

Swipe, Tap, and Read: Research on E-book Tools, Features, and Student Engagement

by

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### Abstract

This study explores the digital tools and features that students had access to and interacted with while reading e-books on Raz-Kids. The goal was to use this information to understand how e-book reading impacted student motivation and engagement. This study was conducted for five weeks, and implemented three days per week with two first grade classes during Daily 5 or Reading Centers. I collected qualitative data by conducting a student survey, documenting the e-books that the student participants read and the digital tools and features that they used, recording field note observations, and conducting audio-recorded interviews with the student participants. Findings were derived from the research. The findings were a) the impact of Raz-Kids on reading engagement; b) first graders' knowledge of e-book tools and features using Raz-Kids; and c) first graders' access to and interaction with e-books outside of the classroom. Conclusions of this research study include that a) student reading experience is influenced by the Raz-Kids star system; b) the quantity of e-book tools lead to exploration; and c) the quality of e-book features impact student reading engagement.

*Keywords:* e-book, Raz-Kids, digital tools, multimedia features

### Introduction

The following excerpt provides a glimpse into one of the ways in which the interactive features of a digital text encouraged Ms. Cooper's second grade students to remain quiet and focused, and engage in conversations with their peers during a reading of *Rapunzel and the Seven Dwarfs: A Maynard Moose Tale* (Claflin, 2011). Maynard Moose combines and amplifies the classic tales of "Rapunzel," "Snow White," and "Sleeping Beauty" with snippets of moose dialect, to tell the quirky story of a long-haired beauty who is locked in a tower by a witch and rescued by both dwarves and a prince.

**Ms. Cooper:** Do you want me to read the story aloud, or do you want to listen to the story?

**Chase:** Hear it.

**Students:** Yeah, let's listen.

**Lila:** [Started listening] Look! The moose is talking. [Giggled]

**Ms. Cooper:** [Pressed the pause button] What does Maynard Moose mean by "unconshable"? [Referred to Maynard Moose's fractured English translated in small pop-up]

**James:** Unconscious

**Ms. Cooper:** What does unconscious mean?

**Lila:** To be asleep

**James:** Yeah, the chair hit the prince on the head. [Laughed] Look! There are stars by his head.

**Chase:** [Intently focused on story] I like this story! It's funny! [Smiled]

This made me think about the multisensory features that contributed to the students' engagement with *Rapunzel and the Seven Dwarfs: A Maynard Moose Tale*. How did the quality of the e-book's features enable the students to have control over this particular reading experience? What would happen if the students engaged in independent reading with digital text? How would the students interact with the digital features of e-books? Would they feel intrinsically or extrinsically motivated to read? These questions led me to investigate the importance of e-books, and explore the different kinds of digital tools and features that students use to engage in literacy practices.

### **Topic and Research Problem**

The integration of electronic books, or e-books, has led educators to focus on redefining their understanding of the literacy curriculum to support students in their ability to effectively access and use new literacies (Leu, 2000). E-books provide new avenues for accessing and interacting with a wide selection of texts (Larson, 2010). Electronic book reading presents multimodal texts and multidimensional representations that make literacy experiences interactive and engaging. Many e-book titles represent quality literature that contain strong writing, interesting language, developmentally appropriate themes, and exciting digital features (Zipke, 2013).

For the purpose of this study, I will characterize e-books as a form of electronic text that contain key features of traditional print-based books, such as pages that turn, though e-books are also equipped with multimedia features, like text-to-speech, embedded images, sounds, animation, and highlighting words or sentences as they are read aloud (Zucker, Moody, & McKenna, 2009). In the same way, e-books are equipped with digital tools such as, allowing students to click on individual words to learn their pronunciation (Zucker et al., 2009). This

study will distinguish e-books from networked information systems, like the Internet, where students can select e-books that include narrative and informational genres.

This study is important, because it may provide information regarding the kinds of e-book tools and features that can help maximize student learning and engagement. Students may benefit from using digital tools and features to successfully interact with and manipulate text (Larson, 2010). If e-books are made readily available to students, then they have the opportunity to engage in new literacy practices that foster literacy development, in particular, reading comprehension and decoding (Larson, 2008). When students have access to e-book tools and features such as, text-to-speech, built-in dictionary, text highlighting, and note-making, they may feel more motivated to actively engage in reading. Furthermore, e-books provide new opportunities and extended possibilities for encouraging readers to actively engage with texts through the use of multimodal features (Larson, 2009). If such research is not conducted, educators may not realize that e-books can motivate students to develop control over their own reading strategies in a multimodal environment.

### **Rationale**

I have very little experience with e-books. However, I realize that e-books have a powerful influence on literacy and learning. E-books promote language and literacy acquisition skills through the use of various digital features (Larson, 2010). I had the opportunity to observe second grade students engaged with an e-book in whole group. The classroom teacher selected an electronic storybook from Tumblebooks (<http://www.tumblebooks.com>), which is an online collection of animated and narrated picture books, and displayed it on the Smart Board. I saw how text highlighting stressed phrasing, and how narration emphasized expression and the mood of the story. The students responded with questions about word meanings. The digital tools and

features helped them make inferences and learn the pronunciation of difficult words. The students' enjoyment was enhanced by the narration, along with the animated illustrations and sound effects that related directly to the storyline.

The classroom teacher chose an electronic storybook, wherein her use of it was purposeful. She engaged her second grade students in an active, constructive experience, where they were able to listen and respond to the text. From this experience, I realize that educators can facilitate enthusiasm for reading digital text, and expose their students to digital tools and features that are not present in traditional print books (Javorsky & Trainin, 2014).

### **Purpose**

The purpose of this study is to explore the types of e-book tools and features that students use to engage with while reading. The goal is to use this information to understand how electronic book reading impacts student motivation and engagement. This study is designed to investigate the importance of electronic book reading, and explore the many types of e-book tools and features that may support literacy development. Furthermore, it is my hope that it might prove to support diverse students' reading development and interests. Therefore, my research questions are as follows:

- What kinds of digital tools and features do e-books offer for accessing and interacting with texts?
- How might e-books impact student motivation and engagement?

In order to explore the types of e-book tools and features that students use to engage in reading processes, I conducted my research study at Oak Ridge Elementary School with Mrs. Smith's first grade class and Mrs. Campbell's first grade class (pseudonyms are used for all people and places). Furthermore, the students had access to and interacted with e-books on

Raz-Kids (<http://www.raz-kids.com>) during Daily 5 or Reading Centers.

I administered the Elementary E-book Survey to every student in both Mrs. Smith's first grade class and Mrs. Campbell's first grade class. Every student took the survey to convey their reading preferences and previous experiences with reading e-books. After the students completed the survey, I coded each one with two distinct colors to separate the student participants from the non-participating students.

I used a double entry journal to take field notes. I also used a recording log to document the e-books that the student participants read, and the tools and features that they interacted with. I used the recording log, and the double entry journal to take field notes every Monday in the computer lab, where students had access to and interacted with e-books on Raz-Kids. I also used the recording log, and took field notes every Wednesday in Mrs. Smith's first grade classroom, and every Thursday in Mrs. Campbell's first grade classroom.

