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The Digital Reading Experiences of Middle School Readers: A Phenomenological Study

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THE DIGITAL READING EXPERIENCES
OF MIDDLE SCHOOL READERS: A
PHENOMENOLOGICAL STUDY

A Dissertation

by

LAURA A. HAYWARD

Submitted to the Graduate College of
The University of Texas Rio Grande Valley
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OF MIDDLE SCHOOL READERS: A
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December 2019

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ABSTRACT

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Reading digitally is part of the 21st century New Literacies, residing in the curriculum as a comprehension skill developed with print reading skills. Differences exist between purpose of digital reading and print reading, manifested in the association of digital reading as a mostly non-fiction genre, the immediacy to digital information and its relevance to a reader's decision about the usefulness of the information. Contrastingly, print reading can be fiction or non-fiction with access to all the text. The differences suggest that learning focused on immediate evaluation, synthesis, and application of information while reading digitally should be taught in the context of digital reading.

This hermeneutic phenomenological study examined digital reading experiences of eight middle school students. Using indepth interviewing to describe and understand the experiences, findings are presented as themes. The findings contribute to the ongoing discourse of digital reading, teacher preparation and development, curriculum, new literacies, pedagogy, and turning research into practice.

DEDICATION

Dedication is a multi faceted word: blessing, commitment, single-mindedness.

With all of those, the pursuit and opportunity to finish this journey has been possible with the unwavering support of my husband, Paul. Thank you.

Ian and Meredith, our two children, who lovingly listened as cheerers. We support each other in everything we do. We are a family and nothing is more important.

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CHAPTER I

INTRODUCTION

As our society continues to embrace technology, including the K-12 learning environment, its impact is being felt and seen in the way instruction is delivered. Given that online reading is content based, (Leu & Forzani, et al., 2014) and as students are continually expected to engage in digital reading to access school, lessons, and homework, attention must be given to understanding how middle school students are thinking and developing (or not) reading comprehension in online and digital text. Recognizing the breadth and depth of their print and digital reading experiences, we can begin to understand the nature of how digital reading comprehension develops in 21st century learners. This hermeneutic phenomenological research study can help inform K-12 and teacher educators, district personnel and curriculum writers about the experiences of students who are reading digitally by having the students tell about and describe these reading experiences in school.

This chapter introduces the fundamental constructs in understanding the issue of students who are experiencing the expectation of adapting print reading skills to foster digital reading. 21st century learners are expected to gain digital fluency throughout their K-12 schooling, therefore, readers should have a basic grasp of its importance. An emerging area of research, the process of securing digital reading skills is not well understood, although research is showing that digital reading requires different skills than print reading. Findings from the few studies that exist, demonstrate there is a relationship among the platform, reading, and comprehension. This

study lets the experience of those who are using their print reading skills to gain digital reading fluency skills to be examined in detail to generate an understanding of the essence(s) of the experience.

Introduction to the Problem

How reading occurs within our society and in schools has changed. Before this century, the linear process of reading print was the same in both in and out of school time. Decades and centuries ago, reading meant sitting down with a printed book, magazine, or newspaper. Reading in the 21st century includes all those, and using any number of touch -devices available in the market, a laptop or desktop computer (Rideout, 2014). Transactional ways of engaging with text are new in this century and have been especially pronounced in the last decade offering what Rideout (2014) calls a “major transition point in the history of reading” (Rideout, 2014, p. 7).

Ng and Graham (2017) suggest that the 21st century gives a new environment and circumstances for understanding reading. Leu, O’Byrne, et al., (2009) add that the Internet has broadened the relationship of the reader to online reading allowing interactions to develop reading comprehension. With the acknowledgement of how reading comprehension online is different than traditional print reading, Leu and Forzani, et al., (2014) found that students lacked online reading comprehension skills, especially evaluation and synthesis of information.

Although this century has seen an overall decrease in the amount of time middle - schoolers spend reading for pleasure, there has been a slight increase in reading comprehension of proficient readers and beyond along with a slight decrease in those with basic reading levels (National Center for Education Statistics, 2017). This century offers more choices and ways to read, however, not all students are making gains over time to situate them for success in high school and beyond.

Statement of the Research Problem

Understanding the experiences of middle school students with a considerable background in print reading and presumed to develop digital reading comprehension skills using their print reading skills is significant within our technological society as school districts decide to use any number of computing technological devices in and for learning. As more schools adopt blended learning approaches, giving learners more control over when and how learning occurs, digital reading is naturally a normal part of the structure of a blended learning environment. Though not an exhaustive list, digital reading can be a website, blog, or digitized text. Differing types of text require differing ways to engage with it. Websites and blogs may include hypertext links embedded within the content. Digitized text may include links for pronunciation or read aloud features (Matteucci, 2014). As blended learning continues to influence the learning environment, how students comprehend the content as it resides on the Internet is important to understand.

Digital reading is an emerging area of research, and for adolescent reading, it is studied within the context of large standardized test results that are, with a few exceptions, traditionally print-based. Few studies consider the students' viewpoint. It is, therefore, necessary that the characteristics of the daily processes of digital reading are described by those who engage in it.

Purpose and Significance of the Problem

The purpose of this hermeneutic phenomenological study was to examine middle school students' experiences in digital reading. While there is much research on student's motivation to read that conveniently includes a component of digital reading, scant research exists focusing solely on middle school digital reading. Blended learning gives students partial control over when learning occurs, also giving them choice in the order of their learning events (Innosight Institute, as cited in Vanderkam, 2013). As a researcher in a school that has adopted blended

learning, I witness on a daily basis the expectation that students know how to purposefully engage with technology for their learning. The anticipated student automatic transmigration of skills by teachers and administration is significant.

Looking first to recent research on middle school students' attitude and motivation to read, the separation between academic reading and reading for pleasure is a dichotomy recognized by middle school students (Mckenna, Conradi, Lawrence, Jang, & Meyer, 2012). Academic reading for marginalized students is situated in the perception of the utility of the skill (Louick, Leider, Daley, Proctor, & Gardner, 2016) and motivation is strongly correlated to this perception. While marginalized readers are not aware of their own efficacy in gaining reading skills, they are keenly aware that a proficient teacher can help them get better (Hall, 2016), but how their peers think of them as proficient readers, their academic public persona, is just as much a negative motivator (Louick, et al., 2106).

Historically, the No Child Left Behind Act of 2001 did little to foster, strengthen, and exploit technology's advantages. Gradual adoption of iterations of digital tools has been slow and is not universally present in today's K-12 educational environment. Amalgamating technology, content, and pedagogy (Mishra & Koehler, 2006) continues to be problematic even as teachers intentionally construct lessons and consider student engagement paramount (Admiraal, et al., 2017). Like print reading, digital reading in middle school is viewed separately as part of the learning landscape (Leu, Zawilinski, Forzani, & Timbrell 2014). Teachers give students assignments both in print and residing within a digital platform. Middle school students are expected to be similarly practiced in print and digital reading. As important, reading comprehension is an integral part of high stakes testing with specific standards and benchmarks at each grade level. The paucity of recent research on marginalized middle school readers

(Ciullo, Lembke, Carlisle, Thomas-Newman, Goodwin, & Judd, 2016; Duncan, McGeown, Griffiths, Stothard, & Dobai, 2016; Fletcher, 2014) is concerning especially given that print [sic] reading performance indicators demonstrate only marginal gains have occurred over the last 25 years (National Center for Education Statistics, 2017). This time -period is congruent with the rise of and adoption of technology in our society, suggesting that while there are more ways to read and engage in reading (Rideout, 2014), it is unclear whether measurements and data gathered by high stakes testing fully reveals the abilities of students who are engaged in digital reading and if there are differences in ways learners read digitally that high stakes tests do not address (Coiro & Dobler, 2007).

