her book for the full 30 minutes. Watching Trixie during independent reading, her face revealed when she was enjoying the book and times when she looked confused. I believe it was apparent when she comprehended what she was reading and when she struggled to understand. When she finished *Cam Jansen: The Mystery of the Television Dog* I helped her shop for another *Cam Jansen* book. We could not find *Cam Jansen: The Mystery of the Stolen Diamonds #1*, so she decided on *Cam Jansen: The Mystery of the U.F.O. #2*. During the second week of reading on the electronic reader,

Trixie started several new books including *Stone Fox*, *Cam Jansen: The Mystery of the U.F.O. #2*, *Junie B. Jones and the Stupid Smelly Bus*, *Blizzard of the Blue Moon (Magic Tree House #36)*, and *Tacky the Penguin*. Trixie noted on the electronic reader *I love this book so far about Blizzard of the Blue Moon*.

Trixie chose to read different books at home on her electronic reader than the books she was reading in the classroom. In this way she was able to read a variety of books. She chose to use her headphones and listen to *Because of Winn Dixie* on her long bus ride home. When she got off the bus her grandma asked her what she was doing. Trixie explained *listening to my book on the bus ride. I don't need to play games any more on the bus; I can listen to my Kindle*. She really enjoyed the *Junie B. Jones* series, reading *Junie B. Jones Has a Peep in her Pocket*, *Junie B. Jones is a Beauty Shop Guy*, *Junie B. Jones is (almost) a Flower Girl*, and *Junie B. Jones is a Party Animal* in addition to *Junie B. Jones and the Stupid Smelly Bus*. On her electronic reader she noted *Love the book. She is like me*. Four days later, Trixie wrote *Dear Mrs. Anderson, I really want the book Junie B Jones Meanie Jim's Birthday. Pleas it sounds interstaning*. The next week she read *Junie B. Jones Meanie Jim's Birthday and Junie B., First Grader: Aloha-ha-ha*. The last week she read *Junie B. Jones is a Graduation Girl*. She also read and finished *Cam Jansen: The Mystery of the Stolen Diamonds #1* when I finally found it on Amazon.com and downloaded it for her.

In her final interview, Trixie shared she liked to read because *a non-fiction book – it can give you more information since you can't go there and some scientists do and give you research and make a book out of it*. She said she liked reading *when it is Kindle time to read. I like it because I can read my new books I have and I can repeat some old*

*books that I didn't understand or I can read a new book that I was not finished with.*

Since all of the books were still on her electronic reader, Trixie could easily reread books she had already read. She always had something to read.

Trixie told me she read between 20 and 30 minutes each day at home. Her level of engagement and motivation to read was evident in her descriptions of reading on the bus and at home. *One time I read for 45 minutes.* When I asked Trixie which books she had read on the electronic reader she named a few and then added *I read so many books I don't remember them.* She used her headphones and the text-to-speech feature at home to access books above her current reading level. In describing her experience reading on the electronic reader, Trixie said *fun because it is mostly like reading on the Internet.* She thinks she reads more on the electronic reader than she did before. But she doesn't prefer reading on the electronic reader or reading regular books. *Like I think both are good.*

She likes the colored pictures on the front cover of a regular book and the books on the electronic reader only have black and white pictures. She told me the best thing about the electronic reader is *that it is just like reading on the Internet, except for turning it on and waiting to load up and putting your password in, go to the Internet, go to a book website, pick a book, then you finally start.* *Electronic reader you'll be already done with your first chapter.* So even though she thinks reading on the electronic reader is similar to reading on the Internet, she finds it easier and much faster. Trixie described how finding a book on the electronic reader is so much faster than finding a regular book. She liked being able to try new books on the electronic reader that she had not read before. *When I got Blizzard of the Blue Moon that was the first Magic Tree House I read by myself.*

Another feature Trixie liked on the electronic reader was the annotation tool. She

explained *one thing I like is you can type notes on it. You have to get a sticky note to make notes on a regular book otherwise it's spoiling the book.* Trixie shared that her feelings had not changed about reading, saying *I think it is good so far.* I asked if she had always thought reading was good and she answered *yeah.* She believed she had become a better reader because when she first started her dad had to read the book to her and now she could read it on her own.

**Nick.** Nick is a striving reader, reading at a first grade level, DRA level 12. He has an Individualized Education Program (IEP) and receives special education services for reading. Even though he said he likes to read because he gets a lot of time to get into a book, he was not enthusiastic about reading and did not read over summer break. This may be one reason he strives to read and he finds reading challenging. When students find reading challenging they are not likely to choose to read. He did not bring books from home when students were encouraged to bring their favorites from home the first week of school. He commented that he likes to read non-fiction books and books about familiar TV shows and movies, like Pokémon, Sponge Bob, and Cars. He also enjoys playing football and reading about football in books and the newspaper. When asked what he liked about independent reading at school he replied *I don't know.* In probing deeper I asked if there was anything he liked about independent reading and he answered *no.* I then questioned him about what he did not like about independent reading and he responded *that it's hard to read chapter books.* He said *reading easy books* makes reading easier. However, he understands that reading helps you learn to read better. Maybe he has yet to experience the joy of reading and thinks the only purpose is to become a better reader.

During independent reading the first week he chose to read the joke book in his book bag. He missed most of independent reading because the special education teacher pulled him almost every day. When Nick was in the classroom he talked, flipped pages of the book, read out loud, and knocked things off his desk. The first few days reading on the electronic reader Nick read *A to Z Mysteries: The Zombie Zone (A to Z Mystery)* and recorded he was 43% done on the second day. Someone may have read it to him the night before, or he may have used the text-to-speech feature. He liked annotating as he read on the electronic reader, writing *I like this book because it is fun*. Nick chose to read the *Mr. Putter and Tabby* books (lexile 230) and they were more appropriate for his reading level. His goal was to read all of them. The teacher conferred with Nick often during independent reading when he was in the classroom. Finding appropriate books at his level on the electronic reader was a challenge. I suggested he listen to the *Roscoe Riley Rules* series using the text-to-speech feature. He tried it and seemed more engaged although at times I observed him just listening to the book and not following along in the text. I searched for more books at his appropriate reading level. However, there were only a few *Step Into Reading* books and he thought they were babyish. He did enjoy *Shampoodle*, laughing out loud as he read.

At book club meetings Nick shared that he really liked the electronic reader and that he wanted to read more *Cam Jansen* mysteries. He finished 11 books on the electronic reader during the six-week study. He read *Mr. Putter and Tabby Catch the Cold*, *Mr. Putter and Tabby Make a Wish*, *Mr. Putter and Tabby Stir the Soup*, and *I Like Stars*, a *Step Into Reading* book. He also listened to and finished *Roscoe Riley Rules #1*,

#2, #5, #6, #7, *Cam Jansen: The Mystery of the Stolen Diamonds #1*, *Tacky the Penguin*, and *A to Z Mysteries: The Vampire's Vacation (A to Z Mystery)*.

During his final interview Nick explained *it feels pretty good when you read on a Kindle because it helps you. [You] don't have when you have a real book and you have to flip the pages there is a button and it does it by itself.* With the text-to-speech feature he did not have to even flip the pages. He added *that when you are reading it if you don't know how to read it can read for you.* Using the text-to-speech feature allowed Nick to access books he would not have otherwise been able to access. He was able to read his favorite books *A to Z Mysteries* just like the other students in his class. Compared to before he started reading on the electronic reader Nick thinks he reads more now. He said *I can get smarter at reading and then I know all my words. If I know all my words I can read normal.* When I asked him to explain read normal, he said *like read normal on the Kindle by myself so I don't have to listen to it.* Even though he was able to access text using the text-to-speech feature, his goal was to learn all the words so he could read without the additional support. Nick indicated that he preferred to read on the electronic reader *because when you read on the Kindle and you have a book you didn't finish you can read that one and when you finish that one you can find another book to read.* For Nick always having access to more books to read was appealing. He said he liked reading on the electronic reader *because it is easy for you to read on. And when you turn the Kindle on it will go straight to your book and you can start reading.* Like Trixie, Nick appreciated being able to go straight to the text and not take extra steps to, as Trixie explained, type in your password, go to the Internet, go to a book website, etc. Nick's feelings about reading changed when he started reading on the electronic reader. He

explained *when I was reading on the Kindle I read until the teacher tells us to stop.* Before when he read regular books *it felt kind of hard with the books that our teacher chose for us when we didn't have our Kindle but when we have our Kindles it's easier.* He thought he had changed as a reader and become a better reader because *when I was reading I read and when I get at this word I know it and then I keep on reading and then if I know the other word I keep on reading, but if I don't know it I have to type it in and it will tell me and I will know it.* The electronic reader provided challenged readers like Nick additional support, making reading easier, and engaging them for longer periods of time.

### **Key Findings**

In this next section I describe five themes that my thematic analysis using constant comparative method produced. These themes address the purpose of my investigation: to explore elementary students' perceptions of using electronic readers during independent reading and the impact on their reading behaviors. The tables 4.1, 4.2, 4.3, and 4.4 list the themes and data from each of the participants.

**Theme 1: Increased reading engagement.** My analysis revealed that using the electronic readers during independent reading promoted students' engagement in reading. An increase in reading engagement was observed in all participants in varying degrees. When comparing the reading behaviors of students reading on the electronic reader to their behaviors while reading regular books there were noticeable differences. The second week of school during independent reading with regular books students were looking around, out of their seats, talking to other students, looking at the clock, flipping through pages, switching books, looking at the ceiling, and not really reading. The



students were excited to get to choose the books they wanted to read and read on the electronic reader. Each day they came into the classroom, grabbed their electronic readers, chose their spots to read, and began reading. Like TJ described *but on the Kindle people don't whine or anything, they just go read*. When a student finished reading his/her book, the student seamlessly chose another book from the menu and began reading. Very little reading time was wasted choosing a new book to read. Even though a few of the students had a hard time sitting the entire 30 minutes, their eyes were glued to their electronic readers. Five students reported finishing their first book within the first week of reading on the electronic reader. Not one student finished a book during the week they read regular books.

Students used the electronic readers' features easily, looking up words in the dictionary and annotating as they read. The only sound that could be heard was an occasional giggle in response to the book a student was reading. Students moving their lips as they read could be observed by a watchful eye. Just watching the students' facial expressions as they read made their interaction with the text visible. The electronic reader was so light and easy to hold students could sit or lie in any position and read. Turning the pages by pushing a button made it possible to assume any reading position. The students were so quiet while reading; the noise from the classroom next door was very noticeable. Students chose to hold their electronic readers any of the four directions. I found it interesting that it did not matter what day of the week it was the students had the same high level of engagement. Even the day before they would be tracking off for their three-week vacation, the students begged to read on the electronic readers and spent 30 minutes totally engaged in reading.

Table 4.1 presents students' responses to the interview question: Compared to before you started reading on the electronic reader, do you think you read more, less, or the same now?

**Table 4.1: Increased Reading Engagement**

Student	Read more	Read the same	Read less
Alex		X	
Bella	X		
Brittany	X		
Chelsea	X		
Ed		X	
Ethan	X		
Grayson	X		
James	X		
Kevin		X	
Madison	X		
Nick	X		
Olivia		X	
TJ	X		
Trixie	X		
Tulo	X		

The majority of participants thought they read more on the electronic reader than they had before. Six students explained how using the electronic reader made reading fun. They shared that it was easier to concentrate because it was so quiet and they could not hear other students flipping pages. Having access to a wider variety and more books of their choice increased their level of reading engagement. In fact, students articulated their ludic reading experiences. Kevin described his reading experience saying *it was like when I read all the books I felt like I was in the book doing stuff that they were doing*. Total immersion! Bella shared *you can type notes on it. But I don't type very many notes because usually when I am reading I am too into the book and then I forget about typing notes*. Students were so immersed in the book that they didn't think about doing anything else but reading. I am confused by three of the four students who claimed they had read the same on the electronic reader compared to regular books, neither more or less but the same. Ed, Olivia, and Alex finished more books than they had read prior to the study. Kevin frequented the public library often with his older brother and his brother also owned a Kindle. Kevin's reading volume may have actually remained the same compared to before the study began. It could be that when they compared reading on the electronic reader to reading regular books prior to the study they were considering the amount of time they spent reading and not the number of books they read. But even that does not make sense in Ed's case because he literally finished a book every night. It may be that even though they had finished more books on the electronic reader than before, it felt like they had read the same amount.