I conducted and used a password protected audio recording device approximately forty-five minutes every Wednesday in Mrs. Smith's first grade classroom, and every Thursday in Mrs. Campbell's first grade classroom, to record student interviews with three student participants. I interviewed different students in the back of the classroom each time I conducted interviews. I transcribed the audio-recorded interviews into typed notes using pseudonyms for all names.

## **Literature Review**

This literature review will outline some important studies with respect to: digital reading devices that enable students to access e-books; the impact of e-book tools and features on literacy development, with subtopics that focus on how e-book tools and features support reading comprehension and decoding; the impact that e-books have on student motivation and engagement; and access to technology. This section will describe the research on which this study is built, and also reveal the gaps that this study is designed to help fill.

### **Digital Reading Devices for Accessing E-books**

Digital reading devices, like the Amazon Kindle, Barnes and Noble Nook, and Apple iPad, offer interactive multimodal tools and features (Larson, 2012). According to Jones and Brown (2011), e-books are available through two main sources: online websites and hand-held devices. Digital reading devices, or e-readers, enable students to gain immediate access to a wide selection of e-book titles (Jones & Brown, 2011). Leu (2000) discussed how the integration of information and communication technologies (ICTs) encourages teachers to expand their perceptions about what constitutes literate activity. He proposed that teachers should make the effort to integrate technology effectively, to help students become proficient when reading books electronically. Teachers must prepare students for the unique demands of new literacy technologies (Leu, 2000).

Hess (2014) conducted a study that investigated the long term effects of using e-readers in the classroom. The e-reader chosen for this study was the Nook, in which ten devices were purchased from Barnes and Noble, with e-book titles selected and downloaded as a result of student reading levels and interest, and teacher selection based on curriculum (Hess, 2014). She found that students indicated a greater desire to have more access to the e-readers. Having the

Nooks in the classroom enabled students to access more current reading material. Her research revealed that a one-to-one ratio would be most effective; students would have access to their own personal e-reader during independent reading and guided reading (Hess, 2014).

McClanahan, Williams, Kennedy, and Tate (2012) conducted a study that investigated the integration of the iPad into structured literacy lessons, for tutoring sessions with a fifth grade struggling reader with Attention Deficit Hyperactivity Disorder. The iPad was used as an intervention tool to help address the student's areas of need. The researchers found that the use of the iPad offered instructional strategies to support a plan of action for the student (McClanahan et al., 2012).

Schugar, Smith, and Schugar (2013) developed recommendations that encourage teachers to focus on "seeing the iPad as a technology that could enhance their current literacy instruction" (p. 618). It is important for teachers to familiarize students with the basics of the e-reader. They suggest that teachers help their students transfer their existing strategies from traditional print reading to reading e-books on the e-reader (Schugar et al., 2013). They argue that mobile devices have great potential for classroom instruction, yet teachers must consider many factors that include: whether or not the e-reader allows students to access suitable content; the type of support students will need in order to read e-books on the device; the ratio of devices to students; and the financial constraints (Schugar et al., 2013).

Brown (2016) developed an extensive study that investigated the digital reading experiences of second grade students who interacted with Nooks at an urban Title I school. The second grade class was comprised of culturally and linguistically diverse students, who were taught by a monolingual teacher (Brown, 2016). Brown discussed how e-readers, like the Nook, can raise opportunities for choice and interaction as students engage in making meaning through

interactive texts. She also addressed how many students have limited access to technology-based devices (Walsh, 2006, as cited in Brown, 2016). In this study, she instructed digital reading workshop mini-lessons with small groups of students, inquiring about the technology tools that they used to help them understand the text (Brown, 2016). She conducted open-ended student interviews, to explore how the Nook helped the students become better readers, and how the e-reader tools helped the students understand the text (Brown, 2016). And so, she found that the Nook enabled the students to “re-play an entire page in the book, a small section of text, or a word with one click” (Brown, 2016, p. 47). This allowed the students to listen to any part of the text that they had difficulty interpreting, in order to build comprehension. Next, she found that the students were more enthusiastic about reading and displayed more confidence, which resulted from the interactive features (Brown, 2016). She also found that the students preferred talking with one another about the digital books that they were reading. According to Brown, the interactive features of the digital books enabled the students to actively participate in the reading process, whereby they were able to articulate their thoughts and ideas about the text. Lastly, she found that the Nook provided the students with a sense of control over their social and personal engagement with the text.

### **Impact of E-book Tools and Features on Literacy Development**

Many e-books employ multimodal tools and features that invite diverse learners to engage in new literacy practices that foster literacy development, in particular, reading comprehension and decoding (Larson, 2008). E-books have tools and features that support and extend students’ understanding of text such as, text-to-speech capabilities, highlighting key words and important information, note-taking tool, and find or search function to navigate text.

E-books also have tools and features that promote language acquisition, such as built-in dictionaries.

**E-book tools and features support reading comprehension.** E-books enable diverse learners to access and interact with tools and features that support reading comprehension. Grimshaw, Dungworth, McKnight, and Morris (2007) conducted a study that investigated the differences in children's comprehension and enjoyment of storybooks according to the medium presented. The researchers found that the provision of narration, accompanied by animated illustrations and audio, enabled the children to retrieve information and make inferences from the electronic storybook (Grimshaw et al., 2007). The researchers also learned that the children found the narration tool to be helpful when they encountered words that were difficult to read (Grimshaw et al., 2007).

Larson (2010) conducted a qualitative case study with two second grade students of diverse reading levels and linguistic backgrounds, to investigate how the Kindle enabled them to "advance e-book readership" as they interacted with text using tools and features unique to the e-reader (Larson, 2010, p. 17). She found that the e-book tools and features promoted new literacies and extended the students' connections as they engaged with and manipulated the text (Larson, 2010). She also found that the Kindle put both students in greater control of using new literacy skills and strategies when reading the text (Larson, 2010). Furthermore, the digital note tool allowed the students to engage in comprehension processes, to annotate understanding of the text, make text-to-self connections, ask questions and find answers to questions in the text, as well as respond to text features (Larson, 2010).

McClanahan et al. (2012) discussed how a fifth grade struggling reader with Attention Deficit Hyperactivity Disorder utilized many different e-book features to focus on sequencing,

recalling details, drawing inferences, and identifying cause and effect. She found that the e-book features helped the student become “metacognitive about his reading” (McClanahan et al., 2012, p. 24). He was able to record his own voice as he read aloud. This enabled him to listen to his own reading in order to catch all of his mistakes. The student was also able to make notes to indicate his response and reaction to the text. For instance, he was able to use a check mark to indicate something already known, a question mark to specify something that did not make sense, and an exclamation mark to indicate something that was very important (McClanahan et al., 2012). The integration of aural modality, accompanied by visual and kinesthetic, helped to address the student’s comprehension difficulties (McClanahan et al., 2012).