This research informs several audiences. Practicing professionals, school administrators, curriculum developers, and educational researchers will benefit as developing an understanding of what is needed by each so that middle school digital reading becomes secure. As a reading teacher, I wanted to know the nature of the experience- their thoughts, feelings, beliefs, and perspectives as they experience the phenomena of digital reading to more fully understand the expectations placed upon students. Little research exists addressing the perspective of middle school readers who are impacted in this shifting of skills, leaving a valuable insight out of the research and discourse. This research gave richly detailed descriptions of the phenomena of digital reading through each participant's experiences, feelings, beliefs, and through an examination of their academic day. A hermeneutic phenomenological study is the most appropriate approach when the focus is to examine the lived experience to find the essence of it (Van Manen, 2016a).

Research Questions

The overarching research question in this study is as follows: How do middle school students acquire and foster digital reading comprehension skills? To address the research question, three sub questions will be addressed:

1. In what ways do middle school students leverage print reading strategies and skills for digital reading?
2. How do middle school students comprehend digital content?
3. How does digital reading shape the learning environment?

Researcher Positionality

In my role as a Reading Interventionist, I see the difficulties students have with reading. My professional role is a Grade 6 and 7 Interventionist supporting and teaching students who are reading and comprehending 2-3 years below their assigned grade level. I teach small groups of students (no more than six at a time) in a separate classroom space. These students have been identified as needing Urgent Intervention in reading. The designation of Urgent Intervention is determined by a district wide common individualized adaptive technology online reading test named REN 360. Interestingly results from the online test give an individualized reading grade equivalent level to be used with print reading materials. Those who receive an overall score equal to three grade levels below their current grade, are considered at highest risk for reading failure, and therefore, need Urgent Intervention. The REN 360 and the expectation that I use print reading materials for teaching and learning exemplifies the systemic expectation that print and digital reading are equivalent.

With its own curriculum designed to spiral through the regular curriculum, the Literacy teacher is not considered an English Language Arts (ELA) teacher, but an Interventionist. An Interventionist is responsible for building student reading and comprehension skills. All students in a Literacy class are reading and comprehending at least two grade levels below their assigned grade, so a 7th grade student would be reading and comprehending at a 5th grade or below (< 5) in their independent reading and comprehension skills.

Like the students I work with and who eagerly use technology, I also embrace the opportunity to implement blended learning. Students willingly use hand held devices in the classroom environment, although not all like to use an iPad, which is the adopted school device to be used by the students to access academic content on the school district's adopted learning management system. At the onset of the school year, a school wide daily common time was devoted to introducing students to the learning management system (LMS), predicated on a nearly 100% device check-out. This did not happen, making the time set aside for learning about the LMS less effective. As the school year progressed, additional iPad check out dates were announced giving more iPads to students. The timing was not aligned with the LMS introductory lessons, leaving those students with a deficit in their learning.

As students progressed in their reading skills, it became apparent that with each reading concept being taught and placed on the digital platform in the LMS, students required continual lessons in how to access and engage with the application. This effectively slowed down the curriculum pace. While students read, they were also expected to engage with the text within the iPad for close reading (Fisher, Frye, & Hattie, 2016). A manifestation from my observations suggested that a dual engagement was expected of students.

Ultimately, I am seeking an understanding of how to best support students as they navigate an academic environment expecting success from them, within a system that is uncertain how to support the digital reading expected of them. Unknown to me is the type of support the educational community at large can provide to facilitate and enhance digital reading.

Conceptual Frameworks

Constructivist framework

This study was informed by a social constructivism framework. According to Creswell (2013) social constructivism values multiple viewpoints of a phenomenon. The beliefs of the individuals experiencing the events ring true for them so all viewpoints are honored. The nature of the explanation and its occurrence has happened to many participants, providing a space to discuss the meaning among the participants. Value is also placed on the negotiated meanings among the group. Disparities, distinctions, comparisons, and parallels exist among any group of learners. As humans, we are unique, but we are not so unique that a feeling of connectedness offering support helps draw us together (Vygotsky, 1978). Students may be experiencing a phenomenon as an individual, but within the space of a classroom there are many affordances for assistance. Teaching students on unfamiliar computer platforms has been a common experience for me. The opportunity to help students delve deeply into one platform, the iPad, presented itself as the research site received funding granting every student an iPad at no cost to the student with a monthly allocation of 5 gigabytes of free data. Parents and guardians of students are required to purchase insurance for the iPad, which is \$20.00 for the academic year.

As the school year continued, I noticed that some students were not bringing their iPads to school, even though in the classroom, students had weekly assignments as part of the workshop model for student centered instruction. When reminding students of accessing lessons

and working independently, some students responded by saying very few teachers made assignments in the district's learning management system, where lessons in my class were placed to be accessed by students. Students often opted to use their phone or the classroom computers to complete classwork.

This hindrance had the unintentional consequence of developing academic habits so familiar to students they did not see the reason to learn to navigate on an unfamiliar platform. Further, as lessons created demonstrated how to create an artifact using an app on the iPad, students expressed frustration with having to think about a work around using their own device. In some instances, students could not use a desktop computer to complete assignments; they had to use a handheld device. These recurring scenarios effectively limited my ability to guide and engage students in robust ways using the iPad.

Some students brought their iPads as expected, using it to complete lessons. These students became proficient users. When necessary these students assisted others to navigate both apps and the iPad platform.

Lesson assignments included reading on the iPad. Instead of reading, some students wanted to access the QR code embedded in the reading assignment to hear it read to them. As students were expected to engage in close reading (Fisher, et al., 2016), I noticed student preference for reading partners or reading in small groups even on a second or third close reading. I also became aware that using the iPad as a platform for reading, annotating for close reading (Fisher, et al., 2016) was more difficult than simply using paper and pencil. Students were easily able to annotate using paper and pencil, however, I noticed students were just as engaged when annotating on the iPad. The conversation included not only the content, but also different ways to access functionality. Even with intentionally developing "digital capital"

(Morgan, 2010), I recognized that asking students to use print skills for digital reading could be more burdensome than simply migrating the skill of reading. Completing the close reading assignment on the iPad was more than merely using the iPad as a substitute for a print assignment, although the actions of the students demonstrated a willingness to do so. Attempting the task on the iPad positioned learners as working in a standard based, content driven curriculum (Giroux, 2010) lacking connections and struggling cognitively while aligning constructs and experiences making it difficult for students to understand his/her own place in the world. Pinar, Reynolds, Slattery, and Taubman (2008) make a comparable suggestion with “currere”, (p. 518) a method to examine personal experiences and position them within learning.