Students read between six and 19 books during the six-week study, most of them chapter books. Because reading on the electronic reader was so easy, finding a new book

did not distract students, nor did holding the book, flipping the pages, figuring out unfamiliar words, or commenting on a book. Chelsea claimed she read more on the electronic reader because *I know if I finish a book I have plenty more to read*. During the third week of using the electronic reader Chelsea was getting ready to leave on vacation to Disneyworld. She asked if she could take her electronic reader on vacation and she read several books while she was gone. During the final interview she shared *before I didn't really feel like reading all the time but now I really like to read and now I know how fun it is. Just getting stuck in a book is fun*. This is another example of ludic reading using the electronic reader.

**Theme 2: Increased reading motivation.** Reading on an electronic reader increased each of the third grade student's motivation to read. For example, one day in class Trixie shared with me *one time I used the Kindle on the bus. My dad said don't use the Kindle on the bus you will break it. So I never used it. But with my headphones I left it on my backpack*. Not wanting to disobey her father she left the Kindle in her backpack and listened to *Because of Winn-Dixie* on her long bus ride home. She continued to listen as she got off the bus; *I kept on listening, I didn't run. Then at home I took out my Kindle when I was eating my food, I put it next to me so nothing gets on it. And I was waiting and waiting until it was done. No one actually noticed me reading*. This third grader was so motivated by the electronic reader that she listened to her book all the way home on the bus and then continued to listen to it as she ate her dinner.

Many factors helped increase students' motivation to read including how students viewed reading on the electronic reader as cool and fun, being able to choose the books they wanted to read, having easy access to the books they wanted to read, and possessing

a purpose for reading. Table 4.2 presents the factors individual students referred to as impacting their reading motivation.

**Table 4.2: Increased Motivation to Read**

Student	Choice	Easy Access	Easier to read on	Fun	Cool	Purpose for reading
Alex	X	X	X			To learn
Bella	X	X	X	X		Learn new vocabulary
Brittany	X	X	X	X	X	To learn
Chelsea	X		X	X		Fun
Ed	X	X	X	X		Entertainment
Ethan	X		X			Taking an adventure
Grayson	X	X	X	X	X	The Kindle is easier and better
James	X	X	X			Enjoyment
Kevin	X		X			Learn new stuff
Madison	X	X	X	X		Entertainment
Nick	X	X	X	X	X	Get smarter
Olivia	X	X	X	X		Enjoyment
TJ	X		X	X		Learn new things
Trixie	X		X	X		Know more
Tulo	X		X	X		Fun learning stuff

When asked if they thought other kids would want to read on the electronic reader all of the students indicated other students would want to read using an electronic reader. Brittany thought other kids would like to use it because *it's pretty cool to read on it*. Eleven of the 15 participants mentioned that reading on the electronic reader was fun. For example, Chelsea agreed saying *because it is really fun to read on and easy*. At every book club meeting Grayson shared how *awesome* reading on the electronic reader was. Olivia, Tulo, and Ed also answered *it's much more fun*. The fact that reading on an electronic device was a novelty alone increased some students' motivation. However, some students did not find that reading on an electronic reader was that different than reading a regular book. Ethan said *regular books or Kindle it doesn't really matter*.

In addition to being more fun, the fact that students were able to choose the books they wanted to read was motivating to them. Chelsea shared at our second book club meeting *I like how there's so many books on it, you don't have to search for a book, you just look on the Kindle*. If a student was interested in reading a book, together we searched Amazon's Kindle Store on the Kindle itself to determine if it was available. In her final interview, Madison said *and what else I really like about the Kindle is that when you put your books on there you can put what you want on the Kindle*. When I asked students if they were able to find the books they wanted to read on the electronic reader they all answered affirmatively. For example, Madison responded, *yeah, I found all the books that I really wanted to read*. The third grade teacher compared it to being in a candy store. The students had access to the books they were interested in reading as long as they were available on the electronic reader. In other words, the electronic reader provided students with increased access to the books they were interested in reading.



Students also commented about how easy it was to access the books they wanted to read. By typing the title into the Kindle Store located on the electronic reader, we knew immediately if the book was available. Bella told me *it's easier to find books* using the electronic reader because *you can just download them*. Grayson loved the fact that *when you need new books...you just have to look at your Kindle menu*. He was referring to the fact that each of the electronic readers had several books loaded on it and the books were easily accessible in the menu. James described how easy it was to get a new book by comparing it to Amanda in *Because of Winn-Dixie* slamming her book on the desk and saying I'm ready for a new book. He explained *here we just come up to you and it is like you click only 5 buttons and we have a new book, instead of walking around the entire library to find something*. Madison especially liked that fact that if a book from the library had been checked out and was not available *you might be able to find it on the Kindle*. TJ told the rest of us at our third book club meeting *I sorta want to read more as I read on the Kindle*.

Not all students need the teacher to give them a purpose for reading. Even though some students read each night because it was their daily homework to read for 20 minutes, most of the students had other purposes for reading. Three students claimed they read for enjoyment. James explained *it [reading] is my favorite subject of the day in school. In my classroom I like that the most because reading is a time where we all can be quiet and get to enjoy some nice books*. Others read for entertainment. Madison shared she likes to read, *so I don't get bored*. Ethan added *it's like taking an adventure but staying in one spot*. Many students said they read to become better readers. Bella and Nick exclaimed how reading helped them learn new words and get smarter. Seven

students mentioned being motivated to read to learn new stuff. Kevin shared *I like to read because it will make you learn new stuff and help you cook*. Tulo also liked to read to learn about stuff from non-fiction books. Ed and Olivia were especially motivated to read in order to finish all of the books in the series they had started reading on the electronic reader. Both students were one or two books shy of finishing their specific series and undoubtedly would have finished had they been able to keep their electronic readers during their three-week vacation from school. Neither student was an avid reader prior to the study. In fact, even though they were highly motivated to finish a series neither would be described as having a passion to read. What is remarkable about these two students is their level of motivation to read and the amount of reading they engaged in during this six-week study.

**Theme 3: Change in reading attitude.** As a result of reading on an electronic reader, 11 of the 15 third grade participants indicated a change in their reading attitude. The number of students who claimed they liked to read increased by one, as well as, a majority of students relayed their preference to read on the electronic reader compared to regular books. Table 4.3 represents students' comments and responses to questions about reading on an electronic reader.

**Table 4.3: Increased Reading Attitudes**

Student	Like to read	Preferred Kindle	Easier to read on	More fun	Cool	Change in reading attitude
Alex	X	X	X			No, I feel pretty good about it.
Bella	X	Liked both	X	X		Not very much. Because I love reading and I still love reading. But now I want to read more.
Brittany	I love to read	X	X	X	X	Yeah, I read a little bit more because it's better for me.
Chelsea	X	Liked both, but preferred the Kindle	X	X		Um, hum. Before I didn't really feel like reading all the time, but now I really like to read and now I know how fun it is.
Ed	X	X	X	X		Yeah, now I want to read more. I like to read more on my Kindle.
Ethan	X	Liked both	X			I don't think so. It is the same as a regular book.
Grayson	X	X	X	X	X	Yeah, Ever since I started reading A to Z Mysteries I keep on reading them.
James	Yes, pretty much	X	X			Since I have read on the Kindle it is way better. Not at all bored.
Kevin	X	X	X			Yes. When I read my first book I felt happy and then the next great.
Madison	I really like to read	X	X	X		I feel like the Kindle is a lot better.
Nick	X	X	X	X	X	Yeah. I read until the teacher says stop.
Olivia	Kind of	X	X	X		Kind of. Cause it's fun on the Kindle.
TJ	X	X	X	X		Yeah. I started to read more and I felt more confident about reading.
Trixie	X	Liked both	X	X		No, I think it is good so far.
Tulo	X	X	X	X		No.

Students' positive attitudes toward reading on the electronic reader were apparent in their reading behavior at school and their positive comments about their reading experience. I found it interesting that all of the students described how reading was easier on the electronic reader than reading a regular book in a variety of ways.

In the initial interviews prior to reading on the electronic reader, 13 students answered yes when I asked if they liked to read. Madison exclaimed *I love to read*. Trixie told me she liked to read a lot. The other two students informed me that they *kind of or sort of* liked to read. In the final interviews 14 of the students responded with yes when I asked the same question, "Do you like to read?" and only one student replied *kind of*. Two girls did not just answer by saying yes, instead Madison replied *I really like to read*, and Brittany responded *I love to read*. James said *yes, pretty much* and explained how reading was his favorite subject besides *specials and stuff*.

When asked if they preferred reading on the electronic reader or regular books 12 students favored reading on the electronic reader. Chelsea replied *I like both, but I really like the Kindle. I think I like the Kindle better actually because it is really fun to read on and easy*. All of the students indicated throughout the book club meetings and their final interviews that reading on the electronic reader was easier than reading regular books. Students found choosing books, finding and accessing books they wanted to read, flipping pages, and finding their page were all easier using the electronic reader. Other features including the variable font size, built-in dictionary, annotating tool, and text-to-speech made reading easier. Three students did not have a preference and liked reading both electronic books and regular books. *Regular books or Kindle, it doesn't really matter* Ethan provided when I asked.

I also probed students having them clarify their reasons they preferred the electronic reader. Their answers included it was more fun, easy, made them happy, and it was awesome. Kevin liked the fact that he could choose the books he wanted to read saying *you can put what you want on the Kindle*. Trixie and Olivia agreed with him. Two boys and one girl mentioned that reading on the electronic reader was *cool*. For example, Nick, a striving reader, believed it was easier to read on the electronic reader and he likes it because *it's cool*. Grayson asserted *I didn't use to like reading, but now I do. I like reading more on the Kindle than I ever liked reading. I like the Kindle and I think reading's got a lot more funner for me 'cause it's a lot easier to do stuff*.

Across the interviews, annotations on the electronic readers, notes in students' reading logs, and comments made during book club meetings third grade students shared that reading on the electronic reader was fun and even more fun (or in their words *funner*) than reading regular books. Eleven of the 15 students described reading on the electronic reader as fun or more fun than reading regular books. For example, Brittany said her feelings about reading had changed since she started reading on the electronic reader *because then it's fun on the electronic reader*. Ed commented that reading on the electronic reader *makes it a lot more fun because it is much more fun and easier to find your books and turn the pages*. Grayson shared *it is fun and better than a regular book. I like reading more on the Kindle than I ever liked reading*. Olivia added *it's much more funner and you don't have to flip pages*. TJ also found reading on the electronic reader fun and mentioned *I sorta want to read more as I read on the Kindle because it is so fun*. Chelsea pointed out *before I didn't really feel like reading all the time but now I really like to read and now I know how fun it is. Just getting stuck in a book is fun*.

Each student had his/her own ideas about what made reading on the electronic reader fun or *funner* than regular books. Some of the features of the electronic reader students noted that made reading fun included being able to type notes in it, change the size of the letters, turn the pages easier, use the dictionary, carry a lot of books, access books, and read different books. Brittany commented *and I love the Kindle because it is fun to read on because I am doing all sorts of things and you can't write in a book and so I like it because I can type notes in it and it helps me a little more*. Some of the features on the electronic reader made reading easier for third graders and this made reading more fun. Grayson summed it up when he shared *reading got a lot more funner, it's easier to do stuff, easier to turn the pages, use the dictionary*. Ed loved that you don't really need a bookmark on the electronic reader because *if you just set it down on a table it won't lose your page*. This automatic bookmarking feature made it easier for students to find their place when they returned to a book. Students could also switch between reading different books and find their place easily. These young readers found the features of the electronic reader made reading easier and more interactive and in turn more fun.

Six of the 15 students commented about the electronic books being fun. These young elementary students found the books they had chosen to read on the electronic reader to be fun and they shared their feelings about these books by annotating on their electronic readers and writing comments on their reading logs. Bella wrote *I thought it was amazing-it was fun* about *Bella the Bunny Fairy*. Nick annotated on his electronic reader *I like this book because it is fun* referring to *Stink and the Great Guinea Pig Express*.

Students found reading on the electronic reader more fun than reading regular books. By discovering reading can be fun and easy, students were more motivated to read and in turn read more. Compared to reading regular books, students perceived an increase in their reading because like Grayson explained *it's a lot more fun than regular books to read on*. Therefore, because students found reading on the electronic reader to be more fun, they engaged in more reading and their reading volume increased. If an activity is fun and easy, students are more likely to engage in that activity and enjoy it. Not only did students find reading on the electronic reader to be more fun, but also their attitudes about reading changed as a result. In Grayson's words, *reading got a lot more funner*.