Gonzalez (2014) conducted a study that investigated the significant difference in oral retelling and comprehension performance on multiple-choice questions when students with reading disabilities in third and fourth grade read e-books under three different book formats. She focused on how the students utilized the e-book features, in addition to how e-books help facilitate the comprehension of students with reading disabilities (Gonzalez, 2014). She found that the text-to-speech tool helped the students’ comprehension when measured through oral retellings. The text-to-speech tool allowed students with reading disabilities to effectively work in their zones of proximal development and perform at a higher level (ZPD; Vygotsky, 1978, as cited in Gonzalez, 2014). Otherwise, the study results revealed that the e-books did not have an effect on comprehension when measured through multiple-choice questions (Gonzalez, 2014). As cited in Dillon (2006), multiple-choice questions entail different thought processes and have many flaws (Gonzalez, 2014). Oral retellings on the other hand, require students to use different cognitive processes to verbally reconstruct the text in a holistic approach (Gonzalez, 2014).

**E-book tools and features support decoding.** E-books have the potential to alleviate students' decoding difficulties by utilizing tools and features that can help them develop new vocabulary and phonological awareness. Larson (2010) found that the Kindle featured a readily accessible built-in dictionary, which was used during the study for two second grade students to look up the meaning of words and to help decode words. When the students encountered difficult words when reading aloud, they accessed the built-in dictionary to decode them. The built-in dictionary was also helpful for decoding multisyllabic words and to learn the meaning of short, unfamiliar words (Larson, 2010).

Shamir, Korat, and Fella (2010) conducted a study that investigated the effect of e-book engagement on vocabulary, phonological awareness, and the concept of print of preschool children at risk for learning disabilities. The preschool children who participated in the study were identified as having developmental delays that placed them at risk for learning disabilities (Shamir et al., 2010). The researchers found that the preschool children who were exposed to e-books displayed greater emergent literacy development compared to children who participated in listening to the book's printed version read by an adult (Shamir et al., 2010). Even though the children in both groups were exposed to explanations of the same unfamiliar words, the researchers found that e-books had a stronger effect on vocabulary acquisition and retention (Shamir et al., 2010). The dictionary mode provided auditory explanations in combination with pictures that supported word meaning. Another finding of this study involved the improvement in "sub-syllabic phonological awareness" as the children interacted with the e-book (Shamir et al., 2010, p. 62). The children more easily internalized the phonological structure of the words, because they were able to simultaneously listen to and view the words in a multimedia format (Mayer, 2003, as cited in Shamir et al., 2010).

### **Impact of E-book Tools and Features on Student Motivation and Engagement**

E-books can be utilized to increase engagement and motivation to read. Ciampa (2012) conducted a qualitative study that investigated first grade students' experiences with and attitudes toward reading e-books. She built her study around key constructs of motivation that included intrinsic and extrinsic motivation, and self-efficacy and competence beliefs (Ciampa, 2012). She explained how students are more likely to readily engage in literacy activities when they feel they are competent (Bandura, 1977, as cited in Ciampa, 2012). She used field notes and a motivation-to-read questionnaire to record every student's level of engagement, which included any comments regarding e-book tools and features, in addition to the students' attention, posture, eye gaze, and nonverbal behaviors (Ciampa, 2012). Ciampa found that the students were on-task and highly engaged during e-book reading sessions. She also found that they shared enthusiasm and interest in the e-book reading sessions. When the students were given the chance to reflect on their experiences, they discussed qualities such as, "self-determination, choice, and stimulation" as reasons for enjoying the sessions (Ciampa, 2012, p. 123).

Jones and Brown (2011) conducted a study that explored the level and amount of time that children spent engaged in e-book reading, in order to predict their motivation to read. Jones and Brown more specifically investigated the effects of e-books on third grade children's reading engagement. The researchers found that access to a wide variety of e-book titles was a strong motivator for engagement (Jones & Brown, 2011). Additionally, the researchers learned that the content, theme, setting, and plot of the e-book had a strong effect on the children's motivation (Jones & Brown, 2011). They also learned that the children remained engaged in e-book reading when afforded a choice of what to read (Jones & Brown, 2011).

Ciampa (2012) conducted a pilot study that investigated several first grade students'

engagement during e-book reading sessions. She used an online reading program that contained a “collection of leveled fiction and nonfiction e-books with embedded comprehension questions,” to explore student enjoyment and attitude toward e-books (Ciampa, 2012, p. 32). Furthermore, she created additional interactive features for the text such as, animations and sound effects, to modify the e-books for the study (Ciampa, 2012). The students had the choice to listen to stories read aloud to them, in which her voice was the narrator, or they could read the story silently to themselves without using the read aloud feature. Otherwise, the students could click the speaker icon located at the bottom of the page to listen to the text again. The e-books also contained a forward and backward button, to enable the students to return to previous pages or continue onto the next page (Ciampa, 2012). Next, she created a questionnaire to understand the students’ “digital reading practices, experiences, and attitudes,” to determine whether or not their reading motivation aligned with their reading behaviors (Ciampa, 2012, p. 36). In addition to the questionnaire, she used a behavior observation checklist, to record the students’ responses and behaviors while engaged in the digital reading sessions (Ciampa, 2012). She defined the students’ level of engagement based on their reading behaviors that included: reading aloud or along with the story; making comments or questions before, during, and after reading; and using positive, goal-oriented nonverbal behaviors (Ciampa, 2012). And so, she found that students were on task and highly engaged, and devoted their attention to following along with the moving, highlighted words in the text (Ciampa, 2012).

### **Access to Technology**

The advancements in technology have resulted in the use of electronic reading systems for digital text (Wright, Fugett, & Caputa, 2013). The impact of available electronic devices and their use within society have led to changing the mode of reading material from traditional

paper-based reading to electronic book reading, in addition to a wide range of other digital texts. Numerous studies have shown the benefits of electronic book reading as an effective way to enhance literacy skills. Many researchers agree that e-books aid in reading comprehension and improve literacy acquisition for students with learning disabilities (Wright et al., 2013). E-books provide an opportunity for teachers and students to “connect and share knowledge, build relationships through literacy developing activities, and enhance stimulation in literacy enriched environments” (Strickland & Morrow, 1989, as cited in Wright et al., 2013). Electronic book reading enables students to read for educational purposes and learning new knowledge.

Needless to say, there are poorly funded school districts that do not have access to an electronic reading system for digital text. Since poorly funded school districts are not provided with electronic readers, the students do not have the opportunity to access and interact with e-books. Leu (2000) however, argues that students must be able to effectively use new literacies of information and communication technologies to reach higher levels of academic achievement. School districts must consider the quality, benefits, and possibilities of integrating an electronic reading system, especially with a generation of readers who are exposed to all sorts of digital technologies in their daily lives outside the school environment (Larson, 2009).