Exploring the digital reading experiences middle school students have, allows their voice to be recognized and situated in their learning environment, as part of the academic environment. As mentioned previously, I observed and participated in the accepted norm that students can use their print reading skills for digital reading engagement and those skills would be enough to support their digital reading.

New Literacies framework

The New Literacies theoretical framework also informed this study. New Literacies helps to view and reflect upon the research findings and reactions in a rich, fluid environment, simultaneously being a keen observer of who is defining the literacy and under what circumstances (Leu, O’Byrne, et al., 2009). A two tiered framework that addresses technology underscores the relationship of using technology while developing digital reading. Leu, O’Byrne, et.al., (2009) expanded the view of New Literacies to include upper case and lower case identifiers, which is unique in its presentation simply because of the rapidly changing technological environment for all of humankind. Upper Case New Literacies unites the

commonalities from the discovery of all literacy practices of the 21st century and includes acknowledging the Internet is a manifestation of the global community and practices around the Internet require lower case new literacies understandings, each unique. Knowing how to access and gain knowledge is a distinguishing feature on the Internet because of its multifaceted way information is presented, and as such, New Literacies theory recognizes it is continually evolving. Both critical analysis and shared practices are important components of the New Literacies (Leu, Zawilinski, et al., 2014). Lower case new literacies accepts and embraces the diversity of technology, viewpoints, and connection to its setting for examination. This distinction acknowledges that literacy also includes the way technology is mediated to “read, write, and communicate” (Leu, O’Byrne et al., 2009, p. 265).

Definition of Terms

In this research study, the following terms and definitions will apply:

- Biliteracy: in the context of this research, having equivalent dispositions to understand and apply the characteristics of print and digital reading in the same language.
- Digital reading: in the context of this research, any non-print reading material read on a technology based platform with the intention to understand what is read.
- Emoji: pictographs representing feelings, objects, and faces.
- Learning Management System (LMS): a software management system that supports, tracks, and manages online learning.
- Literacy: any experience that informs and contributes to background knowledge
- New Literacies (upper case): comprehensive view of Internet based forms of literacy that include all perspectives of discourse, semiotics, and multimodal communication.

- new literacies (lower case): based on upper case New Literacies, one dimension of it; a specific area such as text messaging, or digital reading.
- QR code: a label to access information. Using a scanner or camera, the coding is read allowing a user to access a web site or other digital medium.

Assumptions, Limitations, and Delimitations

Several assumptions exist in this study. This study was intended to give those who experience the phenomenon of digital reading in the academic day an opportunity, or voice, to reflect upon and talk about their experiences as digital readers. The limited number of participants allows for richness of understanding of the phenomenon in the study, but there is no causation about the findings. Hermeneutic phenomenological studies focus on capturing the essences of the experience under examination. Its intention is to add another viewpoint to the discourse of the topic. The participants experiencing the phenomenon are presumed to be honest and trustworthy in sharing their experiences.

In this study, my position as the researcher is one of an instrument for collection, interpretation, and explication of the data. Although this is common in phenomenological studies, the assumptions and beliefs held by me as the researcher are bracketed to suspend such experiences allowing a platform of freshness or newness to understand the experiences of the research participants.

A hermeneutic phenomenological study is, by design, intended to allow the expressions and experiences of the participants to be examined. By nature, each also has their own understanding of the events. Although a small sample of voices is examined, it allows the complexity of the event to be made public. Fewer participants allow for more time spent with

each to capture their experience in depth and place it within the parameters of others experiencing the same event (Van Manen, 2016b; Johnson & Christensen, 2014). The findings may not be generalizable, but instead relatable to the general population because of the generations within our society who are themselves digital immigrants and may be raising their own children or teaching those who are learning to read and reading to learn in both a print based and digital text landscape.

Finally, this study focused on the digital reading experiences of middle school students. Middle school learning resides alongside middle school teaching and its teachers. Although findings may be relatable to teachers, this study does not specifically examine teacher perspectives of digital reading and is a limitation.

Summary

This chapter introduced the fundamental constructs in understanding the issue of students who are experiencing the expectation of migrating print reading skills to foster digital reading. As 21st century learners who are also expected to gain digital fluency throughout the remainder of their K-12 schooling, readers should have a basic grasp of its importance. An emerging area of research, the process of securing digital reading skills is not well understood, although research is showing that digital reading requires different skills than print reading. Findings from the few studies that exist, offer there is a relationship among the platform, reading, and comprehension. This study lets the experience of those who are living the experience of migrating skills to be examined in detail to generate an understanding of the essence(s) of the experience.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction of the Literature

The review of the literature will discuss current findings on adolescent attitudes and motivation to read then describe teacher use of technology in the learning environment. Teachers using technology in the classroom can help inform digital reading because in secondary schooling, English Language Arts is a separate class that all students must take annually. The literature review will then describe similarities and differences in print and digital reading and finally, highlight issues advanced from the literature as it impacts adolescent digital reading.

Attitude and Motivation to Read

High- stakes testing, defined as any test used to make critical decisions about students, teachers and schools (Glossary of Education Reform, n.d) is a culturally accepted assessment method within the US educational system. Designed to help inform the tax paying public who fund our system it can also inform equitable learning opportunities as it holds school districts and its teachers accountable for doing the job of educating students. What started by some to be a worthy goal, eventually turned into a content driven curriculum, rather than learning contextually driven by what students know and understand (González, Moll, & Amanti, 2005). Displacing students from the center of learning, high stakes tests add a comparative dimension within classrooms of students, across grade levels and teachers to perform at thresholds and bands to

measure “how much” knowledge has been acquired, or learning has taken place. It also has the unintentional consequence of negating affective domains of learning as they contribute to motivation (Haimovitz & Dweck, 2017). Dewey (1929/2009) wrote that under circumstances of advancing technology we cannot know what exact content will be useful to any learner. What education can do is teach how to learn using tools available and methodology in combination to focus educational experiences on learning how to learn. Leu, Zawilinski, Forzani, and Timbrell (2014) echo a similar position in the context of reading comprehension in both upper and lower case New Literacies.

Strongly linked to cognition, emotions impact the choices students make on a daily basis, and on the granular level, even minute by minute (Immordino-Yang & Damasio. 2007). Immordino-Yang and Damasio hypothesize that the biology of emotions has propelled cognition, therefore, students need an emotional response before internalizing learning. Considering this, Immordino-Yang and Damasio state, “emotion may play a vital role in helping children decide when and how to apply what they have learned in school to the rest of their lives” (p.5). Both the ubiquity of social media and its easy use are part of the out of school time environment of middle school students, and conversely, have not been wholly a part of the learning environment (Ertmer, et al., 2012), thus creating diverging environments for learners: one using social media via technology and the other, the academic environment, with limited mediated technology. Creating an additional disconnect between cognitive skills acquired by learners on their own and cognitive learning valued in school, learners may possess unrealized “digital capital” (Morgan, 2010) situated in the New Literacies. Examining the lived experience of students who are reading digitally helps to illuminate fully the experience of the learner inclusive of their own feelings, emotions, and abilities.