I asked students in the final interview, "Have your feelings about reading changed since you started reading on the Kindle and how?" Eleven students responded that *yes* their feelings about reading had changed and each student described how they wanted to read more, reading was easier for them, reading was way better, and how fun it was to read on the electronic reader. TJ explained that he had started to read more and *felt more confident about reading*. Four students did not think their feelings about reading had changed since they started reading on the electronic readers and shared that reading an electronic text was the same as reading a regular book. For example, two boys felt their attitudes toward reading had not changed, saying they felt good about reading. Overall, students had positive attitudes toward reading saying they liked to read and liked to read on the electronic reader.

**Theme 4: Increased reading volume.** In order to measure reading volume students kept a reading log each day recording the title of the book they read, the location

or page number they ended on, and a short response to what they had read.

Unfortunately, students did not always fill out their reading log each day. I also kept a status of the class each day, asking students what book they had read and the location or page number where they ended for the day. Each week on Friday I recorded the books they had read and the percentage of the book they had finished. During the final interview I asked students what they were currently reading, what other books they had read on the electronic reader, and how many books they thought they had read.

Students' reading volume increased as a result of reading on the electronic reader. This particular group of third graders finished reading between six and 19 books with an average of 11 books during the six-week study. Table 4.4 indicates the number of books students read on the electronic reader and the amount of time they spent reading at home.



**Table 4.4: Increased Reading Volume**

Student	Books finished on the Kindle	Read more, same, or less	How many books did you read on the Kindle?	Read more than 1 book in the series	How long did you read?
Alex	9	Same	3	Roscoe Riley - 2 Stink - 2 A to Z- 2	20 minutes
Brittany	13	More	2 out of 2 pages on the menu	Fairy - 2	20-30 minutes
Chelsea	7	More	6 or 7	Fairy - 4	20-30 minutes
Ed	19	Same	A lot	A to Z Mysteries-24 Roscoe Riley - 2	20 minutes
Ethan	14	Same	24	Roscoe Riley - 2 Stink - 2	20 minutes
Grayson	10	More	20	A to Z Mysteries - 4	30 minutes
James	14	More	30	A to Z Mysteries - 5 Magic Tree House - 3	20 minutes
Kevin	14	Same		Roscoe Riley - 6 Stink - 2 A to Z Mysteries - 2	45-60 minutes
Madison	7	More	10	A to Z Mysteries -2	40-60 minutes
Nick	11	More	19	Roscoe Riley - 5 Mr. Putter - 2	40 minutes
Olivia	6	Same	8	Roscoe Riley - 5	20 minutes
TJ	11	More	20	Mr. Putter - 2 Roscoe Riley - 3	20 minutes
Trixie	10	More	I read so many books I don't remember them.	Cam Jansen - 2 Junie B. Jones - 6	20-30 minutes

Interestingly, most of the students reported they had read more books than they actually did. Maybe they were just counting the books they had started, but had not necessarily finished. Every student read more than one book in a series and some students read between 3 and 24 books in a single series. Ten students read several books in two or more series. Some students were stuck in a series and determined to finish the series whether it was seven books or 26. Ethan explained *my reading has changed because I have been reading so many chapter books. I can finish a book in two days.* Other students read a wide variety of books, including books in a series.

One reason students read so many books was they had many different books loaded on their electronic readers that they had chosen personally. In this way students had easy access to a variety of books they could choose to read at any given time. Trixie shared *when it is Kindle time to read I like it because I can read new books I have. And I can repeat some old books that I didn't understand or I can read a new book that I was not finished with.* Chelsea agreed *I think I read more because I have more books than I did before. I know if I finish a book I have plenty more to read.*

Another reason students were able to read more was there were no distractions during independent reading with the electronic reader. Madison explained *I think I read a lot more because I can concentrate 'cause instead of flipping pages you won't hear things so you can concentrate a lot better.* Students also thought reading on the electronic reader felt better because it was easier to hold. For example, James answered *I think I read more on the Kindle because it just feels way better for me than books. Because my family would start saying go read for 20 minutes or something like that and then earlier when I didn't have the Kindle at home I would say okay and then I would*

*probably have to get out that huge Narnia book and start reading on it. But now I can just read on the Kindle, which is pretty much tiny compared to that book.*

In many cases, students spent more time reading using the electronic reader. Students indicated they read between 20 minutes (required for homework each night) and 60 minutes. Seven students reported they read for twenty minutes each night. Three students read between 20 and 30 minutes. Five students read between 30 and 60 minutes. Most students chose to read on their electronic readers at home, except when they had new library books to read or when they left their electronic readers at school. Every student read using the electronic reader for approximately 30 minutes each day during independent reading time. At book club meetings students talked about increasing their reading goal at home from 20 minutes of reading each night to 30 minutes.

**Theme 5: Reading is easier.** The electronic reader made reading easier for third grade students. Interestingly enough a recurring theme throughout the book club discussions and final interviews was the idea that the electronic reader made reading easier. All of the third grade students in the study mentioned the fact that reading on the electronic reader was easier than reading a regular book. What made it easier differed among students. The various features of the electronic reader such as the dictionary, annotation, text-to-speech, font size, a button to turn the pages, and flexible reading positions contributed to making reading easier for students. Most of the students noted the ease of turning the pages on the electronic reader. For example, Bella explained that *all you have to do is press a button to turn the page*. Alex explained that *this way you don't skip pages*. Madison believed her reading had changed because she no longer skipped pages when the pages of a regular book stuck together. On the electronic reader

this didn't happen. Brittany and Chelsea added that when they read a normal book they could easily lose their page when flipping pages. Madison described how easy the electronic reader was to hold. *If you read the Kindle you can turn the ways which way you want, which one is more comfortable for you.* Before she had a hard time holding regular books without the pages turning and she tended to lose her spot. *I prefer reading on the Kindle because it is a lot easier to hold instead of holding the two sides of a book.* She feels the electronic reader is a lot better because *you don't have to turn the pages,* just push a button. In addition, Ed described that *if you just set a normal book down it can lose your page, but if you just set it [the electronic reader] down on a table it won't lose your page. And secondly the bookmark can fall out of your book and you don't really need a bookmark on the electronic reader.* Ethan realized that if he left his book for a month and read other books, when he came back to it he would be on the same page. He exclaimed *you don't need a bookmark or anything.* Brittany noticed the same thing when she decided to change books. Grayson loved that when you are using the text-to-speech feature you don't even have to turn the pages, they automatically turn for you. Madison added a bookmark so she could find the exact spot she left off.

Being able to change the font size on the electronic reader also made reading for some third graders easier. Chelsea explained that *reading on the electronic reader was easier* for her because she was able to pick the size she wanted the words to be. Ethan explained that if the teacher or child was having a hard time reading, then he/she could *put it [the font] up to big words and it would actually help them maybe.* Kevin, Madison, TJ, and Brittany agreed that if they couldn't see the print that well they could change the size of the print and that made it easier to read. Olivia said the books she chose to read

on the electronic reader were not too hard *because then you can change the font*. I believe students associated easier books with larger font size because as young readers the books they started reading had larger fonts. By being able to increase the font size, students automatically thought the book was easier to read and indeed it was easier. In fact, I observed several students using the second largest font to read the chapter books they had selected.

Students acknowledged they had easy access to the books they had chosen to read. At the beginning of the study every child was allowed to select three books, which I loaded on their electronic readers. Then as they finished their books, they selected other books to read and I loaded them. Many of the participants explained how easy it was to find a book to read on the electronic reader. They commented on how easy and fast it was to go to the menu, find a book they wanted to read, and begin reading compared to hunting for the book they wanted to read on a bookshelf, in a library, or at the bookstore. Brittany clarified *I can find the book I want and not try to look all over the place for that book*. Grayson also realized that when he needed a book he just had to look at the menu and get it. It was that easy to get another book to read.

While observing students read using the electronic reader during independent reading I noted the transition after finishing a book and selecting a new book was almost seamless. I would not have known except that Trixie was so excited that she quietly blurted out *I finished my first book!* From the student's point of view having access to many books at his/her fingertips made reading easier on the electronic reader. From a teacher's point of view it permitted students more time on task. No longer did students need to return to the classroom library or school library to choose a new book, wasting

valuable reading time. Grayson explained that he preferred reading on the electronic reader *because when you have all these books you want to read, like A to Z Mysteries, you don't have to keep going up and down the stairs to get them.* Reading on the electronic reader made access to the books he wanted to read at home and at school easier. James described the ease of getting new books on the electronic reader compared to taking a long trip to the store to buy a new book. He also thought purchasing books on the electronic reader *would probably be a lot cheaper.* Madison shared at a book club meeting *what else I really like about it and I think everyone should have is that if you can't find a book in the library you might be able to find it on the Kindle.* With the electronic reader students did not face the problem of the book they wanted to read being checked out and having to wait until another student returned it. Access to the books they had chosen to read was immediate. Like Grayson said *it just takes a minute to load it.* In addition, all of the books they had read remained at their fingertips. Like Trixie found *it is easy to go back and reread books because they are all right there.*

That brings up another feature of the electronic reader that makes reading easier. Students were able to carry and had in hand an entire bookshelf of books. The students agreed with Ed *if you had a whole bookshelf it would be much harder carrying around, but you could have a little bookshelf on your Kindle.* TJ realized that without the electronic reader making all of your books portable would be difficult. Ed talked about how easy it was to take all of his books on the electronic reader to Red Robin. Carrying all of these books was easy because *it's not heavy* as Madison shared.

All of the students experimented with the text-to-speech feature at home, listening to the books as they followed the text with their eyes. Many of the students commented

on how this feature made reading/listening to books easy. Grayson explained that if he needed to listen to a book, he did not have to ask someone to read it to him *you just have to listen to it with headphones*. The text-to-speech feature allowed the students to independently access books that were above their reading levels, making reading easier. TJ said he liked listening to the electronic reader read *because you know you don't have to read it by yourself. It reads to you, even if you are reading by yourself*. Nick also mentioned *when you are reading it if you don't know how to read, it can read to you*. Trixie agreed *using the headphones makes it easy to read hard books*. Brittany said *it's great because you can listen to it, just follow along, and read it in your head. As you are reading if you don't know a word you can just say oh, okay and look at it and then it just tells you it. And you won't have to just skip that word*.

Some students thought making notes about what they were reading was an easier task on the electronic reader than in a regular book. Brittany explained *I love the Kindle because it is fun to read on because I was doing all sorts of things and you can't write in a book so I like it because I can type notes in it and it helps me a little more*. TJ agreed *I also like the Kindle because you can like write notes*.

Some of the students used the built-in dictionary to make reading easier. Instead of getting up to find a dictionary and look up the unfamiliar word, students were able to use the dictionary on the electronic reader. Again this feature allowed students to seamlessly access definitions and pronunciations of words they were not familiar with and continue to read on. Bella claimed *it's not that hard because there is a dictionary on it. On the Kindle dictionary you type a word and you search for it*. Brittany also used the dictionary and explained

*It's probably helping me read a little better because if I don't know a word I can just look it up in the dictionary. I can just move the little arrow towards it and then it will split it apart for you so you know what it is instead of me skipping it and like staying on that word forever. I can just look it up right there and then like oh this is the word instead of me saying hum, hum, hum.*

She was referring to the dictionary showing the syllabication and allowing her to pronounce the unfamiliar word.

Even though the students found reading on the electronic reader easier than reading a regular book, some students really did not find reading on the electronic reader any different than reading a regular book. To these students reading was reading and the medium did not make a difference. For example, when asked if he preferred reading on the electronic reader or regular books Ethan replied *regular books or Kindle it doesn't really matter.*

Throughout the study students commented on how the features of the electronic reader made reading easier for them. As adults we have forgotten how demanding reading actually is for young elementary students and the amount of concentration it takes to orchestrate all of the reading strategies in order to understand the text. As long as students perceive reading as easy, students will invest the energy and time to learn and practice reading. Isn't it true if we find something easy we are more likely to engage in the activity? Therefore anything we can do to make reading easier will increase student motivation, engagement, and enjoyment of reading.



## Chapter Summary

My specific purpose for conducting this study was to explore the use of electronic readers during independent reading with third grade students in order to determine the effects it had on their reading experience and behaviors including reading engagement, motivation to read, reading attitude, and reading volume. This chapter presented students' narratives of their electronic reading experience, allowing readers to understand the influence it had on the students' individual reading behaviors. Each student's reading behaviors were unique and changed in different ways because of his/her reading experience using the electronic reader. In addition, the themes and patterns that I discovered in my analysis revealed five specific findings in the students' perceptions of the impact on them as readers. Using the third graders' own words strengthened the in-depth description and answers to each finding.