### **Summary**

This research study explores the types of e-book tools and features that diverse learners use to engage with while reading. The goal of this research study is to use this information to understand how e-books impact student motivation and engagement. The research study is designed to explore the importance of electronic book reading, and how e-books support diverse students’ reading development and interests. Students will gain valuable skills in the area of information and communication technologies (ICTs). There are a variety of digital reading

devices, or e-readers, which help students access and interact with e-books. Many e-books are accompanied with tools and features that are interactive and allow for students to become actively engaged in the text. The tools and features of e-books support both reading comprehension and decoding. E-books are efficient, inexpensive, and available electronic resources that can easily affect the selection of reading materials in elementary schools (Jones & Brown, 2011).

## **Methodology**

This research study is designed to explore the types of e-book tools and features that students use to engage with while reading. This study is designed to investigate the importance of electronic book reading, and explore the many types of e-book features that may support literacy development. In this section, I will discuss the participants and context, positionality of the teacher-researcher, data collection methods I used, and the procedures. I will describe each data collection instrument used, and how each instrument addressed the research questions. I will also outline the procedures that were used to the conduct the study.

### **Participants and Context**

I conducted my study with two first grade classes in a public school that had access to e-books. A maximum of twenty students from the two first grade classes took part in this study. The age range was from seven-years-old to eight-years-old. The school, which I will refer to as Oak Ridge Elementary School (all names in this study are pseudonyms) is located in an urban-suburban area of western New York.

According to the 2014-2015 New York State Report Card, there were approximately 943 students enrolled at Oak Ridge Elementary School. The student population was predominantly white, with ninety-two percent of the students identifying as Caucasian, one percent was black or African American, five percent identified themselves as Hispanic or Latino, and two percent of the student population identified themselves as multiracial. There were 470 students who were identified as male and 473 students who were identified as female. Ten percent of the student population was identified as students with disabilities. Economically disadvantaged students accounted for thirty-two percent of the population (New York State Education Department, 2015).

### **Positionality of the Teacher-Researcher**

As the teacher-researcher of this study, I am positioned in my role in terms of the social and cultural factors that I share with the school. I am a white, middle class female pursuing my Master's degree in Literacy Education B-12 at The College at Brockport, SUNY. I am also certified in Early Childhood Education B-2, Childhood Education 1-6, and Students with Disabilities 1-6. Currently, I substitute teach in two different urban-suburban school districts located in western New York.

### **Data Collection Instruments and Analysis**

During the course of this study, I used several data collection methods. The data were collected using a student survey, a recording log to record the types of e-books that student participants read and the accompanying tools and features, field notes, and a password protected audio recording device to record open-ended interviews with the student participants. These methods provided insight into how the student participants accessed and interacted with e-books, and how digital tools and features allowed the students to become actively engaged in the text.

**Student survey.** I used the Elementary E-book Survey, which I created, to assess the students' reading preferences and previous experiences with reading e-books (see Appendix A). The survey was administered to all of the students. I chose to create my own survey, so that I could understand the nature of the students' e-book reading experiences.

**Recording log.** I utilized my own original recording log to document the e-books that the student participants accessed on Raz-Kids, and the accompanying tools and features that they interacted with (see Appendix B). Additionally, I recorded the student participants using their allotted pseudonyms, to help recall which e-books each student read, and the tools and features that they used.

**Field notes.** I also used a double entry journal, adapted from Tovani (2000), to keep field notes, to record my inquiries, reactions, and inferences as I observed student participants engaging with e-books during Daily 5 or Reading Centers (see Appendix C). My field notes helped me focus on the students' level of engagement and specific reading behaviors. My field notes also allowed me to document any comments made by student participants as they interacted with e-books.

**Audio recording of student participant interviews.** I conducted interviews with three student participants in Mrs. Smith's first grade class every Wednesday for approximately forty-five minutes during Daily 5. I conducted interviews with three student participants in Mrs. Campbell's first grade class every Thursday for approximately forty-five minutes during Reading Centers. The interview questions elicited responses about the student participants' e-book title preferences and favored e-book tools and features (see Appendix D). The interview questions were also open-ended to ensure that student participants justified their responses. These interviews were recorded using a password protected audio recording device. There was minimal risk of missing instructional time while the students completed the interview. To minimize this, I kept the interviews brief. Each interview took approximately fifteen minutes.

## **Procedures**

This study was conducted over a period of five weeks, during February and March of 2016. I implemented the study two days per week during Daily 5 or Reading Centers in two first grade classrooms. I also implemented the study every Monday during computer lab, where students had access to and interacted with e-books on Raz-Kids.

First, I sent the informed consent document home with each student prior to the start of the study, along with a cover letter that introduced myself, and explained the research study and

the informed consent document. I gave the parents or legal guardians approximately five days to return the document. Once I received all informed consent documents, I gathered only the students whose parents or legal guardians gave their consent to allow their child to participate in the study. The students whose parents or legal guardians did not give consent engaged in a separate activity led by the classroom teacher. After that, I read the minor assent form aloud to only the students who had consent to participate in the study. I read the minor assent form aloud to both first grade classes, but at separate times.

I also administered the Elementary E-book Survey to every student in Mrs. Smith's first grade class and Mrs. Campbell's first grade class. After the students completed the survey, I coded each one with two distinct colors to separate the student participants from the non-participating students.

Finally, I used a double entry journal to take field notes. I also used a recording log to document the e-books that the student participants read, and the tools and features that they interacted with. I used the recording log, and the double entry journal to take field notes every Monday in the computer lab, where students had access to and interacted with e-books on Raz-Kids. I also used the recording log, and took field notes every Wednesday in Mrs. Smith's first grade classroom, and every Thursday in Mrs. Campbell's first grade classroom.

I conducted and used a password protected audio recording device approximately forty-five minutes every Wednesday in Mrs. Smith's first grade classroom, and every Thursday in Mrs. Campbell's first grade classroom, to record student interviews with three student participants. I interviewed approximately twenty student participants. The student participants were selected through random sampling without replacement. I drew slips of paper with the student participants' names from a paper bag. If a student participant was absent, then they were

not removed. I interviewed different students in the back of the classroom each time I conducted interviews. I transcribed the audio-recorded interviews into typed notes using pseudonyms for all names.

### **Data Analysis**

Findings were discovered as a result of this research. The findings were (a) the impact of Raz-Kids on reading engagement; (b) first graders' knowledge of e-book tools and features using Raz-Kids; and (c) first graders' access to and interaction with e-books outside of the classroom.

#### **The Impact of Raz-Kids on Reading Engagement**

While observing and conducting interviews with student participants in both first grade classes during Daily 5 or Reading Centers, I noticed that the students were driven by the incentives and awards on Raz-Kids rather than actively reading leveled e-books. Raz-Kids is an online reading program that reinforces independent reading and enables students to practice reading comprehension skills (<http://www.raz-kids.com>). Raz-Kids supports literacy and learning with digital tools and features such as, audio, follow-along highlighted text, tools for highlighting, Individual Word Audio playback that reads words aloud to support phonics and fluency development, and vocabulary cards that provide information and context about key vocabulary words in a text (<http://www.raz-kids.com>). Students closely read leveled non-fiction and fiction e-books with multiple choice comprehension questions that focus on essential understandings of the text. What is more, the e-books and comprehension questions increase in difficulty and complexity as students progress to the next level. Thus, the incentives and awards, like Robot Builder and Raz-Rocket, prevent the students from actively engaging with the leveled e-books, and result in questionable reading behavior.