Brown, Collins, and Duguid (1988) argue learning without context is less productive for the learner. Authentic and culturally situated learning helps frame relevance and gives both meaning and understanding not only to the “what” but the “why” of learning. 21st century learners, and readers, need to find relevance and meaning to their academic work including the multimodalities of their academic and social environments. Findings from Louick, et al., (2106) similarly support this idea as they examined internal and external motivation factors and reading self-efficacy in students who struggle to read determining that a relatively high relationship exists between print [sic] reading motivation and its perceived utility later in life. Findings also revealed that while participants recognized its value, feelings of how others perceived reading transgressions motivated them more than grit and perseverance to get better at reading comprehension. While these findings support the need to address motivation as a key factor in middle school reading, digital reading is not addressed, therefore motivation and how it influences digital reading is an area that needs further examination.

In their 2012 reading attitude survey of more than 4,400 middle school students across the United States, Mckenna, et al., (2012) looked at both print and digital reading. Viewed through the lens of attitude theory, their findings suggest that middle schoolers make a distinction between academic reading, which is assigned, and leisure reading where self-selection is prominent. Further to the point of reading choice, males prefer digital reading more than females, while the importance of choice is consistent with both groups. In praxis, this insinuates that digital reading may offer the platform for reading, but selection of the content should also be a consideration. Research findings did not address causation of male preference in digital reading suggesting an area for further research.

Literacies built around social media also play a role in middle school attitudes toward reading. One finding from Mckenna, et al., (2012) found that although middle school students enjoy email and text messaging to communicate, they make no connection between their social media literacy and school. Mckenna, et al., (2012) postulate that teachers have simply substituted digital reading for print reading, suggesting that pedagogy plays a more important role in reading attitude than current research implies. The interactivity differences between digital and print reading might be negligible to middle school students, hence perhaps there is a need to study whether there are interactivity differences and how middle schooler attribute those differences. Survey research helps to establish possible causation, but is limited in its ability to uncover the depth and nuances of the respondents' experiences. This hermeneutic phenomenological study provides the explicitness and attention to what the survey research insights suggest and to reveal perceptions into middle -schoolers affective domain of digital reading.

In their case studies of marginalized middle school readers receiving additional reading support outside of the school day, Pitcher, Martinez, Dicembre, Fewster, and McCormick, (2010) found that most participants did not have solid strategies to develop comprehension. Even so, they were instructed in skills associated with reading such as phonics and low level recall questions. Together with choice in reading material, participants reported they enjoyed reading online and believed to have a good understanding when reading on the Internet. Pitcher, et al., (2010) assert that student choice may be one factor in helping to develop reading comprehension simply because students are more motivated to engage in text that holds their interest. Moreover, students may be able to easily implement comprehension strategies because the motivation to comprehend the text is important to them. The authors imply that the role of technology may help develop reading opportunities but this area needs more examination. The findings from this

hermeneutic phenomenological study helps address the gap identified as part of the assertion in the discussion of findings from Pitcher, et al., (2010). The research to date demonstrates that middle school students are interested in and use social media, indicating a clear motivation to be engaged using technology. The research is also bearing out that it is unknown the range of digital skills middle school students possess and foster on their own in relationship to digital reading.

In her year-long study of the role of identity in middle school reading comprehension, Hall (2016) viewed findings through an identity framework. At the onset of the study, two thirds of the 21 participants believed they had limited capacity to affect and transform their reading ability, placing instead, the responsibility solely on their teacher. Middle schoolers who struggle with reading often have a fixed reading view of themselves (Hall, 2016; Haimovitz and Dweck, 2017). In other words, they believe their perceived subpar progression of their reading ability compared to their peers remains static throughout their schooling. Even so, the participants made progress in their reading comprehension using a combination of goal setting, explicit instruction from the teacher who connected the learning to their goals while reading more complex texts. Formative instruction helped guide the teacher in supporting participants as continuous emerging data informed ongoing instruction (Hall, 2016). These findings align with the position of Haimovitz and Dweck (2017) who continue to research factors influencing growth versus fixed mindsets in learning. “Teacher talk” to students about their learning and the importance of continual incremental effort affords learners a pathway to success, rather than how clever or quick a student can complete assignments or attain mastery. Hall’s (2016) findings suggest that middle school student expectations are high that teachers have the skills and motivation necessary to increase student ability to read and comprehend at increasingly higher levels.

Students, however, do not see themselves as equal partners in the teaching and learning relationship.

In her review of literacy practices to support reading among adolescents, Fletcher (2014) found mixed results due in part to the myriad of ways defining “effective practices” (p. 294). Viewed collectively, the research revealed a lack of acknowledgement of the background of middle schoolers and its influence on reading habits. On the other hand, findings also exposed the positive influences a teacher can have on student progression of reading. These were identified as: an enthusiasm for reading, student to student interactions to develop comprehension, student self-control, expectations that students will progress in their proficiency, and collected data to guide students along a progression of learning (Fletcher, 2014; Fountas & Pinnell, 2007).

Similar to findings by Hall (2016), Fletcher’s review also acknowledged that adept and accomplished teachers make a difference in the reading progress of students. However, emotional self-control directly impacts a student’s ability to attend to academic tasks, including reading, over prolonged periods of time (Kolencik, 2010).

In their desire to address the dearth of research into adolescent reading behaviors, Duncan, et al., (2016) examined a range of reading skills for comprehension that included word recognition and fluency, reading fluency within fiction and non-fiction genres, gender, and print and digital literacies. Aligning with the definition of lower case literacies by Leu, O’Byrne, Zawilinski, McVerry, and Everett-Cacopardo,(2009), Duncan, et al., (2016) defined digital literacies as social media, web based reading, and gaming. Listening comprehension was not examined. Updating findings through a re-examination of a range of variables using standardized test results of 1, 200 United Kingdom lower and upper middle school students and their diaries

(journals), findings included the continued importance of academic vocabulary and its relationship to understanding the text. Expository text was found to be easier for marginalized readers to comprehend. The authors speculate that young adult fiction text has increasingly complex plot structures that may be unfamiliar to some readers ultimately interfering with comprehension.

All middle school readers should be equipped with a host of skills and frameworks to make meaning of the text, either print or digital. These include different kinds of inferencing skills based on the text. One finding from Duncan, et al., (2016) concluded that the type and length of text influences the reading opportunities to develop and hone multiple types of engagement necessary to comprehend across a range of texts. Only fiction reading positively impacted the development of higher level inferencing skills. This finding contrasts with the suggestion by Leu, et al., (2014) that inferencing skills can be taught using Internet searches. Marginalized readers may seek out expository text or prefer to read shorter online text at the risk of stagnating the opportunities to continually develop valued higher level reading comprehension skills (Duncan, et al., 2016).

Duncan, et al., (2016) also found that engagement with digital literacies differed according to gender. Males reported a preference for gaming while females reportedly engaged more with social media, text messaging, and reading song lyrics. Gender differences and its relationship to digital reading is an area for further exploration as Duncan, et al., (2016) do not offer an explanation or causation in their findings. Even so, for both genders, engaging with digital literacies had a negative effect on comprehension, although Rasmusson and Åberg-Bengtsson (2014) found just the opposite for males and gaming. Duncan et al., (2016) speculate the adverse relationship may be due to students using time otherwise spent reading engaging in

digital literacy activities. Because the relationship among gender differences, gaming and digital reading is unclear, the research suggests it is an area for further exploration.