As a result of reading on the electronic reader, third grade students noted an increase in reading engagement. In fact, a majority of the students reported they had read more using the electronic reader than they did before. They stated several reasons for this increase including improved concentration, access to more books, the ability to get lost in the book, and the opportunity to read the books they wanted to read. In addition, students described being more motivated to read using the electronic reader because they had a purpose to read, it was fun, and they had access to books they wanted to read. Similarly, a majority of these students indicated a positive increase in reading attitude. They liked to read and preferred to read on the electronic reader because it made reading easy and more fun. Moreover, these young readers recognized an increase in their reading volume using the electronic reader compared to reading regular books because they were able to

concentrate on what they were reading, they had access to more books, and it was easier. In fact, all of the students pointed out the fact that reading on the electronic reader was easier than reading a regular book. Even though the factors that made it easier differed for students they pertained mostly to the electronic reader's features.

To fully understand third graders' experiences using electronic readers during independent reading and the impact it had on their reading behaviors, I discuss the findings from each of the four subsidiary questions in Chapter 5. I will provide conclusions, implications for diverse readers and literacy instruction, recommendations for further research, and my final reflections.

## **Chapter 5: Conclusion and Recommendations**

The impetus for this descriptive case study was to explore, analyze, and understand a relatively new phenomenon, elementary students' use of electronic readers for independent reading. Interested in students' perspectives, I examined third grade students' perceptions of their experience using electronic readers during independent reading and the impact it had on their reading behaviors including reading engagement, motivation to read, reading attitude, and reading volume. I observed my third grade participants using their electronic readers for independent reading 30 minutes each day for six weeks. Having a better understanding of the perceptions of students using electronic readers I believe illuminates the possibilities electronic readers may offer students by providing choice of and access to reading materials based on interests, the opportunity to read anywhere and anytime, and a context to interact socially with others about reading. In addition, this research may help educators make informed decisions about assimilating electronic readers into their literacy instruction. Furthermore, students and teachers may profit from expanded reading opportunities using electronic readers within and outside the classroom. 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, discussion of the impact of using electronic readers on students' reading behavior, implications for classroom practice, and recommendations for future research.

This descriptive case study allowed me to probe, understand, and expand the information in this relatively new area of education where very little research has been conducted. Contributing to the conversation on using electronic readers with young

students, this study extends the findings of prior studies examining the use of electronic texts and provides a piece that is missing regarding reading motivation and engagement. My research addresses the question: In what ways does reading on electronic readers during independent reading affect third grade students' reading experience and behaviors?

Results of this study highlight the reading possibilities the electronic reader offers elementary students by providing choice of and access to reading materials, the opportunity to read anywhere and anytime, and a context through which to interact socially with others about reading. It also provides insight for teachers integrating this digital tool into their literacy instruction to promote increased reading motivation and engagement. Implementing the use of electronic readers in the classroom offers great potential for motivating and engaging students in reading and ultimately impacting students' reading behaviors.

An in-depth case study design allowed me to collect qualitative data from multiple participants by observing 15 third graders read on electronic readers during independent reading, conducting pre- and post- interviews, videotaping weekly book club discussions, and collecting annotations, reading logs, and reading journals. The data were coded, analyzed, and organized to create an in-depth description of students' experiences using electronic readers during independent reading and the impact it had on their reading behavior. The following research questions guided the analysis of data collected in this study:

1. How is reading engagement affected?
2. What is the effect on students' motivation to read?

3. What is the effect on the students' reading attitudes?
4. How does it influence students' reading volume?

These four research questions were essentially answered by the findings in Chapter 4. Findings from this study capture the multidimensionality of participants' lived experiences using electronic readers for independent reading. The results of this study demonstrate that reading on the electronic reader made a difference for third grade students as it had an impact on their reading behaviors including engagement in reading, motivation to read, attitude about reading, and the amount of text they read. These third grade students found reading on the electronic reader easier and more fun than reading regular books. The fact that it was easier for students to access the text, keep their place while reading, see the text, turn the pages, and interact with the text motivated students to read, engage in the act of reading and get lost in a book, feel confident and successful in reading a book of their choice, and ultimately read more. We know that students are more likely to engage in activities in which they find easy and that make them feel successful. The more they choose to read the more proficient they will become at reading and the more they will achieve. The overall finding in this study revealed that using electronic readers for independent reading positively impacted third grade students' reading behaviors.

The next section includes discussion of the impact of using electronic readers on the reading behavior of the four categories of readers (engaged, disengaged, proficient, and striving) and the five themes. In the following sections of this chapter, I discuss the five themes or findings supported by the data collected during this study that answer the research questions:

1. Students were more engaged in reading. (Research question 1)
2. Students were more motivated to read. (Research question 2)
3. Students' attitude toward reading changed positively. (Research question 3)
4. Students' reading volume increased as a result of reading on electronic readers. (Research question 4)
5. Students found reading was easier on electronic readers compared to regular books. (Overarching question)

The prior themes were produced by thematic analysis using the constant comparative method and used to code my data and present my findings in the previous chapter.

Findings of this study were presented first through representative narratives from various students with diverse reading behaviors and then by organizing themes and patterns in the students' perceptions of their electronic reading experience and the impact on their reading behaviors. The following discussion takes into consideration the literature on reading engagement, motivation, attitude, and volume as well as the impact of technology on reading behavior. Implications for each of these findings will also be discussed.

### **The Impact on Diverse Readers**

Reading on electronic readers made a real difference for these third grade students. Not only did it make reading easier for them, but it also helped increase their reading motivation, engagement, attitude, and reading volume. In fact, by using the electronic reader during independent reading, students became more confident readers and came to view reading as fun. It made a difference in many ways for these young readers. Just as Larson (2010) found in her study using electronic readers with second

grade students, my participants also reported being more confident readers as a result of this study.

**Engaged readers.** Engaged readers, like Trixie, were intrinsically motivated to read and read frequently for interest, enjoyment, and learning prior to reading on the electronic reader. However, reading on the electronic reader made a difference for engaged readers as well as students who were not as engaged at the beginning of the study. Trixie and the other engaged readers who chose to read to gain new knowledge about topics they were interested in and who enjoyed reading for pleasure indicated they preferred reading on the electronic reader, thought it was easier and more fun, read more on the electronic reader than they had before, and claimed because of the electronic reader they had become better readers. Not only did reading on the electronic reader in this study make a difference for the students who were identified as engaged readers, but it also made a difference for students who were disengaged readers or reluctant readers.

**Disengaged or reluctant readers.** Disengaged or reluctant readers, like Grayson and TJ, pretended to be reading or avoided reading by doing anything and everything except reading as Kelley and Clausen-Grace (2009) found in their study of independent reading. In fact, before introducing the use of the electronic reader Grayson and TJ flipped through the pages of their books, looked around the room, and frequented the restroom during independent reading. However, after these students began reading on the electronic reader their on-task behavior increased and they became more engaged in reading. In fact, on-task reading behavior increased for all of the participants after they began reading books of their choice on the electronic reader. The opportunity to share what they were reading and their reading experiences at book club meetings also

motivated students like TJ and Grayson to read more, similar to what Kelley and Clausen-Grace (2009) found when they implemented R<sup>5</sup>. Nick like the disengaged students in Bryan and colleagues' (2003) study lacked confidence in his reading, was inattentive and uninterested in reading, and easily distracted and distractive. Even though the electronic reader did not alleviate this problem completely, Nick was far more engaged and less distracted while reading on the electronic reader than before. Many of the students who were disengaged the first week of the study when they were reading regular books may have been reluctant to read because they had not chosen the books they were reading. Worthy (1998) found many disengaged readers are only reluctant to read teacher-selected texts. On the other hand, some students were excited about the books the teacher had chosen for guided reading and they wanted to read those same books on their electronic readers for independent reading too. Reluctant readers like Grayson and Alex read more because they felt empowered as readers by being able to choose the books they wanted to read. Reading on the electronic reader made a difference for reluctant readers as well as engaged readers. Their level of engagement, motivation to read, and reading volume increased because they were able to choose what they read and they preferred reading on the electronic readers because it was easier to read for reasons such as being able to increase the font size and find their place in the text. Disengaged readers like Grayson changed as readers because they were more engaged in reading and therefore felt they had become better readers.

**Proficient readers.** Proficient readers like Ed and Madison used reading strategies effectively and comprehended grade level text. They believed in their reading abilities. Ed, like other proficient readers, was compliant to the teacher's requests and



read the required 20 minutes each night prior to using the electronic reader for independent reading. However, Ed was not that interested in reading for pleasure. For Ed, having access to the entire *A to Z Mysteries* series and being allowed to choose the books he read provided the motivation for him to read more. He may not have chosen to finish a book every night if he hadn't been able to choose and access the entire series.

Students like Madison and Ed had a purpose for reading, read a variety of texts, responded to what they read, connected what they read to their own lives, asked questions as they read, and made predictions. Reading on the electronic reader allowed proficient students an easier way to interact with the text as they read. Even though these readers could read proficiently prior to the study, reading on the electronic reader also made a difference for them as it did for disengaged and striving readers. Ed found reading on the electronic reader easier than regular books because he could easily find books he was interested in reading, turn the pages with a push of a button, and have easy access to a lot of books whenever and wherever he went. For these reasons Ed claimed he read more on the electronic reader than before. The electronic reader made a difference for proficient readers like Ed and Madison because it was more fun and it changed the way they felt about reading, encouraging them to read more and become even better readers.

**Striving readers.** Striving readers find reading difficult. In this study, the electronic reader provided these students with necessary scaffolds such as a built-in dictionary, text-to-speech, and adjustable font size in order to make reading easier. This study corroborates West-Christy's (2003) finding that electronic readers offered reluctant and striving students support by providing a wide range of reading materials, incorporating large font size, engaging multiple modalities, teaching vocabulary through

the built-in dictionary, and supporting comprehension strategies such as predicting, questioning, and making connections through the use of the annotation tool. The difference the electronic reader made for striving readers like TJ was it created a context in which students got lost in the book as they were reading. These young readers experienced a flow experience as McKool's (2007) students described when the book is so interesting that the readers lose track of place and time while reading during independent reading time.

### **The Impact on Reading Behaviors**

Students found reading to be easier on the electronic reader; therefore, students were more engaged, motivated, and positive about reading. This increase in positive reading behaviors impacted students' reading volume. Because students found reading on the electronic reader easier and therefore more enjoyable, they were more motivated to read and consequently engaged in more reading.

**Reading is easier.** All of the third grade students in this study reported that reading on the electronic reader was easier than reading regular books for a variety of reasons. They found it easier to access books, turn the pages, keep their place in the text, hold in their hands, and carry lots of books with them. Students also indicated the features of electronic reader such as the built-in dictionary, annotating tool, text-to-speech, adjustable font size, button for turning pages, and flexible reading positions made reading easier. Like the third graders in Isley's classroom, my participants found the built-in dictionary made looking up words easier than getting up and moving away from the text to find a dictionary and look up the word. The dictionary on the electronic reader made the process effortless. In this way, students may be more apt to look up unfamiliar

words to aid their comprehension of the story. Horney and Anderson-Inman (1999) found that the text-to-speech, online glossaries, and note taking capabilities of electronic text scaffolded striving readers and, as students in this study proclaimed, made reading easier. Even though some of these features like turning the page may seem insignificant, to young children the task of reading in itself can be daunting. Anything that makes reading easier, allows elementary readers to engage in a book, motivates them to read more, improves their attitudes about reading, and increases their reading volume is worth implementing. Maynard (2010) in her study of three different electronic readers also found that her participants preferred reading on the Kindle because it was easier. The findings from my study are also comparable to reports from participants in Clark and colleagues' (2008) study stating the ease of downloading and reading a book on the electronic reader. My study extends the work of Maynard (2010) and Hearn and McCaslin (2010) in demonstrating that reading on the electronic reader, specifically the Kindle in all three cases, is easier. It is easier for third graders as well as older students in previous studies.

**Increased engagement.** Reading on electronic readers made a difference in young students' reading engagement. Students need uninterrupted time to read each day in order to develop the reading behaviors we attribute to becoming a proficient reader. The third grade teacher in the classroom in which I conducted my study was instrumental in providing her students with 30 minutes to read independently each day. On the few occasions when this time was cut short because of a field trip or a fire drill, her students voiced their disappointment. They came to expect this time to read books of their choice using the electronic readers.