Figure 1 iPad snapshot of student Book Room on Raz-Kids. This figure shows the collection of leveled fiction and non-fiction e-books, and the number of stars earned.



Figure 2 iPad snapshot of Robot Builder and Raz-Rocket

Students were distracted by Robot Builder and Raz-Rocket when they were logged on to Raz-Kids during Daily 5 or Reading Centers. Several students were focused on earning stars for completion or success with listening to and independently reading the leveled e-books, and completing the multiple choice comprehension quizzes. What is more, the stars are used to buy

exciting items to personalize Raz-Rocket and create a customized robot. Students earn ten points for listening to the story, fifty points for independently reading the story, and one hundred points for successfully passing the quiz. If students receive a perfect score on the comprehension quiz, then they earn one hundred fifty points. For instance, Gabriella exclaimed, “Look at how many stars I have!” after listening to *Country Places*. Gabriella received ten points for listening to the story. Even though she should have read the story next, she chose to navigate to Robot Builder to purchase a hat for her robot avatar.

On the other hand, Christopher animatedly pointed out the total number of stars he earned every time I observed him. He explained how he would only listen to the stories and complete the comprehension quizzes; he chose not to read any of the stories. Needless to say, students must complete the listening, reading, and quizzes for every leveled e-book in order to move on to the next reading level. This made me wonder about how Christopher would advance to the next reading level when he chose not to read any of the stories. This also made me wonder about Christopher’s reading preferences. Fortunately, Christopher explained how he would flip through the pages of each story, and earn fifty points despite the fact that he did not actually read the story.

In the same way, Travis excitedly declared the total number of stars he earned for simply listening to and completing the comprehension quizzes. He stated, “I can read really fast now,” while quickly flipping through the pages in *Maria Joins the Team*. Then, he exclaimed, “See! I’ve got 50 stars now!” After that, Travis listened to *Whose Eggs Are These?* and once he finished listening to the entire story he exclaimed, “Yes! How much did I get? I’m going to be able to buy a thousand things!” Needless to say, Travis was more focused on earning as many stars as he could, so that he could purchase a mustache for his robot avatar. He was less engaged

with the text and more involved in the pursuit of competition and prosperity.

Therefore, the star system encourages students to engage in listening to and reading expository and narrative e-books, and successfully completing comprehension quizzes, in order to earn tons of stars to purchase exciting items. However, the star system discourages students from engaging in close reading. Instead of remaining on-task and increasing the amount of time spent reading, students were going on a shopping spree! Enthusiasm for reading books on Raz-Kids did not flourish; and so, students were not being productive and taking control over their digital reading experiences.

During the interviews, many students were excited to talk about Robot Builder and Raz-Rocket rather than sharing their most and least favorite books on Raz-Kids. For instance, I conducted an interview with Thomas, and prompted him regarding what he liked about Raz-Kids in the following excerpt:

**Mrs. Winans:** What do you like about Raz-Kids?

**Thomas:** Mmm [Pause] that you can get stuff.

**Mrs. Winans:** What kind of stuff can you get?

**Thomas:** You can get stars.

**Mrs. Winans:** What can you do with the stars?

**Thomas:** Um, you, um, buy like kid's stuff from like [Pause] you can get stuff for your robot or your rocket ship.

**Mrs. Winans:** Can you change your robot on Raz-Kids?

**Thomas:** Yeah! [Smiled]

**Mrs. Winans:** How can you change your robot? Do you need to read more books on Raz-Kids in order to change your robot? [Thomas interjected]

**Thomas:** Yeah! To get stars, um, you have to read.

**Mrs. Winans:** Interesting [Smiled]

**Thomas:** I can show you with my iPad! [Grabbed his iPad]

When I conducted an interview with Gabriella however, she wanted to show me how to access and interact with Raz-Rocket, along with telling me what she was doing in the following excerpt:

**Mrs. Winans:** When you finish reading a book, you listen, read, and take a quiz on the story. Do you earn stars?

**Gabriella:** Yes

**Mrs. Winans:** Where do the stars go?

**Gabriella:** Up here [Pointed to the top right hand corner of the screen]

**Mrs. Winans:** Do you have to try and earn as many stars as you can?

**Gabriella:** Yeah, and then you go back to your rocket ship, and then you can get, like, animals and your planet.

**Mrs. Winans:** Very nice

**Gabriella:** And I got a princess planet! [Exclaimed]

**Mrs. Winans:** A princess planet? Wow! [Smiled]

**Gabriella:** Yeah, and it's all pink! [Exclaimed]

**Mrs. Winans:** What else can you tell me about Raz-Kids?

**Gabriella:** When you go to Star Zone, you can do your robot or you can go to your spaceship, and it will load for a minute.

**Mrs. Winans:** Okay. We have to give it a second.

**Gabriella:** This all I got [Pointed out all purchased items]

**Mrs. Winans:** Are these the different things that you have bought with your stars?

**Gabriella:** Yeah [Pause] and that's my princess planet [Pointed out a pink castle]

**Mrs. Winans:** Now, what can you do with Raz-Rocket? Are there different activities?

**Gabriella:** You can make this guy bounce. You can make this guy move. This guy [Pointed to the green alien] since there isn't enough room, he used to just disappear, and then he'll move over here [Pointed to the left side of the screen]. He'll turn white and just stay right there.

**Mrs. Winans:** Can they all do different things when you click on them?

**Gabriella:** Yeah

**Raz-Kids adversely affects reading engagement.** Raz-Rocket and Robot Builder prevented students from actively engaging with leveled fiction and non-fiction e-books. Moreover, students were spending more time playing with the two activities instead of reading e-books. This impacted student achievement, and resulted in adverse reading behaviors. It also led students to develop a lack of reading enjoyment.

On the other hand, several students were able to explain why they enjoyed reading e-books on Raz-Kids. Ansley stated, "It helps me learn more about stuff," and when she was asked about what kinds of things she learned on Raz-Kids, she articulated that she learned about animals, food, and bees. Daniel stated that he enjoyed reading books on Raz-Kids, because "some are nonfiction and some are fiction." During Daniel's interview, I asked him what his most favorite book was that he read on Raz-Kids. He identified *At the Rodeo* as his most favorite book, because he was fascinated with the illustrations of the cowboy riding both a wild bull and wild bronco. Nevertheless, Ansley was not able to identify the title of her most favorite book, but she described it as "that leaf book with trees that lose leaves," and explained that she enjoyed

reading it, because she liked reading about how the leaves change in autumn. What is more, while observing Ansley and Daniel during Daily 5 or Reading Centers, I noticed that they remained on-task and expressed positive, nonverbal behaviors after listening to and independently reading an e-book. Both students showed a higher level of engagement compared to their classmates.