Although there is a lack of breadth of recent research about marginalized middle school students and reading comprehension, there is emerging evidence that emotions are highly correlated to cognition. As humans, emotions affect our motives, therefore, examining motivation in reading situates reading as more than just a cognitive exercise practiced for some unclear purpose in an academic environment. Marginalized readers believe teachers can help them gain necessary skills to make improvements in reading comprehension but neglect to see their own role in acquiring strategies to become proficient readers, suggesting a lack of awareness may contribute to their motivation to read. Understanding academic vocabulary and its relationship to secure the overall meaning of both fiction and expository text is still a necessary skill in reading comprehension. Both fiction reading and Internet searches develop inferential skills, which are considered to be important in comprehension. Gender differences remain constant as males prefer to read expository text while females prefer fiction. Digital literacies include non-reading activities that compete for time in 21st century learners. The skills, motivation, and enjoyment garnered, “digital capital” (Morgan, 2010) might not have been around long enough to understand its value in this generation of students and in an ever-widening circle of what it means to be literate in the 21st century. Examining the experiences of middle school youth reading digitally can help begin to capture the degree of importance placed on various new literacies and the value they hold for middle school youth.

Be that as it may, teachers are at the forefront of 21st century learners. Schooled in K-12 pedagogy, instructional design, classroom management, and coached in awareness of the emotions of students, expectations also include using technology to engage students. However,

most teachers raised in a print-based educational model, have also likely been trained by professors in teacher preparation programs who also may be digital immigrants raised in a print based reading world and now expected to transition to the integration of digital technology into their pedagogy. This poses challenges for teacher educators and the students they prepare to become teachers of 21st century learners, adding another dimension, technology, into the intersection of pedagogy, content, and knowledge understandings (Mishra & Koehler, 2006).

Therefore, I turn my attention now to the dynamic relationship of teaching, teacher expectations, and systemic changes with technology impacting the job of teaching in this century.

Teachers Engaging with Technology

Like any viable and sustainable corporation, the people within the organization come from diverse backgrounds. However, currently the K-12 educational environment is in a unique situation with few employees born in this century who are teachers (Zachary, 2012). Conversely, students enter school with different types of background knowledge that now includes digital reading skills. For decades, schools and school districts have wanted to use technology to transform learning and the learning process, but the transformation has been slow and uneven due to barriers that exist within the system and with teachers (Ertmer, et al., 2012; Means, 2008). Historically, and especially before 2010, computers in classrooms were underutilized (Means 2008; Miller & Warschauer, 2014). Since the introduction of the iPad in 2010, the ownership of tablet computers in society has increased tenfold (Anderson, 2015). This technological change in the social landscape presents challenges for curriculum, curriculum practices, and student and teacher attitudes about using technology in learning environments, demonstrating that ongoing changes in technology are part of both the academic and social milieu.

While 21st century learners grow up with changing computing advances, school districts, schools, and teachers are unable to keep pace with the changing technology landscape (Admiraal, et.al., 2017; Webster, 2017; Means, 2008; Prenksy, 2001) and have limited habitus (Bourdeau, 1997) that includes understanding how students engage in digital reading and develop comprehension skills from digital text. Though students may be engaging in a range of new literacies for their own purposes, their background experiences, teachers have limited facility in using student “digital capital” (Morgan, 2010) positioning students and their experiences at the center of learning, or a constructivist approach. In her historical accounting of education trying to meld technology into the curriculum, Means (2008) cautions that curriculum should focus on more than just content and measuring how much knowledge has been acquired through high stakes testing.

Teachers and their beliefs about leveraging technology for learning is one piece that determines whether it is used in the classroom by the teacher, the students, or both. Further, blended learning models, believed to use student capital and therefore are more engaging to students, is predicated on a learner centered approach, giving students partial control over when and in what order their learning can occur (Innosight Institute, as cited in Vanderkam, 2013). In their findings, Admiraal, et al., (2017) found that some teachers believe simply utilizing technology in the learning environment easily situates the learning environment as a constructivist one.

Using individual videos and completed surveys sent to them by more than 1,600 Dutch public school teachers, Admiraal, et al., (2017) examined and assessed the video footage across a range of topographies to measure the relationship between a teacher reported constructivist approach to learning and technology use. Among the findings, there was not a solid, stable

correlation between a teacher reported learner centered approach with lessons using technology. This finding, as reported by the authors, suggest that teachers may not be as developed in their understanding of what learner centered learning looks when including technology in the lessons. In other words, even when teachers develop and plan lessons that place students at the center of the learning, when technology is incorporated into the lesson, it loses its constructivist approach. This implies that teachers need more support to gain a better understanding of a constructivist approach to learning with technology, that may be different without technology.

This study's findings are consistent with my lived experience. The amount of time necessary to curate content to be used for online learning is substantial. The process of researching multimedia resources, vetting for alignment, offering differentiation, and, if none are found, to create them, requires considerable effort than simply looking at print resources to decide whether to use the print resource.

Heitink, Voogt, Verplanken, Braak, and Fisser (2016) studied the pedagogical underpinnings of 157 (also) Dutch teachers using instructional technology, premised that content, pedagogy, and technology use in lessons would be considered equally (Mishra & Koehler, 2016). Video submissions and completed questionnaires examined found teachers thought that technology added value to learning not only for student engagement, but also for leveraging and broadening content. Efficiency was a third beneficial outcome. Teachers reported teaching students how to use video content to help students learn, thus showing students how to manipulate technology to benefit their learning.

The findings also showed that for more than half the teachers, intentional alignment between the use of the technology and teacher reasoning for its selection to be consistent. However, almost half of the participants did not have this alignment. Teachers used technology

to gain attention of students through an inferred belief that students will be attracted to a technology based lesson. Like Admiraal, et al., (2017), this indicates that teachers need more support understanding the deep changes that can occur in the learning environment when both (Upper and lower case) types of new literacies are leveraged (Leu, Forzani, et al., 2014).

As this study did not include teacher knowledge of the background of student experience with technology, there are limitations to these results. Increasingly, the kinds and types of technology students can already use helps to address the relationship of the technology available to students in the academic environment versus what is available and used during out of school time. When both are known, a pedagogical shift can occur to include both content and technology in realistic and substantive ways that can leverage student experience (Rafalow, 2018).

Rafalow's (2018) work examined teacher attitudes incorporating out of school time New Literacies into the academic environment at three technology rich middle schools. His disconcerting findings position both school culture and teachers as gatekeepers of student development of digital literacies in their learning environment. Racial stereotyping magnified the value teachers placed on students using new literacies for their learning. In a mostly white, private school, the school culture and teachers embraced and expected students to use all their opportunities and skills to augment learning experiences. In a mostly Asian public school, teachers were unreceptive to out of school time digital experiences to be used in the classroom and viewed them as immaterial to the learning environment. Rafalow's interviews of the predominantly Asian students school teaching staff revealed a suspicious attitude toward students using technology in the learning environment due to students crossing boundaries by breaking into both teacher websites and the school's online system. At the third school, with a

majority population of Latino/a students, teachers had limited expectations of what their students could achieve after graduating from high school, so they placed little value on students developing digital literacies in middle school. Teachers expected students to achieve at a middle socioeconomic class level upon completing their K-12 learning.