The level of engagement in reading in all third grade students increased with the use of electronic readers. I observed an increase of reading engagement the first day I introduced the electronic readers to the students and that same level of increased engagement throughout the study. Findings of increased on-task behaviors during independent reading confirm the results in Fitch's (2010) study that the use of iPods for reading eliminated off-task behaviors. The majority of students described an increase in reading engagement due to various factors including choice in the books they read, access to books they wanted to read, increased ability to concentrate, and reading being easier on the electronic reader. Parker (2010) also found that using electronic readers with students increased reading engagement. The electronic reader extended students' learning beyond the classroom as Trixie and Ed indicated in their comments about increasing their reading on the bus and at home. Students chose to read on their electronic readers at home as well as at school similar to the students in Grams' (2003) study. In addition, third graders in this study interacted more with the text as Larson (2010) found in her study by using the tools and features.

**Increased motivation.** Using electronic readers for independent reading made a difference in third grade students' reading motivation. Students were more motivated to read as a result of reading on the electronic reader because of one or more of the following reasons: choice in what they read, access to books, a purpose for reading, and reading being more fun. These findings support the results of Guthrie and Humenick's (2004) research that choice, access, and purpose all increase reading motivation. Increasing motivation encouraged increased reading, which positively affected feelings of competence and had the potential of increasing reading ability. Students had complete

freedom to choose what they read as long as it was grade level appropriate and published as an electronic book for Amazon.com. Even though a majority of students when interviewed prior to using the electronic reader said they were interested in reading non-fiction books, at the time of the study Amazon.com had not published many non-fiction books. However, the third graders were also interested in reading fiction, scary books, series books, joke books, and books reflective of media and mass marketing as Williams (2008) found in her study. For example, students chose to read *Judy Moody and the Not Bummer Summer*, *Because of Winn-Dixie*, and *The Lightning Thief*. Many of the third graders were interested in reading mysteries on their electronic readers as their teacher was conducting a genre study on mysteries.

Students had an abundance of books at their fingertips, which as McKool (2007) found and Allington (2006) suggests, increases motivation to read. Students are more motivated to read if they have access to high interest books (Corcoran & Mamalakis, 2009; Gambrell, 1996; Guthrie & Humenick, 2004; Pachtman & Wilson, 2006). Both Ed and Grayson commented on the ease of accessing the books they wanted to read by selecting them from the menu on the electronic reader. The books they wanted to read were literally at their fingertips. Just as Palmer, Codling, and Gambrell (1994) discovered having prior experience with books, including series books and books based on media motivated many of the third graders. Students chose to read more than one book in a series. More specifically, every third grader read more than one book in a series, ten students read more than one book in two or three different series, and two students tried to finish an entire series in the six weeks. By having time to share the books they were reading, students were able to recommend books to others and many of

the third graders chose to read the same books as their classmates. In fact, almost every student chose to read the *A to Z Mysteries: The Zombie Zone (A to Z Mystery)*. As McGill-Franzen and Botzakis (2009) suggest reading series books presented these readers opportunities to discuss the text and connect socially with others. In addition, students reported being motivated by the electronic reader just as Balajthy and his colleagues (2001) found in their study. I discovered like West-Christy (2003) that the features of the electronic reader such as adjustable font size, access to a wide range of texts, multiple modalities (text-to-speech), the built-in dictionary, and the annotating tool increased students' motivation and positive attitudes toward reading. Technology such as electronic readers has a motivational advantage.

Increased motivation encouraged increased reading, which positively affected students' competence and reading behaviors. Students reported an increase in their reading ability according to self-assessment.

**Positive reading attitudes.** Reading during independent reading using electronic readers made a difference in students' reading attitudes. Students' attitudes toward reading increased positively as a result of reading on the electronic reader. This finding validates Adam and Wild's (1997) claim that students reading electronic texts develop strong positive attitudes toward reading. The third graders claimed reading on the electronic reader was more fun and they actually preferred it to reading regular books. In fact, one of my participants equated reading on an electronic reader to reading on the Internet. Just as Strangman and Dalton (2005) reported, this study supports the findings that technology can make a positive impact on students' attitudes toward reading. Engaged and motivated readers believe reading is fun (Hunter, 2005). Similar to the

results Worthy and McKool (1996) found, my participants reported that having increased choice and access to books they wanted to read as well as the opportunity to read affected how they felt about reading and in turn influenced their decisions to voluntarily read more often. Third grade students in this study enjoyed reading on the electronic reader more than they did regular books and research shows that the most effective way of building literacy is the most pleasant (Greenlee, Monson, & Taylor, 1996). Increasing students' engagement through the use of electronic texts also increased their self-confidence and improved their reading attitudes as Strangman and Dalton (2005) discovered. Students believed they could read and therefore, they chose to read more.

**Increased reading volume.** Using electronic readers during independent reading made a difference in their reading volume, the number of books students read. Students read more books on the electronic reader than they had read previously. They finished reading between six and 19 books during the six-week study. Analogous to the findings in Moser and Morrison's (1998) study, my participants' reading volume increased when they had time to read, were allowed to choose the books they wanted to read, and had opportunities to share what they had read with others. By students having increased access to books they wanted to read, they read more as Morrow (1992) also found. In addition, the third graders experienced enjoyable reading on the electronic reader and therefore chose to engage in more reading. Increasing engagement through the use of electronic texts is desirable as Strangman and Dalton (2005) stressed because it also increases self-confidence and reading attitudes. My study confirms Oakley and Jay's (2008) findings that students read more when reading electronic books. Similar to Gram's (2003) finding that students read more electronic text and were more interested in

books my data also shows an increase in reading volume and interest in reading and books.

**Increased confidence.** For many students, reading on the electronic reader during independent reading made a difference in their confidence in their reading ability. Similar to Fitch's (2010) study using electronic readers, the third graders in this study believed and self-reported that they were better readers as a result of reading on the electronic readers. In Larson's (2010) study of the electronic reader with second graders a parent reported an increase in her daughter's confidence as a reader. Students in my study were confident about their reading ability, believing they could read and in turn sought more opportunities to read as Taboada, Guthrie, and McRae (2008) discovered in their study.

After thoroughly discussing the findings from my study and the conclusions I reached, in this next section I present the implications this study has for literacy instruction. After spending the first quarter of the school year with third grade students using electronic readers for independent reading, I would like to suggest the implications for students, teachers, and administrators.

### **Implications for Diverse Readers in Our Classrooms**

I argue that the use of electronic readers in the classroom positively impacts reading behaviors by increasing reading engagement, increasing motivation to read, improving students' attitudes about reading, and increasing reading volume. While the findings of this study are limited to this specific group of third graders, results of this study suggest the difference using electronic readers can make for diverse readers in our classrooms. The significance of this study is that it illuminates the reading possibilities



the electronic reader offers elementary students by providing choice of a multitude of reading materials based on their interests, access to a wide variety of reading materials, the opportunity to read anywhere and anytime, and a context through which to interact socially with others about reading. Electronic readers provide students with choice of a wide range of books as well as easy access to a variety of texts they are interested in reading. In addition, electronic readers allow students to interact with the text using the built-in dictionary, annotating tool, highlighting tool, and text-to-speech features. By increasing engagement, motivation, attitude, and reading volume electronic readers have the potential to increase student achievement and develop a reading habit in young children. The electronic reader is not a replacement for regular books, but it is an effective addition, allowing students to use digital tools (technology) in developing as proficient and passionate readers. The novelty of using digital tools is just one of many ways to engage students in reading.

### **Implications for Literacy Instruction**

The findings of this study indicate the promise for the integration of electronic readers into the literacy curriculum. If our goal as teachers of reading is to create a literate environment in which students choose to read independently and seek opportunities to get lost in books, then the electronic reader may be one avenue worth pursuing. The responsibility of integrating technology into literacy instruction can be easily met when teachers implement the use of electronic readers in reading. My hope is that the knowledge gained from this study would inspire and guide teachers in their integration of digital tools into their literacy instruction. In this way, teachers can offer their students easy access to a multitude of books they are interested in reading and the

ability to choose books they want to read. In addition, using electronic readers in the classroom will assist teachers in differentiating instruction and meeting the needs of individual students by providing books at the students' independent reading levels without the stigma of reading at a certain level. Teachers can also help students practice comprehension skills using the annotating tool. For example, students can type their connections to the text and save them on their electronic readers to share with others. In order to help expand their vocabulary, students can highlight unfamiliar words, look them up in the built-in dictionary, and type their own definition of the word with the annotating tool.

The other implications for educators is the ease of being able to offer students their own personal mini-electronic libraries in a more cost effective manner after purchasing the electronic readers. The start up cost of \$99.00 per electronic reader is a financial obstacle for teachers and schools. However, after the purchase of the devices, the cost of books is less expensive than purchasing regular books, as each electronic book can be loaded onto six electronic readers. For an example of a budget to purchase electronic readers for a classroom of 30 students see Appendix L. In purchasing 300 electronic books for the classroom, each student would have access to 60 books on his/her electronic reader. The electronic reader affords teachers an easy way to send books home with students to allow students the opportunity to read anytime and anywhere.

I believe that my study provides evidence for the efficacy of implementing electronic readers during independent reading in the classroom. Obtaining documentation directly from students sharing their experiences, this research provides

teachers support to pursue the use of electronic readers to promote reading motivation and engagement. It also offers educators information on the perceived benefits of incorporating electronic readers into their literacy instruction, which may include more choice in reading, increased interest in reading, enhanced motivation to read, and positive attitudes toward reading. Incorporating electronic readers in the classroom may ignite a passion for reading in students especially those who are striving or disengaged. In essence, students and teachers may profit in multiple ways using electronic readers for reading activities within and outside of the classroom. However, it would be naïve to expect that the implementation of a single tool would be 100% successful in motivating and engaging all students.

### **Implications for Administrators and School Districts**

Ensuring our students are prepared for the 21<sup>st</sup> century, funding for the implementation of technology in literacy instruction must be designated. In addition, providing professional development for teachers to ensure they are knowledgeable and proficient at integrating technology in the classroom must be ongoing. Finally, it is imperative that students have protected time during the school day for independent reading and access to the books they want to read. Both should be non-negotiable in order for students to become proficient readers who choose to read.

### **Limitations**

Some of the limitations of a descriptive case study may include a representation that is not completely objective due to the judgments about the significance of the data made by the researcher. In case studies the researcher is the primary instrument of data collection and analysis. Researchers may choose to select only certain aspects of the

data, creating a biased final product (Merriam, 1998). Other limitations involve issues of generalizability. Case studies involve a number of individuals who may not represent the general populations. Therefore, the results of a case study may not be generalizable to other case studies. One additional limitation of case studies is that different people providing data may have a difficult time recalling specific information and important details may be left out.

### **Recommendations for Future Research**

Based on the paucity of research that explores the use of electronic readers in the elementary school setting, future research is warranted. As educators it is our responsibility to continuously provide the evidence of the impact of technology on literacy instruction. Future research on integrating a variety of information and communication technologies in the classroom is necessary in order for teachers to make informed instructional decisions to ensure their students have the skills and strategies required to navigate these new literacies successfully.

Four suggestions I have for future research include exploring the impact of reading on electronic readers on reading achievement; investigating the use of electronic readers with more diverse student populations in varied instructional settings; examining the use of electronic readers for prolonged periods of time to discover the effects on reading engagement, motivation to read, reading attitudes, and reading volume; and comparing the effects of using electronic readers and regular books on students' reading behaviors and achievement.

First, I am interested in gaining more of an understanding of the impact using electronic readers during independent reading has on students' reading achievement.

From my study we know that students became more engaged, motivated to read, positive about reading, and read more. However, I did not measure reading achievement, so we only have self-reported data to show that students made growth in reading. Since the study began as soon as school started in order to complete the study in the first quarter of the school year prior to me returning to work full-time as a first grade teacher, there was no measure of reading achievement given prior to the introduction of the electronic readers. The first reading assessment was administered after the students had been reading on the electronic readers for four weeks. Therefore, it would be interesting to measure the impact using electronic readers may have on students' reading achievement. My prediction is that increased engagement, motivation to read, positive reading attitude, and reading volume would indeed improve students' reading ability. However, in order to make this claim, more research is necessary.