Similar to the pilot study that Ciampa (2012) conducted, where she explored student enjoyment and attitude toward e-books, I focused on observing Ansley and Daniel's reading practices while they were engaged in reading from a collection of leveled fiction and non-fiction e-books on Raz-Kids. Ciampa (2012) used a behavior observation checklist, to record several first grade students' responses and behaviors while engaged in digital reading sessions. She had hoped to determine whether or not the students' reading motivation aligned with their reading behaviors (Ciampa, 2012). Reminiscent of this pilot study, I chose to define Ansley and Daniel's level of engagement based on their reading behaviors that included: reading aloud or along with the story; devoting their attention to following along with the moving, highlighted words in the text; and engaging in face-to-face dialogue with nearby classmates regarding their reactions to the story.

**Raz-Kids supports reading engagement.** Reading enjoyment stemmed from the students' ability to freely choose e-books on Raz-Kids that sparked their interest and were at their reading levels. This impacted student motivation and reading engagement, because students could read great quantities of developmentally appropriate e-books, choosing fiction and non-fiction titles, at their own pace. And so, the experience of choosing e-books based on reading pleasure heightened motivation and reading engagement.

### **First Graders' Knowledge of E-book Tools and Features Using Raz-Kids**

Again, Raz-Kids is an online reading program that supports literacy and learning with digital tools and features (<http://www.raz-kids.com>). There are a variety of features that can be seen across all leveled fiction and non-fiction e-books on Raz-Kids such as audio, follow-along, highlighted text, forward and backward button, pause button, and portrait or landscape book orientation. Fiction e-books display animation and sound effects; however, non-fiction e-books present key words in bold font, photographs and diagrams, and include a glossary. What is more, these digital features were observed as students engaged in listening and reading to e-books on Raz-Kids. There are also a variety of digital tools that students can access and interact with, in order to practice actively reading while exploring the content, which include: tools for note-taking; drawing; highlighting; stamping; Individual Word Audio playback; eJournal; and vocabulary cards (<http://www.raz-kids.com>). Needless to say, students had access to and were able to interact with: Individual Word Audio playback that was referred to as hear the word; the highlighting tool; vocabulary cards; and eJournal that was referred to as My Word Journal.

There were two key features that were prominent as I observed students reading e-books on Raz-Kids. First, I noticed that animated illustrations captured the students' attention as they listened to and read fiction leveled e-books. As Parker listened to *Grasshopper's Gross Lunch*, I noticed how the grasshopper lifted his sandwich, and the way the grasshopper repeatedly blinked throughout the story. Ansley also listened to *Grasshopper's Gross Lunch*, and I noticed that the grasshopper displayed emotions such as, frowning to express frustration and smiling to express happiness. In the same way, Leah listened to *The Sky is Falling*, which depicted many different forest animals blinking repeatedly throughout the story. While Cassidy silently read *Groundhog Goes Outside*, I noticed the movement of snowflakes falling, to represent the winter season, and I

also noted how the groundhog waved good-bye to the characters in the story. All of these students responded to these features by directing their classmates' attention to the computer screen while pointing to the features.

On the other hand, Adrien reacted to the baby bear's thought bubbles in *Where Is Cub?* to find out which home was the baby bear's home. When Adrien reached the part in the story where the baby bear asked the mother bird if her nest was his home, he shook his head back and forth twice. As a result of Adrien's interaction with the text, I found that animated illustrations attracted his attention, but it also proved to inform, to tell about the events in the story. Animated illustrations enable children to retrieve information and make inferences, which subsequently supports reading comprehension and leads to enjoyment of storybooks (Grimshaw et al., 2007).

Second, I noticed that the follow-along, highlighted text helped the students stay on-task and focused. As Ansley read *Ants, Ants, and More Ants* and Madeline read *Ocean Animals* in the computer lab, they both used the cursor on the computer screen, to point to each word in the text while quietly reading. Likewise, Jenna used the cursor on the laptop screen while silently reading *Animal Coverings* during Reading Centers; however, she highlighted each sentence in the text prior to reading the sentence. Since the students were at higher reading levels, they had access to follow-along text, but the words in the text were only highlighted in red while read aloud with audio. The students mimicked this reading strategy by using the cursor to help guide their independent reading of the text. And so, by synchronizing the highlighted text with the narration, the students are able to keep track of the text, which can promote their understanding of the story (Shamir et al., 2010).

Similarly, there were two key tools that were prominent as I observed and interviewed students. First, many students used the Individual Word Audio playback, also known as hear the

word, which enabled students to hear the pronunciation of unknown key words while reading leveled e-books. In the computer lab, Blake was reading *The Sky is Falling* when suddenly he came across a word he did not know how to pronounce. He leaned over and asked Ashley how to pronounce the word “falling,” and she read the word aloud for him. Then, he clicked on the word “falling” and selected “hear the word,” while leaning in closer to the computer screen to hear the word pronounced. Finally, Blake re-read the sentence, placing emphasis on the word “falling” clearly and accurately. Digital tools thus help students build new vocabulary and phonological awareness, which subsequently alleviates decoding difficulties (Larson, 2010).

In the same way, Parker used the Individual Word Audio playback tool to hear the pronunciation of the words “hooked” and “pelican” in the non-fiction e-book, *This is a Bird*. Parker did not ask any classmates for help. He clicked on each word and selected “hear the word,” and then verbally repeated each word after it was pronounced by the audio. Parker used this tool every time he encountered the words “hooked” and “pelican” while quietly reading the e-book aloud to himself.

Likewise, Gabriella used the Individual Word Audio playback tool to hear the entire pronunciation of the sentence, “Some plants grow in sand,” in a non-fiction e-book. Gabriella listened to the audio read aloud the sentence first, and then she paused the e-book, and quietly re-read the sentence aloud to herself.

When I prompted students about the kinds of tools that they were familiar with, or had accessed and interacted with while reading books on Raz-Kids, several students identified Individual Word Audio playback. Furthermore, the students referred to it as a tool that allowed them to learn how to say a word that they did not know. Thomas stated, “Yeah, you click on the word and it [Pause] you can do, like, read it to me, or like, you can highlight it.” Cassidy

supported Thomas' statement by explaining how to use the tool in the following excerpt:

**Mrs. Winans:** There is another tool that you can use when you don't know what a word says.

**Cassidy:** Yeah

**Mrs. Winans:** Can you tell me about this kind of tool?

**Cassidy:** I do that sometimes when I don't know a word.

**Mrs. Winans:** How do you use the tool?

**Cassidy:** I just click on that word, and on the top one it says hear the word. I don't do the other ones though.

**Mrs. Winans:** Do you use this tool a lot?

**Cassidy:** Mmm, no, because I mostly know the words.

Thomas and Cassidy understand that they have to click on an unknown word and choose the first selection that says "hear the word," in order to learn how to pronounce it. The Individual Word Audio playback can be accessed while students are listening to and independently reading fiction and non-fiction leveled e-books. Of course, as Cassidy stated, students only use this tool if they do not know how to say a word, and in most cases, students prefer not to access it, because they feel that they know all of the words in the text.