Findings from this research suggest that legitimizing and intentionally building “digital capital” (Morgan, 2010) rests on the attitudes and beliefs of teachers who are a dynamic part of the school culture. Rafalow’s findings help call into question how students are reading digitally in a formal academic environment. If teacher attitudes about digital literacies in general impact whether or not the students can use technology to support their learning, that also includes digital reading. Digital reading in middle schoolers is an emerging area of research.

Summarizing the findings of teachers engaging with technology in the classroom, teacher perception using technology in lessons that can increase student engagement has some merit. Consistent alignment between lesson objectives and using technology continues to be problematic for teachers, however, there is noteworthy effort in teachers’ desire to help students build digital literacy skills. School culture beliefs impact the degree and expectations that New Literacies support and value a constructivist approach to learning for 21st century learners.

Schema Theory and Its Relationship to Digital Reading

To understand new information, learners connect new constructs and understandings into their existing schema to construct meaning, providing the learner with a contextual way to learn new knowledge (Brown, Collins, & Duguid, 1988). Engaging in both kinds of New Literacies during out of school time happens simply because of availability, and students wanting to use technology. Ubiquity of technology use is across all socioeconomic levels (Jiang, 2018), however, the differing types of technology available in households are related to ethnicity and

college graduation rates (Perrin, 2016). For example, digital reading using mainly a cell phone is more pronounced among Black and Latina/o populations who did not attend college. This contrasts with white college graduate who utilize multiple devices for digital reading (Perrin, 2016).

Until this century, print reading was the primary way all people engaged in reading (Rideout, 2014; Ng & Graham, 2017). Differing ways to read is new to this century with most adults able to successfully use their print reading skills to engage in digital text. In K- 12 environments, students are learning to read, or reading to learn, and one part of school focuses on reading. An examination of similarities and differences of digital and print reading follows.

Similarities in Digital and Print Reading

Engaging in digital reading may appear to be a solitary task, but so is print reading. A quick glance at anyone print reading offers an opportunity to recognize and make a judgement about the literature being read, yet that same information cannot be captured when observing someone reading on a technology platform. An observer can only see a person engaged with a device. This fundamental difference places enormous expectations and trust in students. Responding to this issue, schools and districts build into their infrastructure methods and procedures to control devices from a central location, usually the teacher. Student engagement may be very high with devices but remaining focused on academic tasks is a support and skill necessary no matter what academic challenge is expected of a learner. For example, it has been my experience that students will opt to play video games on the iPad during class time instead of completing academic work that requires using an iPad.

Collaboration and socially constructing understanding is turning out to be an important component of academic digital reading (Leu, Kinzer, Coiro, Castek, & Henry 2013). Those same

proficiencies and approaches currently exist in the research and in reading comprehension as students turn from learning to read to reading to learn. As a student centered learning method, social interdependence theory (Johnson, Johnson, Holubec,1993) values the interdependence of the collective knowledge of the group. By sharing the differences and understanding of a given task, the group membership benefits both individually and collectively. In 21st century learners, social connections on media platforms has grown rapidly and is perhaps one of the defining features of the early part of this century. Learners enter school with this skill already developed. Furthermore, because they are socially connected using technology, this knowledge and its relationship with social connections constitute a natural association in 21st century learners. The collaborative finding by Leu, Kinzer, et.al.,(2013) has implications for pedagogy outside of social interdependence theory. Reading has mostly been considered a solitary endeavor but perhaps by a 21st century learner, the nature of reading on the Internet is approached differently that needs more exploration and is an area for research.

In her research on using literature circles and online student responses, Larson (2009) found noticeable brevity in online student responses compared to traditionally hand written ones. Digging deeper, she found that the limitation of student typing skills had a negative effect on the quantity and quality of the online response. Further, online student responses were written in the same format as though students were responding on social media. For example, students used common emojis, abbreviations, and phonetic spelling such as UR to mean ‘you are’ in their responses. In literature circles, student “talk” and thinking is central to strengthen development of comprehension and understanding. Using academic language is a skill expected when responding in a formal learning environment. Cooperative groups, however, are about students engaging and leveraging the knowledge of individuals to benefit the group. Students speak with

each other as peers and friends; it is reasonable to expect students would do the same when responding to each other in an online reading response. To further the point, as technological changes within society continue, and as schools and districts begin to integrate academic online reading into the English language arts curriculum (Leu, Kinzer, et. al., 2013), explicit teaching of various interfaces and platforms may become necessary. One finding from Mckenna, et al., (2012) suggests the same; students themselves do not distinguish the academic from the social environment when engaging with social media and need to distinguish between the environments and to whom they are communicating.

Differences in Digital Reading

Technology platforms have built within them similar ways to use the platform, but differences among them exist. Digital reading therefore, requires knowledge of using the platform and how to construct meaning from the content. This is an important difference between the ways print reading is presented. One can think about the format difference in reading an online newspaper or visiting a museum website. The daily online reading and gathering of information in robust ways are, in part, due to the intersection of psychology and artificial intelligence, also known as cognitive science. Directly related to schema theory (Shank, Kass, & Riebeck, 1994) and constructivism, schema theory places emphasis on retrieving information, evaluating, and adapting it to new situations, working recursively (Kalantzis, Cope & Cloonan, 2010). Contrary to Bloom's taxonomy (Richard, 1985), schema theory values the simultaneous retrieval, evaluation and adaption of information and experiences currently part of our technological world and the 21st century learner. This may have important implications for achieving reading comprehension. Reviewed research by Leu, Kinzer, et al., (2013) is beginning to uncover specific areas of digital reading that require different skills not taught when engaging

in print reading. Learners need additional reading comprehension strategies to engage in digital reading and they are simply not competent at reading online. This is understandable given the ways print reading has been taught. This study helps inform ways middle school students develop digital reading skills and habits, adding to the discourse for exploring strategies to develop digital reading skills.

Reading teachers, myself included, have gone to great lengths to ensure that, beginning at a very young age, students are taught reading within the zone of proximal development (ZPD) (Vygotsky, 1978) to maximize student engagement and reading comprehension (Fountas & Pinnell, 2007). This controlled environment continues into middle school and beyond with additional limitations placed on what students read by accepted grade level reading lists. Free online digital reading comprehension resources such as Commonlit, Newsela, or Readworks add another element of placing boundaries on leveled texts assigned to students. Signing up with an Educator account, teachers can search within the website to select reading passages aligned to the standards found within Common Core and Texas Education of Knowledge and Skills. Within each of the respective websites (Commonlit, Newsela, or Readworks), teachers can select varying Lexile levels of the same text to match the levels within the classroom that can be printed or assigned digitally. The alignment of texts to Lexile levels and grade levels positions teachers as gatekeepers of reading text to ensure that academic reading time, whether digital or print, supports both reading standards and the student reading level or levels found within the classroom setting.