Second, I believe it is important to investigate the use of electronic readers with a more diverse group of readers in different contexts. I am curious how reading on the electronic reader would impact reading experiences and behaviors for students with dyslexia, English as their second language, and differing cognitive abilities, gender, and class. I wonder how providing electronic readers to students without books in their homes might impact their reading behaviors. In addition, I am interested in exploring the use of electronic readers in tutoring settings as well as special education literacy groups. Is it possible to use electronic readers to teach guided reading and what might be some of the issues teachers and students face? New and diverse settings may present new possibilities and challenges for our young readers.

Third, due to the time constraints of my availability to collect data on a daily basis

before I started teaching first grade, I only examined the use of electronic readers in the third grade classroom for six weeks. I am curious if the impact on reading behaviors would be different if students had access to the electronic readers all year. What impact would using electronic readers for an entire school year make on students' reading behaviors? Would students' reading engagement and motivation continue to increase as the school year progressed?

Fourth, comparing the impact of using electronic readers versus regular books on reading behaviors as well as reading achievement may highlight additional informative findings to help guide teachers in the implementation of these digital tools into their literacy instruction. What differences would students experience and how might their reading be affected?

Knowing that literacy instruction in the classroom is impacted by research-based policy, it is important that we continue to research the implementation of new literacies.

### **Reflections**

Reflecting on this study and the impact reading on the electronic reader made on third grade students' reading behaviors according to their perceptions of their experiences as a reading specialist and a classroom teacher, I am excited about the difference electronic readers can make for our diverse students. The way I see it the electronic reader made reading easier for students and as a result they viewed reading as more fun. Thinking reading was fun and having a positive attitude about reading increased students' motivation to read. The more motivated they were to read, the more engaged in reading they became. As a result these students read more and became more confident in their reading ability. The cycle continued because the more confident they were about

reading, the easier reading became. The bottom line for me as an elementary teacher is that students choose to read and enjoy reading. As Beers (1998) writes “If creating lifelong readers is the goal, then every tool is needed” (p.35). In my opinion the electronic reader, according to this study, is one tool we need to ignite a passion.

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## Appendices

## Appendix A

### Kindle Studies

Authors	Date	Participants	Methodology	Purpose	Findings	Publication
Allmang & Bruss	2010	8 scientists, engineers, admin staff	Focus groups	To explore users' impressions and preferences Kindle DX, Kindle 2, iTouch	6/8 preferred Kindle DX	<i>Online: Exploring Technology &amp; Resources for Information Professionals</i>
Clark et al.	2008	36 Texas A & M University	Focus groups	To examine users' experiences and overall impressions	Easy to download and read	<i>Performance Measurement and Metrics</i> Peer-reviewed
	Fall 2009	Arizona State University Case Western Reserve Darden School of Business Pace University Princeton Reed College University of Washington	Interviews Survey	To establish suitability for higher education, effects on learning and teaching process, explore environmental sustainability	Would recommend the Kindle as a personal reading device	
Marmarelli & Ringle	2009	43 undergraduate college students Reed College	Web survey Focus group Email responses	To evaluate the features of the Kindle DX & identify impact on teaching & learning	Unable to meet academic needs Durable	Reed College website
Hearn & McCaslin	2010	21 college students The University of Tennessee at Martin	Experimental Nelson Denny test Reader Self Perception Survey	To determine the Kindle's impact on reading achievement and attitudes	No statistical difference in reading achievement; a statistically significant difference in attitude on 2 questions	SITE Conference- Peer-reviewed
Wines & Bianchi	2010	California Lutheran University	Blogs on Blackboard Interviews Observations	To explore and identify the practices that would best optimize the Kindle's teaching/learning potential		<i>Educause</i> Peer-reviewed

Authors	Date	Participants	Methodology	Purpose	Findings	Publication
Parker, K. Librarian	2009- 2010	Seneca Middle School Seneca, IL 7 <sup>th</sup> & 8 <sup>th</sup> graders	Observations Interviews	To determine impact on reading- to level the playing field	Increased engagement and participation in book discussions	<i>School Library Journal</i> Peer- reviewed
Isley, D. 3 <sup>rd</sup> grade teacher	2010	Burnley-Moran Elementary Charlottesville, VA -3 classes of 3 <sup>rd</sup> graders 19 Kindles	Observations & interviews	To determine the impact of text-to- speech feature on leveling the playing field	Scaffolding, note taking, increased participation in discussions	<i>The Daily Progress</i> Charlottesville, VA
Larson, L. Kansas State University	2010	(2) 2 <sup>nd</sup> graders	Observations & interviews	To determine the impact of Kindle's features on the interaction with text	Self-reported improved reading abilities	<i>The Reading Teacher</i> Peer- reviewed
Maynard, S. Loughborough, Leicestershire, UK	2010	6 children ages 7-12	Journal entries & interviews	To consider the experiences of e-book reading of young children and their families, with currently available portable e- reader devices	All participants chose the Kindle over iPod Touch and Nintendo DS-Lite as their favorite. E-book readers might be beneficial for reluctant readers	<i>Publishing Research Quarterly</i> Peer- reviewed
Siko, K. L. University of NC, Wilmington	2010	41 tutors and 41 tutees (ages 5- 12)	Survey	To determine participants' use of the Kindle during tutoring sessions and their thoughts on the usage of electronic readers in a tutoring environment	1 tutor used the Kindle with tutee; 15 would use a Kindle for pleasure reading and 28 would use Kindles for educational purposes	SITE Conference- Peer- reviewed

Authors	Date	Participants	Methodology	Purpose	Findings	Publication
Milone, M.	2011	(31) 4 <sup>th</sup> graders	Accelerated Reader assessment & survey	To determine the difference in students' comprehension of books read in Kindle versus traditional format	No statistically significant difference 76% claimed the Kindle was easy to use 62% preferred using the Kindle	Renaissance Learning Report

## Appendix B

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## **Appendix C**

### **What is a Kindle?**

The Kindle is a hand-held wireless electronic reader the size of a paperback book that displays electronic books, magazines, and newspapers. On November 19, 2007, Amazon.com released the first Kindle, “named to evoke the crackling ignition of knowledge,” in the United States (Levy, 2007, para. 4). Today there are an estimated three million Kindles in use (Auletta, 2010). In the second quarter of 2010 Amazon.com sold 143 Kindle books for every 100 hardback books (“Kindle Device Unit”, 2010). Electronic book sales grew 163% in May 2010. Since electronic book sales are booming, access to a wide variety of text is ever increasing.

The Amazon.com Kindle is a tablet easily held in your hands (Perenson, 2009). Reading on the Kindle is comfortable due to the high-resolution electronic ink display (600 x 800 pixel resolution at 167 dpi and 16-level grayscale) that looks and reads like real paper. The crisp black words against the white page on the 6-inch screen have the same appearance and readability as printed-paper. The text is very readable and there are eight text sizes in three fonts from which to choose. Unlike the computer screen, the Kindle reflects external light just like paper, making it easy to read and not causing eye fatigue (Gade, 2009). There are several advantages of electronic ink over backlighting used by LCD displays. First, the glare associated with electronic displays is eliminated. Second, there is no need for continuous electricity supply because the pigments rest in their last position without power and only turning the pages requires power. Without a constant need for energy and the drain of a backlight, electronic ink does not use the battery like LCD displays. Finally, the Kindle can be read in bright sunlight or sitting in bed; although, reading the Kindle at night is similar to a conventional book requiring a lamp to make the screen visible.

The size of the Kindle is about that of a paperback book and it only weighs 8.5 ounces, making it lighter than a typical paperback and thinner than a magazine. It is a third of an inch thick; it is not heavy, but sturdy. The Kindle was ergonomically designed for reading, allowing readers to easily hold it and read comfortably for long periods of time. Page-turning buttons on both sides allow readers to hold the Kindle and turn the

pages with either hand. To navigate within the electronic reader there is an easy to use 5-way controller, enabling readers to highlight and look up definitions. The long battery life allows the reader to read up to ten days on a single charge with the wireless on. By turning the wireless off the reader can read up to two months on one charge. When the Kindle does need recharged, it can be connected to an electrical outlet or computer using the U.S. power adapter/micro-USB cable.

Readers using the Kindle have access to over one million books, including 107 of 111 New York Times® Best Sellers and new releases, plus U.S. and international newspapers, magazines, and blogs. In addition, Kindle readers can download thousands of free popular classics and more than 1.8 million free, out-of-copyright, pre-1923 books including titles such as *The Adventures of Sherlock Holmes*, *Pride and Prejudice*, and *Treasure Island*. Project Gutenberg and Baen Free Library are two websites from which a reader can download thousands of free books. WorldLibrary.net and Webscriptions.net offer many books under ten dollars and include a variety of science fiction and fantasy content. With the largest library of any electronic book vendor and nearly every publisher on board, the Kindle may be the best choice of electronic reader to use with elementary students. Not only do students have access to thousands of books, but also other features of the Kindle enhance the reading experience.

In addition to being an electronic reader, the Kindle is also a wireless Web browser and an audio book player. The Kindle uses Sprint 3G wireless network, Whispernet, to deliver books, newspapers, magazines, and weblogs to the reader in less than a minute. One benefit of the Kindle is this wireless Web browser is free of charge with the purchase of the Kindle. In addition, readers can purchase a lower priced Kindle without Sprint 3G wireless network, but access to free WiFi at AT&T hotspots. Kindle supports wireless delivery of and can read unprotected Microsoft Word (DOC, DOCX), PDF, HTML, TXT, RTF, JPEG, GIF, PNG, BMP, PRC, and MOBI files. Readers can send any document to their Kindle and read it anywhere without carrying all those papers around, allowing readers to have all of their text materials in one convenient place to read anytime and anyplace. In addition, many websites are now offering electronic books for sale that are compatible with the Kindle format (MOBI), such as Fictionwise with fiction

and nonfiction titles for young readers (Pappas, 2009). With the Kindle, the reader is also able to download and enjoy more than 50,000 audio titles from audible.com via Kindle's speakers or by plugging in headphones and listening privately anywhere. The reader can transfer MP3 files and podcasts from a computer via USB. In this way, the Kindle can be used as a MP3 player, allowing the reader to listen to music while reading. Listening to music for some readers while reading blocks out all other noise, letting them focus on the words.

Designed specifically for reading text, the appeal of the Kindle for young readers makes it a good choice for various reasons. Children, like adults, who like gadgets will consider them "cool". Specifically, students can do things with the Kindle they cannot do with a conventional book such as quickly search the content, carry hundreds of books around with them, and possess an extra copy of all of their books in their personal library backed up on Amazon.com's servers. Since the Kindle is designed solely for reading books, unlike the computer, iPhone, iPod, and iPad there are no other distractions from phone calls and emails while reading. The Kindle does display pictures in picture books for younger readers, just not in color. Without the bells and whistles of a netbook and other applications (apps) such as games that compete for their time, students will not be distracted from the task of reading ("Will the Kindle," 2009). Students can immerse themselves in reading just as they would with a conventional book.

The Kindle's features specifically designed to support reading allow readers to perform a variety of reading activities such as read, listen to, interact with, and learn from books and an array of other reading materials.

In the following paragraphs I include an explanation of the actions readers can engage in while using the various features of electronic readers and more specifically the Kindle based on information obtained from the *Kindle User's Guide 5<sup>th</sup> Edition* (2010) and my own use of the Kindle.

**Access text.** One of the benefits of owning an electronic reader is the access to a substantial number of books. With 4GB of internal memory, readers can easily have a personal, portable library of up to 3,500 books with them at all times (Carnoy, 2009). Using the Kindle, teachers can provide students with more books than is practical with



conventional books. No longer do students have to wait for other students to finish a popular book and return it to the library; students have instant access to the most popular books at any time. This easy access to thousands of books may entice students to read more (McKool, 2007; Worthy & Roser, 2004).

**Read.** Electronic readers have features that can enhance appeal and engagement in ways not achievable with conventional books. Some examples include the ability for the reader to change the font size or the orientation of the page, listen to the book while reading along, search the book for keywords, access a built-in dictionary, create electronic sticky notes within the book, and listen to music while reading (Schrock, 2006).

In a study conducted by Clark, Goodwin, Samuelson, and Coker (2008), participants used comments such as “cool,” “wow,” “fun,” and “really neat” to describe the excitement they felt using the Kindle (p.124). Because readers find electronic books to be an exciting and cool new medium, they find themselves reading more (Fasimpaur, 2004). Young people find text presented in small chunks and the ability to have more control over the text make reading fun and easy (Fasimpaur, 2004).