The highlighting tool was also prominent as I observed and interviewed students. Mohammed stated, "You can highlight stuff when you press it," and ended the conversation by clarifying that the highlighter can be used "when you're reading." What is more, most students did not know the reason for using this tool; however, Cassidy suggested that the highlighting tool could be used like a bookmark, to save unknown words for further practice. When I interviewed Gabriella, she was able to describe how to use the highlighting tool:

**Mrs. Winans:** When you are reading on Raz-Kids, like you are today, do you use any tools to help you read?

**Gabriella:** Uh, no.

**Mrs. Winans:** Did you know that there is tool to help you learn how to say words that you don't know?

**Gabriella:** Yeah, and also when I click on the words, sometimes I can highlight them.

**Mrs. Winans:** Can you tell me more about how to use this tool?

**Gabriella:** Yeah. And also, if you wanted to, you could just highlight all of the words and click on it again, and click on a word, and you do [Pause] and you click remove, and it removes all the highlight.

In addition to Gabriella's interview, I had the opportunity to observe her accessing and interacting with the highlighting tool while reading a non-fiction e-book. I noticed that she read aloud the sentence, "Some plants grow in sand," and then highlighted each word in the sentence. She repeated the exact same reading behavior with the sentence, "Some plants grow in water," on the next page in the book. In the same way, I noticed Thomas using the highlighting tool to highlight the word "bagged" while reading a fiction e-book. I found myself captivated by the way he used the highlighting tool after that. He proceeded to highlight all of the text on the page, then silently read the text, and finally removed all of the highlighting before turning the page. Both observations show how Gabriella and Thomas were exploring how to interact with the highlighting tool, but lacked understanding about the purpose of the tool.

Most of the students were familiar with Individual Word Audio playback and the highlighting tool while listening to and independently reading books on Raz-Kids; nonetheless, the students were not able to identify vocabulary cards and eJournal, also known as My Word

Journal. Needless to say, Cassidy was the only student who took the initiative to explore the eJournal.

I had the opportunity to observe Cassidy adding words to her eJournal or My Word Journal, while reading *Maria Joins the Team* in the computer lab. She told Mrs. Campbell that she never knew that she could do that before. Every now and then she would leave her chair to share her inquiries about My Word Journal with Mrs. Campbell. Finally, Mrs. Campbell walked back to Cassidy's chair with her in tow, and explained how she could use My Word Journal to work on words that she did not know. Next, Cassidy clicked on the word "baseball," and then selected My Word Journal, telling Mrs. Campbell that she knew what the word "baseball" meant, but wanted to use it as an example to learn how to use the tool. After Mrs. Campbell and Cassidy filled in her eJournal together, Cassidy decided to add the word "amos" to the next entry. She typed "a name" for the definition of amos, and typed "my name is amos" for using the word in a sentence. After that, she left her chair and walked over to Mrs. Campbell, asking, "What if you don't know a synonym?" In addition to this inquiry, she asked, "Could you do a word that you don't know what it means?" Mrs. Campbell nodded. Unfortunately, Cassidy did not have time to type in a synonym for amos, because her first grade classes' computer lab session had reached the forty-minute mark.

### **First Graders' Access to and Interaction with E-books Outside of the Classroom**

Digital reading devices such as, the Apple iPad, Amazon Kindle, and the Barnes and Noble Nook, have great potential for literacy instruction within the classroom, as well as supporting literacy experiences outside of the classroom. Digital reading devices can provide students with a sense of control over their social and personal engagement with text (Brown, 2016). Students share excitement about using digital reading devices, which are similar in size

and shape to traditional print books (Larson, 2010). The environment where actual reading occurs, along with reading position and context, greatly affects students' overall reading experiences (Larson, 2010).

What is more, I found that several students had access to digital reading devices outside of the classroom. Most of the students stated that they had access to an iPad or Kindle, and read with family members, including parents and siblings. Leah explained that she prefers reading independently using her iPad. In addition, she stated that she reads with her mother first, so that she can practice reading to her two-year-old cousin. McKenzie stated that she has a younger brother who enjoys playing on her iPad. She explained that she has a book app, where she can read "tons of books" nearly every day. McKenzie happily declared, "I love that app! I have this unicorn chapter book that I'm starting to read, and I'm on chapter four!" In the same way, Travis stated that he has his very own Kindle. He explained, "I can only play games on it for one hour, and then I have to read books on there. I can listen to books, too."

McKenzie and Travis displayed low reading motivation and engagement while accessing e-books on Raz-Kids during Daily 5. They were off-task and demonstrated disruptive behavior; they had difficulty beginning and following through with different activities, like listening to and reading e-books. Even though both students showed low reading motivation and engagement, they expressed more interest in reading books on their own digital reading device. Self-determination and choice thus, are important motivational qualities that contribute to students' reading experiences (Ciampa, 2012).

## Discussion

### Conclusions

Although this research study was based on five weeks of data collection, I was able to draw conclusions as a result of analyzing field note observations and transcribed interviews. I have concluded that a) student reading experience is influenced by the Raz-Kids star system; b) quantity of e-book tools lead to exploration; and c) quality of e-book features impact student reading engagement.

First, I have concluded that student reading experience is influenced by the Raz-Kids star system. I learned that many students were motivated to successfully complete the different activities on Raz-Kids, because they were determined to earn stars, so that they could purchase various items for their spaceship and robot avatar. During interviews, several students were very excited to describe the star system rather than share their most favorite book that they had read on Raz-Kids. Some students preferred to show me the number of stars they had earned, present their spaceship and robot avatar, and demonstrate how to earn the stars while logged on to their account. Also, I learned that students selected e-books based on their reading interest. They would complete the different activities such as listening to the story, independently reading the story, and taking the comprehension quiz, in sequence and earn more stars than if they chose an e-book that was mind-numbing. According to Zucker, Moody, and McKenna (2009), distractions can draw students away from digital text, where the students' reading experiences no longer lead to an educational learning outcome.

I have also concluded that the quantity of e-book tools lead to exploration. When students realized that they could access the highlighting tool and the eJournal, also referred to as My Word Journal, they were in awe. During interviews, I questioned students about these tools, and

when I learned that some students knew what the tool was, but never used it before, I decided to take the interviews toward a different route. Instead of questioning about the tools, I had the students log on to their accounts and show me how to use the Individual Word Audio playback, also referred to as hear the word, because this was the only tool that they knew how to use. When the students clicked on a key word in the text, in order to reach the Individual Word Audio playback tool, they noticed the other tools listed below. Many students expressed excitement, and were determined to try out the tools with different e-books. In the same way, Cassidy was the only student who explored the eJournal. She took it upon herself to learn how to use the tool through inquiry and practice. And so, digital tools and features foster students' understanding of text, and effectively support their language and literacy development (Shamir et al., 2010).