By contrast, online reading is mainly a self-directed endeavor (Leu, O'Byrne, et al., 2009) and most often motivated by the learner. The plethora of websites and the multiplicity of information in the form of graphics, video, podcasts, blogs, and social media do not mirror

reading ZPD experiences in most classrooms. Therefore, it stands to reason that students engaging in digital reading need additional skills to: determine if a website is academically “available” to the learner, meaning, if the learner has proficient reading skills to comprehend the information offered; evaluate the website for a match between the information offered and what the reader is looking for, and how the information presented on the website can further refine information already known. This process is similar to schema theory presented by Schank, Kass, and Riebeck (1994) and by comparison, different than Bloom’s ordered taxonomy (Richard, 1985) that identifies evaluation at the highest level. The linear process of ZPD reading experiences are different than the experiences of engaging and reading online. Before this century, the linear process of reading print was the same in both in and out of school time.

Adolescent digital reading is a new phenomenon and an emerging field of research. Therefore, there is very little research focused on middle school students and digital reading (Naumann, 2015). The journal articles retrieved offer research findings that can provide a backdrop and entry points for thinking about middle school students, their habits, emotions, and expectations placed upon them as they navigate digital reading with print reading skills.

Findings from International Standardized Testing

Unlike the US, many countries across the globe participate in the Programme for International Assessment (PISA) for a common summative assessment. Offered in more than 80 languages, PISA is administered every three years in reading, mathematics and science to fifteen year olds. In 2009 and 2012 PISA began piloting digital reading as part of reading comprehension. In 2015, reading comprehension was administered solely as an online endeavor. With a large set of participants, researchers have examined the results to find connections with

the expectation of using the findings to contribute to discourse and future areas to research. An examination of the findings follows.

In his examination of 2009 PISA digital reading, Neumann (2015) analyzed results for two related factors: online reading engagement and its effect on proficiency in navigating platforms and the ability of the reader to leverage their navigation skills for reading comprehension. Using meta- data documenting the number of times visit and re-visit to websites occurred and its relationship to correct responses, Neumann (2015) differentiated high and low task reading demands. In other words, some questions required examinees to access multiple hyperlinks and determine relevance to the question. Other questions were less demanding. Multiple re-visits to text related high task questions with a correct response indicated that examinees could successfully navigate and comprehend the digital text. Low task less frequent re-visits implied the same.

Findings include that students who are practiced in reading online outperformed those who are not. The ability to navigate, evaluate while remaining on task was another important finding. Neumann (2015) also found that students who adroitly use social media are not as familiar using other platforms, such as reading online, but it did not substantially impact their results; they simply spent more time navigating to less task relevant sites. The research did not suggest a reason for this nor did it reveal causation. This suggests a gap in the literature to examine exactly how students who are practiced with online reading decide relevance of sites versus those who are less practiced with navigation make decisions about which sites to view. Limitations of these findings include only correlations. As mentioned previously, there are very few peer reviewed research articles addressing how middle school readers use their print reading skills for digital reading.

Hahnel, Goldhammer, Naumann, and Kröhne (2016) hypothesized that a relationship exists among basic computer skills, navigation of the platform, and digital reading as it intersected with digital comprehension. Digital reading comprehension results from the 2012 (PISA) were examined. The authors defined basic computer skills as involving the purposeful use of a computer; navigation skills are specific to software or an application. In the context of the PISA exam, reading and understanding blog posts, response threads, and websites constituted the digital reading. Findings included those students with secure comprehension skills were equally adept using them for both print and digital reading. Examinees whose results demonstrated they struggled in print comprehension likewise, struggled with digital comprehension.

This suggests that those students with secure print comprehension skills can ascertain similarities between the two types of reading, leveraging their print skills to negotiate meaning in a digital reading environment. Conversely, the same is not true with marginalized readers. The authors suggest the cognitive expectations placed upon marginalized readers (Sullivan & Puntambekar, 2015) is an area for further research, specifically, learning navigation strategies and behaviors. This finding is important in the overall discourse of digital reading. Historically, there is a strong likelihood that digital immigrants, such as teachers, teacher educators, and school district personnel, have relied on their print reading skills to read digitally. Their digital reading experiences happened in tandem with the changes and adoption of technology in society. This study can add to the discourse of digital reading for middle school students who are still acquiring and building their academic knowledge, and who are reading in both a print and digital environment.

By 2015, the PISA reading comprehension exam was administered solely online, again, with different types of digital reading. The reading comprehension results in the typically highest performing countries of Japan, South Korea, Hong Kong, and Taiwan dropped precipitously (Komatsu & Rappleye, 2017). Komatsu and Rappleye (2017) argue that in those four countries, computers in schools are rarely used. Meanwhile, the “Anglo American governments” (Komatsu & Rappleye, 2017, p.616) had no noticeable differences in results compared to previous years. Interestingly, the citizenry in both South Korea and Japan are ranked among the top ten most digitally connected populations in the world (Evans, 2016).

The comparison of these findings insinuates digital acumen established outside of school may be more difficult to convert to an academic setting if the connection between the two settings is not customarily established within the school setting. The findings also imply, at least for standardized testing purposes, students must be taught specific digital reading skills. This study helps inform the nature of these specific digital reading skills that are not part of typical reading programs (Leu, Zawilinski, et al., 2014).

Other Studies Comparing Print and Digital Reading

Moving into research outside of PISA test results, in their meta-analysis comparing reading comprehension of print and digital reading before and after 2013, Kong, Seo and Zhai (2018) found comprehension with print to be slightly higher than digital reading; reading rate was the same. The studies after 2013 showed a leveling of the difference in reading comprehension between the two variables. Speculating, this could possibly be due to the increase in the number of hand-held devices becoming more prolific in our society, although the authors do not state a reason for the separation of the years. The findings suggest that as readers become use to reading online, their digital habit (Morgan, 2010) supports both print and digital reading.

Neijens and Voorveld (2016) had similar findings when examining print versus online reading of newspapers by university students. A small number of participants recalled more from print reading. Among “digital innovators” (Neijens & Voorveld, 2016, p. 764) or those identified as competent technology users, there were no differences in recall.

Correlations among navigation suggest digital reading involves seeing the relationship among various websites when gathering information. Acknowledging that reader background plays a role in digital reading, Sullivan and Puntambekar (2015) examined the relationship among reader background, comprehension, platform navigation, coherent digital text, and learning outcomes. Their findings revealed there is no significant difference among background knowledge, comprehension navigation of platforms, and positive learning outcomes. In other words, reading comprehension from print to digital reading was substantiated directly. A separate finding suggests that the ability to intentionally navigate through a platform for purpose also effects digital reading comprehension. Learners must have skills in reading comprehension and deploy to relevant web pages in an Internet search to develop digital reading comprehension. As such, Sullivan and Puntambekar offer similarly to Leu et al., (2009) that digital reading requires a different set of skills. Even though students may be well versed in the content area, a different metacognitive process exists when engaged in digital reading that includes evaluation of information, then application, the process proposed in schema theory (Shank, Kass, & Riebeck, 1994). The authors note that students who were goal driven to read performed better on learning outcomes.