Even though an electronic reader allows the reader to get lost in the book just as a conventional book, it does work a little differently than a regular book. To begin, it is faster to turn the pages on an electronic reader than a regular book. Students who struggle with reading and in a sense are still learning to read may benefit from text features designed for younger readers such as larger print size and fewer words per page (DeLamater, 2010). Reducing the number of words per page creates more space between letters and words. Hughes and Wilkins (2000) studied 120 elementary (grades 1-5) students’ reading speed and accuracy using four different font sizes and spacing between words. The accuracy of all students, regardless of age, increased as the font size increased. They found some children in their study benefitted from larger text size and spacing. Based on the results, Hughes and Wilkins (2000) suggest that increasing font size and spaces between words would aid the development of emerging readers’ reading ability, increasing reading speed and accuracy. In addition, Lowe (2003) tracked third and fifth grade students’ use of large print books and found that these students made

significant gains in word recognition and accuracy, comprehension, and fluency when reading larger print text. Seventeen language arts teachers reported similar results in a survey conducted by Thorndike Press (2004). They observed increased comprehension, motivation, vocabulary, reading enjoyment, and willingness to read in students using large print books. In addition, having fewer words on the page was shown to lower struggling readers' anxiety levels (Thorndike Press, 2004). In eliminating this "crowding" phenomenon, sixth grade students with dyslexia, in a study conducted by Martelli, Di Filippo, Spinelli, and Zoccolotti (2009), demonstrated an increase in their reading rate. As readers gain proficiency in reading they develop the ability to read smaller and smaller text (DeLamater, 2010).

Parker discovered in her Kindle pilot study at Seneca Middle School that students prefer the largest font size based on reports from teachers and students (DeLamater, 2010). One teacher commented that all of her students preferred to use the largest font size. Students claimed the larger font size helps them read better and faster (DeLamater, 2010). With the ability to adjust the font size and style of reading materials according to personal preference, electronic readers present a new opportunity in order to improve reading rates for all readers (DeLamater, 2010).

In addition, using the electronic reader's ability to remember the last page read of any book, readers could easily read several books simultaneously without losing their place in each book. Readers can download text on an electronic reader, and also search for additional information on a topic of interest.

***Shop for and sample text.*** Along with Web access, readers can go directly to the Kindle Store via Whispernet to browse for books, newspapers, magazines, and blogs. Amazon.com now offers two versions of the third generation Kindle, each with varying degrees of wireless connectivity. One has 3G wireless and Wi-Fi, while the other has only Wi-Fi. With 3G wireless there is no need for a hotspot (a specific location to access free public wireless broadband network services) because the Kindle uses the same technology as advanced cell phones ("Amazon Adds More", 2009). Since Amazon.com pays for the wireless connectivity, there is not an additional monthly bill for this wireless access. The Wi-Fi only version does require a hotspot to browse the web. However,

Kindle readers do not need access to a computer; they can download books and magazines without hooking the Kindle up to a computer (Berger, 2009).

The electronic reader allows readers to sample a new author or book by simply downloading and reading the beginning for free. If readers like the book and want to continue reading, they are able to buy and download the whole book with one click, right from the electronic reader, and continue reading. Even though the length varies by book, the first chapter of almost any book is available as a free sample (Levy, 2007). After a book has been downloaded, the electronic reader has several features that enhance the reading experience. These features include a text-to-speech option, highlighting and annotating tools, a built-in dictionary, and a search tool.

***Listen to books.*** The text-to-speech feature allows readers to listen to the book, magazine, newspaper, or blog as they follow along visually. This feature is powered by technology by Nuance, the makers of *Dragon Naturally Speaking*, and is accessible through a menu option or a keyboard shortcut (Perenson, 2009). There are two digital voices (Tom and Samantha) to choose from and three different reading speeds: slow, medium, and fast (Perenson, 2009). The voices, slightly stilted, are about 80% natural (Berger, 2009) and unfortunately do not sound as good as the professional voice actors who read audio books (Gade, 2009). However, this feature does allow readers to listen to books while viewing the text. Readers can select the speed at which the text is read, adjusting it to match their own reading rate. The ability to control the speed at which the book is read benefits students who read at a slower pace, allowing them to keep up with the reader. The Kindle allows readers to switch back and forth between reading and listening with a simple touch of a button. In addition, the Kindle saves the reader's spot automatically. While listening to a book the pages automatically turn, permitting hands-free reading and listening on the go, while riding on the bus or walking to school.

The text-to-speech feature can address some of the challenges students with vision problems, language barriers, and lack of fluency present. For those students who learn better by listening while reading, the Kindle's text-to-speech function could be invaluable. However, to increase their reading fluency, it is essential students reread the book after listening to it. Beers' (2003) indicates reluctant readers are more inclined to

read a book after having the first chapter read to them. The text-to-speech feature and the free preview of a book's first chapter could provide this support. As well as listening to text, students can also interact with text using the highlighting and annotating tools.

***Interact with text.*** On the electronic reader, readers have the capability of highlighting text, bookmarking pages, and annotating while they read. Students can capture passages they want to remember using the 5-way controller, an electronic version of a highlight pen, allowing them to interact with the text to a greater degree. Similar to a conventional book, readers can turn the corner of the page to remember significant pages of text in the book. Multiple bookmarks may be placed within one text and easily accessed from the Menu selection "My Notes & Marks".

Furthermore, a reader can add annotations to text while reading by using the QWERTY keyboard, similar to a cell phone. The circular keys are easy to press and incredibly handy. Readers are able to type notes just like writing in the margins or creating sticky notes within the text, enabling students to make connections, ask questions, and predict as they read. There is no limit to the number of annotations a reader can make.

The annotation and highlights are saved on the Kindle and can be downloaded via USB cord to a computer. Using the annotation feature, students have their notes from the book readily available as they write a paper, according to Clausen at Ball State University (Richards, 2009). This highlighting and annotating option could assist students in creating an outline of the material they have read, adding a few summary notes, and transferring this outline to the computer. In this way, students could easily summarize the text, saving money on highlighters and sticky notes.

The electronic reader allows students to practice comprehension strategies. According to Brunner, the deputy director at the Center for Children and Technology in New York City, students could make connections by reading, annotating, and clipping passages ("Will the Kindle," 2009). In fact, students can jot down a brief note of the meaning of a word or words they are reading to aid comprehension (Levy, 2007). In her study, Larson (2010) found students made comments summarizing the plot and pondering character development. She found the digital notes provided insight into what her

students were thinking as they read. Just as the highlighting and annotating tools assist students in engaging with text so does the built-in dictionary.

***Learn new vocabulary.*** The electronic reader has a built-in dictionary for instant lookup of unknown words. It is loaded with The New Oxford American Dictionary, which includes over 250,000 entries and definitions, so readers can seamlessly look up the definitions of English words without interrupting their reading by going to a computer or dictionary to look up the word. The definition will automatically display at the bottom of the screen by simply moving the cursor to the unfamiliar word. Readers no longer have to “fear a sesquipedalian word” as before when reading a conventional book; they can simply look it up and keep reading (“Kindle Wireless,” n.d., Built-in dictionary). To provide appropriate support depending on reading ability, the electronic reader allows a reader to change the default dictionary (Gade, 2009). In this way students are more likely to be able to read and understand the definitions in the dictionary. But if students discover an unfamiliar word in the definition they can also look up that word in the dictionary.

***Search the text.*** Another feature that can aid readers in comprehending text is the search tool. Using the keyboard, readers can search within a text, across the library, in the Kindle Store, or even on the Web. They simply type in a word or phrase they are looking for and the electronic reader finds every instance in the book or across their personal library that it appears. This feature allows students to easily skim and scan for quotes, characters, vocabulary, and specific incidences (Meadows, 2010).

***Share books.*** One more beneficial tool for students is the ability to share books with each other. Even though all Amazon.com books have digital rights management (DRM), which restricts the use and transfer of digital content, Amazon.com allows Kindle users to share books. An electronic book can be downloaded onto as many as six Kindles, as long as the electronic readers are associated with one Amazon.com account. In this way, teachers can pay for one book and download it onto six Kindles, allowing six students to read the same book for the price of one.

To summarize, readers are able to access, sample, read, and interact with a wide variety of text using electronic readers. Based on the description of electronic readers

and more specifically the Kindle and its features, it is easy to understand why the electronic readers with their various features offer readers the potential for an enhanced reading experience compared to the conventional book.

## Appendix D

### Teacher Information Letter

Spring 2011

Dear Third Grade Teacher,

I am writing to ask for your assistance in inviting students to participate in my dissertation study, which is focused on understanding students' experiences using e-readers for recreational reading and the impact on reading engagement. I would be most grateful for your help as I pursue my PhD in Reading at the University of Tennessee.

For my study, I will be observing third graders during independent reading daily for six weeks to discover their reading behaviors using an electronic reader, beginning July 11, 2011. Students will be given an electronic reader with books of their choice loaded on it and will read on the electronic reader during independent reading. In addition, students will be encouraged to share the books that they are reading and discuss their reading experiences on the electronic reader. Optional weekly book discussions will be held after school and videotaped and transcribed.

I need your help to invite students to participate in this study. After receiving consent and assent from parents and students I will contact the parents to re-introduce myself and answer any questions they might have about the study.

Please do not hesitate to contact me if you have any questions or concerns about this process. You are also welcome to contact Brenda Lawson at the University of Tennessee Office of Research (865-974-7697) if you have any questions about student rights.

Thank you so much,

Tammy L. Anderson  
Reading Specialist  
Glacier Peak Elementary

## Appendix E

### **Exploring the Use of Electronic Readers with Elementary Students Study Information Sheet** (Please read to your child)

My name is Tammy Anderson and I am currently a doctoral student at The University of Tennessee in Literacy Studies. I am also a teacher in Adams 12 Five Star Schools. I would like to invite you to participate in a research study to explore the use of an electronic reader with elementary students to develop an understanding of how it may impact reading behavior. I have chosen this study because I am interested in the use of technology in reading.

I am inviting you to help me by using an electronic reader to read books of your choice and participate in an optional weekly meeting to discuss the books you read and your experiences with the electronic reader. You will have the opportunity to read on the electronic reader for six weeks. At the end of the study, the electronic readers will be collected and returned to the schools at which they were purchased. Your reflections on your reading experiences with the electronic reader are very important to me. As a result of this study, I hope to help more students become engaged in reading using technology. The information you provide will help teachers understand factors that may affect students' engagement in reading.

Your participation in this study will be kept confidential, which means your real name will not be used in the study. You may choose a name for me to use in the study. I need you to agree to be audio- and videotaped in order to help me record our discussions more accurately. I will be the only person with access to the audio- and videotapes and they will be stored on my computer that no one else can use. After the study is complete the audiotapes will be destroyed. You may decide not to participate in this study at any time.

I would like to give you a reading interest survey and interview you about the things you like such as books, hobbies, television shows, videos, and computer games. I also want to meet with you every week after school to discuss using the electronic reader. We will discuss the books you are reading and your experiences with the electronic reader. You will also get to write about your ideas in your reading journal. Each week I will stop in your classroom and observe students reading during independent reading. I will interview you two times during the study to see how your reading is going at a time and place that is convenient for you.

I hope you will agree to be a part of this study and join me weekly in discussing books you are reading on the electronic reader.

Sincerely,

Tammy Anderson  
tander30@utk.edu  
303-981-0491



## Appendix F

### Student Assent Form Exploring the Use of Electronic Readers

Hi, my name is Tammy Anderson. I am wondering if you want to help me learn about reading on electronic readers. I want to know what you think about reading on them. You will be able to choose the books you want to read during independent reading.

I want to observe you and other students while you are reading on the electronic reader during independent reading. I also want to talk to you about what it is like to read on an electronic reader. You will also have a chance to meet with me and other students after school to discuss the books you are reading and using the electronic reader, if you choose. Each time we meet I will videotape our conversations.

You can decide if you want to be in the study. You can say Yes or No. Whatever you decide is OK. If, after beginning, you want to stop you can tell your teacher or me and we will not be mad. You will be allowed to continue to read on the electronic reader.