Lastly, I have concluded that the quality of e-book features impact student reading engagement. Students were able to interact with the text and illustrations. The animated illustrations and disembodied narration enabled students to process visual and auditory information. Furthermore, the follow-along, highlighted text was shown as the audio played, and it was illustrated sentence by sentence and word for word. This enabled students to visually match the narration to the written text. Similar to a paper-based text, students pointed to the digital text with their index finger while following along with the narration. I learned that students could turn pages on the iPad from right to left by touching or tapping on the screen; page turning could only occur by clicking on the forward or backward button when using the classroom laptops. Therefore, e-book features support and extend students' understanding of the text, and allow interactions to occur within the text (Schugar et al., 2013).

### **Implications**

I have developed two implications that may benefit classroom teachers and primary grade

level students. These implications may promote new literacy practices, and extend interaction between the reader and the text as students construct knowledge about how to interact with digital tools and features on Raz-Kids (Hess, 2014). The implications I suggest for classroom teachers and primary grade level students are to a) teach and model how to access and interact with the digital tools on Raz-Kids; and b) monitor student progress on Raz-Kids.

First, classroom teachers should teach students about the different kinds of digital tools and features, and also model how to access and use them during reading. By giving students the opportunity to learn about the digital tools and features on Raz-Kids, students become curious and raise inquiry, similar to the way Cassidy questioned how to fill out her eJournal. Many students did not interact with any of the digital tools and features, though when students were given the opportunity to explore them, they were in awe and appeared very excited. Teachers need to play an active role by demonstrating how to access the interactive tools and features, and set expectations for students during and after reading (Schugar et al., 2013). The teachers at Oak Ridge Elementary School do not have to focus entirely on the usability of the iPad, because students have the technology skills needed to access e-books. However, teachers should facilitate individualized learning regarding usability of the device, as well as helping students transfer existing strategies to electronic book reading experiences (Schugar et al., 2013). Teachers could invite students to the reading group table, to show them how to apply strategies to e-books, as a way of helping them build reading comprehension and improve literacy acquisition skills. In the same way, teachers could invite students to share what they have discovered as they explore the digital tools and features.

Next, classroom teachers should monitor student progress on Raz-Kids. Teachers must keep track of each students' reading level, and also ensure that students are logged on to their

own Raz-Kids account. For instance, Travis decided to log on to his classmate's account, making sure to receive permission from his classmate first, to complete the quizzes that that student struggled with. Travis helped his classmate receive stars, so that the student could purchase more items for his robot avatar. Teachers should only allow students to access Raz-Rocket and Robot Builder during indoor playtime or recess. By taking away these two activities during Daily 5 or Reading Centers, students will have opportunities to develop positive reading behaviors and spend more time actively engaged in reading. Also, teachers can monitor student progress by writing messages to their students on Raz-Kids, to express praise and encouragement regarding students' reading achievements. Needless to say, many students reached high reading levels on Raz-Kids, in which they became easily frustrated and discouraged. Most of these students were simply turning the pages of the e-books without actively reading, and they did not use the digital tools and features; and so, they barely earned any stars at the higher levels, because they could not read the words and understand the main ideas in the text. That is why classroom teachers should conference with students, to listen to them read for a short amount of time and provide feedback. This would be an opportunity for the teacher and the student to talk about his or her reading progress, and to ensure that the book level is suitable for the student.

### **Limitations**

The first limitation of my research study was the number of student participants. There were many students who had permission to participate in the study, but chose not to give their assent, because they were skeptical and felt apprehensive. As my research study came to end, some students who did not give their assent even though they had permission, became eager to participate, because they had the opportunity to view their classmates' interviews and developed a sense of wonder. The second limitation of my research study was the wide range of electronic

devices used to engage in reading e-books on Raz-Kids. Moreover, the student participants had access to two or three classroom iPads, three classroom laptops, and then all of the students used computers with a keyboard and mouse in the computer lab. Students were not always able to use the classroom iPads to read e-books on Raz-Kids. When student participants used the computers in the computer lab, many students did not have a clear understanding of how to navigate to the Raz-Kids website after logging on to their school accounts.

### **Suggestions for Future Research**

One suggestion I have is to conduct this study with a larger sample size, and in addition to this, make observations and conduct semi-structured interviews with upper elementary grade level students. I have learned that every fourth and fifth grade student at Oak Ridge Elementary School has access to an iPad, and they are permitted to bring them home to complete school assignments, as well as use them during classroom instruction. Furthermore, I would be able to investigate how fourth and fifth grade students annotate text using digital tools while engaged in close reading. Another suggestion is to study primary grade level students using only the iPad to listen to and read digital text. For this reason, the school district would need to equip primary grade level classrooms with more iPads, so that students would have greater access to the iPad; therefore, having more opportunities to explore the digital tools while engaged in close reading. Many students have prior experiences with these devices, which means classroom teachers would not have to familiarize the students with the usability of this device.

### **Overall Significance**

The findings in this research study have provided insight regarding the types of digital tools and features that students used to engage with while reading e-books on Raz-Kids. The findings also provided insight about how electronic book reading impacted student motivation

and engagement, in addition to the way e-books supported students' reading development and interests. The findings presented in this research can serve to educate and inform classroom teachers, who employ Raz-Kids during Daily 5 or Reading Centers, so that they can better understand how to play an active role in motivating their students to actively engage with e-books on Raz-Kids.

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**Appendix A: Elementary E-book Survey****Elementary E-book Survey**

NOTE: You can skip any question if you want to

**I read my e-books:**

Circle any that apply:

- On an e-book reader (NOOK, Sony Reader, etc.)
- Using an app on a smart phone, iPad, etc.
- On a computer
- Other

**I like to read:**

Circle all that apply:

- Fiction
- Non-fiction

**How do you feel about reading e-books?**



Very Happy



A Little Happy



A Little Upset



Very Upset

\*Adapted from McKenna & Kear, 1990

**When do you use e-books?**

**If you use e-books during reading workshop, how long do you read for?**

Circle the one that best applies:

- Under 30 minutes
- Between 30 and 60 minutes
- 60 minutes
- It depends

**Would you like to see the school library offer e-books?**

Yes

No

**What types of e-books would you like to see the school library offer?**

Fiction

Non-fiction

**Books and authors that I have enjoyed reading include:**

1.

2.

3.

4.

5.



**Appendix C: Double Entry Journal**

<b>FIELD NOTES</b>	<b>QUESTIONS/REACTIONS/INFERENCES</b>

**Appendix D: Research Participant Interview Questions****Research Participant Interview Questions**

1. Do you enjoy reading e-books on Raz-Kids? Why or why not?
2. Do you read e-books at home? Do you read e-books with any of your family members? Who? Why?
3. What is your most favorite e-book that you have read? What is your least favorite e-book that you have read? Explain.
4. Which e-book tools do you use? Can you describe how to use the tool?
5. If you prefer not to use e-book tools, can you explain why you choose not to use them?
6. Which e-book tools do you use the most? Which e-book tools do you use the least? Why?