I will meet with you to ask you about your reading interests, like what kind of books you like to read and your interest in hobbies, movies, television programs, videos, Internet websites, and computer games. I will also ask your teacher about your independent reading level based on reading assessments including DRA and running records. This will help us decide what books you want to read on the electronic reader. If you decide to participate in the study, you will receive an electronic reader with books of your choice loaded on it. You will have the opportunity to read on the electronic reader for six weeks, after which time the electronic reader will be returned to me. You can choose to meet with me and other students each week after school to discuss your reading experiences and what it is like to read on the electronic reader. We will also discuss your reading experiences during independent reading each week. You will also have the opportunity to reflect on your reading in your reading journal or using the annotation tool on the electronic reader.

I will also interview two times during the study to see how your reading experience has been so far. I will also stop in your classroom to observe you reading during independent reading.

I think it will be really fun and I think I will learn a lot about reading on an electronic reader from you. You can talk to your parents about being in the study and if you both agree it is okay, sign your name below. Thanks! I look forward to learning with you!

Print your name here: \_\_\_\_\_

Sign your name here: \_\_\_\_\_

Write the date here: \_\_\_\_\_

I will keep the videotapes on my computer while I am working on the study. I might want to use them later to teach other teachers about using electronic readers in the classroom, but I will never use your real name. If that is okay with you, please sign your name below.

Thanks so much!

It is okay for me to be videotaped for this study.

Sign your name here: \_\_\_\_\_

It is okay for Mrs. Anderson to use the videotapes in a presentation about the study.

Sign your name here: \_\_\_\_\_

## **Appendix G**

### **Parent Consent Form Exploring the Use of Electronic Readers with Elementary Students**

My name is Tammy Anderson and I am a doctoral student at The University of Tennessee in Literacy Studies, beginning my dissertation research. Your child is invited to participate in a research project that is designed to discover the effect reading on an electronic reader has on reading behaviors. I am interested in learning about your child's experiences using an electronic reader for independent reading and more specifically how reading on an electronic reader effects your child's reading motivation, engagement, attitude, and reading volume. So if you decide you would like your child to participate, your child will have the opportunity to meet with me and other students after school once a week to talk about his/her reading experiences during the six week period.

#### **Information about Participants' Involvement in the Study**

Your child's participation in this study will include taking an interest survey and having a conversation with me about his/her reading behaviors. The information gathered will assist me in helping your child find electronic books h/she is interested in reading. Your child will read on an electronic reader every day during independent reading time in the classroom. In addition, your child will be allowed to bring the electronic reader home for additional reading time. Your child will be allowed to choose books to read with his/her teacher's approval. At the end of the study, the electronic readers will be collected and returned to the schools to which they belong. In order to help your child choose books at his/her independent reading level, his/her assessment data [Developmental Reading Assessment (DRA) and running records] will be obtained by me from your child's teacher. During independent reading I will be observing your child as h/she reads on the electronic reader. At the beginning of the study I will meet with your child at a time and place that is convenient for you and your child to administer a reading interest survey and interview him/her about his/her reading interests. After six weeks I will meet with your child again at a time and place that is convenient for you and your child for 30 – 60 minutes to interview him/her about his/her experiences using the electronic reader for independent reading. Your child will also keep a reading journal or document time h/she reads on the electronic reader.

The weekly after school meetings and interviews will be digitally videotaped and transcribed to help me record accurately the children's descriptions of their reading experiences. The annotations made by your child on the electronic reader will be sent to my private Twitter account, however; students will use their pseudonym and the option to share these annotations publicly will be turned off on the electronic reader. The only way to view the annotations made by a student is to look at the electronic reader or view them on my Twitter account. Neither is accessible to the public.

This study is considered a human research project; however, the risk to your child for being involved is minimal. Your child's participation in this study is completely voluntary. At any time, your child may discontinue his/her participation in the study or

withdraw from the study without question or penalty by notifying his/her classroom teacher or me. The data collected on your child will be deleted if your child chooses to withdraw from the study. Your child will still be allowed to read on the electronic reader. It is possible that this study, when completed, will be published or presented in a public forum (i.e. a professional conference). Although there is a possibility of recognition of your child on video, his/her real name will not be used and s/he will select a pseudonym. If for some reason, your child's real name is audible or visible, I will digitally mask the name. However, there is still a possibility that your child will be recognized on the videotape. I will strive to protect the identity of all participants. You may choose to allow me to use video clips of your child in my presentations or not. I will not be sending the video clips to another person or posting them online.

This study may help reading educators know more about motivating children to read. We hope your child will enjoy reading on an electronic reader and spend more time engaged in reading.

You may ask questions about the study at any time either before the study begins or during the time that your child is participating. I will be pleased to share the findings with you at the end of the project.

\_\_\_ Initial here to indicate you have read page 1.

Tammy L. Anderson  
12060 Jasmine Street  
Brighton, CO 80602  
Office: (720) 972-5985  
Cell: (303) 981-0491  
Email: [tander30@utk.edu](mailto:tander30@utk.edu)

You are also welcome to contact Ms. Brenda Lawson ([blawson@utk.edu](mailto:blawson@utk.edu)) at The University of Tennessee Research Compliance Office at (865) 974-3466 if you have any questions about your child's rights as a research participant.

If you decide you want your child to participate in this study, please go over the assent form with him/her and return both the assent and consent forms, signed, to your child's teacher. Your child's teacher will then give them to me. I will contact you about scheduling the interviews and weekly after school meetings.

Thank you so much for your time and attention to this important project!

Tammy L. Anderson

I have read the above information and consent form, and I give permission for my child to participate in this project.

**Consent**

I understand that Mrs. Anderson’s study is exploring the effects of electronic readers on students’ independent reading. If my child participates, s/he and I have read the above information. I have received a copy of this form. I agree to have my child participate in this study.

Student’s name:

\_\_\_\_\_

Parent’s Name:

\_\_\_\_\_

Parent’s signature:

\_\_\_\_\_ Date \_\_\_\_\_

I understand that video recordings will be made of my child during interviews and optional weekly after school meetings to aid in transcription. I agree to have my child audio- and videotaped during the interviews and optional weekly meetings.

Parent’s signature:

\_\_\_\_\_ Date \_\_\_\_\_

I understand that these digital recordings may be used in professional presentations, such as conferences and staff development presentations, to report on this research. The videos will not be maintained over 5 years at which time they will be deleted. I understand that my child’s real name will not be revealed in presentations.

I hereby give my permission for these videos to be used by the researcher in the manner described.

Parent’s signature:

\_\_\_\_\_ Date \_\_\_\_\_

## Appendix H

### Silent Reading Behaviors Observation Checklist Third Grade Class

Student	Out of seat	Looking around/skipping pages/not reading	Talking	Total # of off-task behaviors observed	Date: Notes
Trixie					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
Grayson					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
Madison					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
Chelsea					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
TJ					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
Ed					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
James					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N
Nick					1:15 R N 1:20 R N 1:25 R N 1:30 R N 1:35 R N

R= Reading      N= Not Reading

## Appendix I

### Guiding Questions for Interview

1. What are you reading for independent reading?
2. What other books have you read? E-books? Traditional?
3. Which books did you choose to read on the electronic reader?
4. Could you find the books you wanted to read on the electronic reader?
5. How many books have you read on the electronic reader?
6. Tell me about what it was like to read on the electronic reader.
7. How often did you read on the electronic reader? For how long each time?
8. Compared to before you started reading on the electronic reader do you think you read more, less, or the same now?
9. Do you prefer reading on the electronic reader or traditional books? Why?
10. Where and when did you read on the electronic reader?
11. Do you think other kids would want to read on the electronic reader? Why or why not?
12. Did you tell others about reading on the electronic reader?
13. What do you like about reading on the electronic reader?
14. Were there things you did not like?
15. What makes reading easier on the electronic reader?
16. What makes reading more challenging on the electronic reader?
17. Have your feelings about reading changed since you started reading on the Kindle?
18. Have you changed as a reader since you started reading on the electronic reader? How?

## Appendix J

### Reading Interest Survey

1. Do you like to read?
2. How much time do you spend reading?
3. What are some of the books you have read lately?
4. Do you have a library card? How often do you use it?
5. Do you ever get books from the school library?
6. About how many books do you own?
7. What are some of the books you would like to own?
8. Put a check mark next to the kind of reading you like best.

(topics you might like to read about)

\_\_\_ history

\_\_\_ travel

\_\_\_ plays

\_\_\_ sports

\_\_\_ science fiction

\_\_\_ adventure

\_\_\_ romance

\_\_\_ detective stories

\_\_\_ war stories

\_\_\_ poetry

\_\_\_ car stories

\_\_\_ novels

\_\_\_ biography

\_\_\_ supernatural stories

\_\_\_ astrology

\_\_\_ humor

\_\_\_ how-to-do-it books

\_\_\_ folktales

\_\_\_ mysteries

\_\_\_ art

\_\_\_ westerns



9. Do you like to read the newspaper?

10. If ‘yes’, place a check next to the part of the newspaper listed below you like to read.

\_\_\_ Advertisements

\_\_\_ Entertainment

\_\_\_ Columnists

\_\_\_ Headlines

\_\_\_ Comic Strips

\_\_\_ Political Stories

\_\_\_ Current Events

\_\_\_ Sports

\_\_\_ Editorials

\_\_\_ Others: (please list)

11. What are your favorite television programs, videos, DVDs, computer games, and Internet websites?

12. Do you have a computer at home?

13. What is your favorite type of music to listen to?

14. What is your favorite magazine?

15. Do you have a favorite hobby and/or sport? If so, what is it?

16. What are the two best movies you have ever seen?

17. Who are your favorite entertainers and/or movie stars?

18. Do you enjoy having someone read aloud to you?

19. List topics, subjects, etc. which you might like to read about:

20. What do you like to do after school and on the weekends?

21. Say anything else that you would like to say about reading:

# Appendix K

## Reading Log

Date	Book Title	Page or location number	Minutes read	What did you think? Why?

## Appendix L

### Itemized Budget Spreadsheet

Quantity	Item	Individual cost	Total
30	Amazon.com Kindles	\$99 each	\$2,970.00
30	Cases for the Kindles	\$7.00	\$210.00
30	Headphones	\$1.50	\$45.00
300	Electronic books from Amazon.com	Between \$2.99 – \$9.34 each	\$1,500.00
Total cost			\$4,725.00

### Itemized Electronic Book List

# of books	Title	Cost of each book	Total
30	Magic Tree House	\$4.99 each	\$149.70
26	A to Z Mysteries	\$4.89 each	\$127.14
27	Junie B. Jones	\$4.99 each	\$134.73
28	Horrible Harry	\$3.99 each	\$111.72
31	Cam Jansen	\$3.99 each	\$123.69
19	Patricia Reilly Giff books	\$2.29-\$9.29 each	\$86.51
14	Matt Christopher sports	\$4.99 each	\$69.86
10	Encyclopedia Brown	\$3.99 each	\$39.90
10	Step Into Reading	\$3.19 each	\$31.90
10	Gary Paulsen's books	\$4.88 each	\$48.80
10	Rick Riordan	\$5.99-\$9.34 each	\$76.65
10	Hardy Boys	\$5.99 each	\$59.90
10	Nancy Drew	\$5.99 each	\$59.90
8	Fairy series books	\$9.99 each	\$79.92
8	Beverly Cleary - Ramona	\$5.99 each	\$47.92
8	Calendar Mysteries	\$4.99 each	\$39.92
7	Roscoe Riley	\$3.99 each	\$27.93
7	Stink	\$3.99 each	\$27.93
7	Series of Unfortunate Events	\$6.99 each	\$48.93
5	Ivy and Bean	\$4.74 each	\$23.70
5	Ballpark Mysteries	\$4.99 each	\$24.95
4	Flat Stanley	\$4.99 each	\$19.96
3	Mr. Putter and Tabby	\$4.79 each	\$14.37
3	My Weirder School series	\$3.99 each	\$11.97
# of books = 300	Electronic books from amazon.com	Between \$2.99-\$9.34 each	Total cost=\$1,487.90

## **Vita**

Tammy Anderson was born and grew up in Casper, Wyoming. She graduated from the University of Wyoming in 1992, earning a Bachelors of Arts degree in Elementary Education. The first seven years of her teaching career she taught first and second grade at Oregon Trail Elementary in Casper. After moving to Thornton, Colorado she continued teaching. She has taught first, second, and third grade as well as technology. In 2007 she completed a Masters in Education degree with a specialization in literacy from Lesley University. For six years she was a reading specialist in Adams 12 Five Star School district. Upon acceptance of this dissertation, Tammy will have earned a PhD in Teacher Education with a concentration in Literacy Studies from The University of Tennessee, Knoxville in 2012.