Summary and Implications

A review of the literature examined recent research on the motivation of middle school students and reading, followed by teachers and technology use in the classroom, and finally

similarities and differences in print and digital reading. In K-12 learning environments, emphasis is placed on acquiring differing comprehension strategies and skills in accordance with student ZPD (Vygotsky, 1978) at different grade levels (Fountas and Pinnell, 2007), and is fundamentally a linear process. Digital reading follows a recursive path that includes the ability to navigate the platform on which the digital reading is placed.

Findings revealed that while students want choice in their reading, they also know there are different purposes for reading. As such, their commitment to reading depends on its purpose, however, it is not always clear to adolescent readers what their efficacy is in the reading and comprehension process. Teachers themselves still need more support to fully understand how to meld the utility of technology and constructivism for learner centric learning.

New Literacies (both upper and lower case) (Leu, O’Byrne, et al., 2009) give a structure to think and reflect on multimodal ways communication happens in this century. The research to date demonstrates that its current focus is on understanding what is happening at the intersection of navigating a platform and reading comprehension. Findings are mixed in this respect, but the research findings indicate there is much that is not understood about the actual act of digital reading. Clearly, more work needs to be done to examine the nature of digital reading and its relationship to comprehension. However, continuing to look at the same types of data points may not be helpful in the discourse. Instead, a “complex, detailed understanding of the issue” (Creswell, 2013, p. 48) is needed; one that adds more perspectives, that this study helps to inform. The literature revealed, not only is more research needed examining adolescent digital reading, but also differing views. Different understandings of the same phenomena, the nature of middle school digital reading, gives a more ordinary view of the world (Creswell, 2013) as it is happening in time and to someone. Examining and documenting the experiences of students who

are expected to read digitally, versed in print reading skills can help to inform the nature of the phenomena of middle school students and digital reading. Teachers, teacher educators, and district personal should have a good understanding of how to support learners as K-12 environments embrace, utilize, and expect to transform learning environments with technology. When multiple views of phenomena are studied, a holistic picture begins to emerge, representing the complex world of which we are all a part.

Examining digital reading experiences of middle school readers would not only add to the emerging research field, but also add another perspective. If middle school students with secure comprehension skills can successfully capitalize on their print reading acumen to equally negotiate digital reading, how are they are able to do that? What thought processes exist? Conversely, if marginalized readers equally cannot negotiate both ways, what thought processes exist? What similarities and differences exist between the different types of reading that both kinds of students experience?

CHAPTER III

METHODOLOGY AND FINDINGS

Methodology

Introduction

This section introduces and explains the methods for conducting this hermeneutic phenomenological study. Understanding the digital reading experiences of middle school students is important within our society as school districts decide to use any number of computing devices for learning to transform the learning environment. Although blended learning offers more ways that students can engage in their academic endeavors (Parks, Oliver, & Carson, 2016), findings from Parks, et al., (2016) reveal that teacher perception of their own expertise is not consistent with blended learning standards developed by the International Society for Technology in Education (ISTE), the TPACK framework (Mishra & Koehler, 2006), or the Substitution Augmentation Modification Redefinition (SAMR) (Puentedura, 2010) model. This suggests that teachers need more support to understand how to implement blended learning. A part of blended learning is digital reading as teachers upload and link reading passages, websites, videos, podcasts, games, etc., to help students learn, therefore, examining digital reading in middle school academics can add to the discourse of blended learning. Coiro and Dobler (2007) state similarly and call for “an active, broad-based set of studies to further define our understanding of how reading comprehension changes on the Internet and the extent to which reading comprehension might (or might not) differ when it takes place online” (p. 245).

Adding to the discourse of new literacies, Leu, Lankshear, Knobel, and Coiro (2014) state that given the many areas technological literacy impacts the 21st century, new theories to understand and frame literacy in the 21st century is required. Included in the four areas for contextualizing research in the new literacies, is “social practices, skills, strategies, and dispositions for their effective use” (Leu, Lankshear, et al., 2014, p. 14). This research study addressed these areas through its hermeneutic phenomenological design and can help inform educational professionals about the nature of middle school digital reading in an academic environment so that students can be supported in acquiring the necessary range of skills and characteristics to be successful 21st century learners.

Van Manen (2016b) offers that “ The lifeworld, the world of lived experience, is both the source and the object of phenomenological research “ (p. 53). In my role as an Interventionist I came to wonder about the expectation placed upon students and its impact on students’ digital reading as my professional site began implementing blended learning using iPads. A lack of a dedicated, systemic way to teach students to develop an understanding of the grant device added to the assumed equivalency of print and digital reading (Leu, Lankshear, et al., 2014; Coiro & Dobler, 2007). Watching as students navigated the platform, seeking help from both the teacher and classmates to gain access to the learning management system on the iPad, I came to wonder what could be done better to support students’ development of digital reading. Both the device as an entity, and the student using the device help shape the essence of the experience. Boettcher and Conrad (2016) acknowledge these ongoing contextual interactions with technology when they state “learning tools make a difference” (p.40).

A hermeneutic phenomenological research method was selected to examine the consistent features of the experience of middle school students engaged in digital reading.

Hermeneutic phenomenology is simultaneously descriptive and interpretive (Van Manen, 2016b) so that what is described in the phenomenon of the events can also be interpreted as the “facts” (Van Manen, 2016b, p. 181) of the phenomenon by those who are experiencing it. It is linguistically named thus it becomes interpretive. As a reading teacher and researcher, I wanted to know the nature of the experience of the middle school students- their thoughts, feelings, beliefs, and perspectives experienced as the the phenomena of digital reading to understand the expectations placed upon them. Creswell, (2013) wrote that a phenomenology study can be helpful when it is necessary to “understand several individuals’ common or shared experiences of a phenomena.” (p. 81). Little research examines academic digital reading therefore, this research study can contribute to a growing discourse. This research study examined the experience as it is lived, from those who are living it, so that the principle commonalities of their experiences could be identified and named. The themes and findings may provide areas for further examination thus, expanding opportunities for research. The findings can benefit me as I can use the findings to support students and the professional community. Findings can provide insights for other educators transitioning to blended learning, may inform decision- making and our understanding of how youth negotiate these kinds of transitions, as well as add to the discourse of student motivation to read.

Site and Population.

After receiving IRB approval, participants were recruited for this study. With consultation and agreement among the participant’s guardian, the participant, and me, each participant’s location was selected for their interview. It was not known to me if the participants knew each other and due to the length of the interview, it was important the focus of the interview remain on the experiences of each participant. Five interviews were conducted at

participant homes. One interview was conducted in a coffee shop, one in fast food restaurant, and one in the bar area of a grocery store. All places were in the same county in southeastern Texas.

Participants attended different public middle schools in different school districts.

The population for this study consisted of middle school students who were using digital reading for part of their academic day. In order to participate in this study, participants must have experienced the phenomena of digital reading in their school day and be a middle school student. All participants acknowledged they were middle school students and were reading digitally during their academic day while a middle school student. Initially, I sought permission to conduct this research at the middle school where I was on staff. School district approval was not obtained. Because I have access to middle school students only during my work day, I turned to my social and professional network to find participants. My social and professional network allowed me to seek access to middle school students who met the necessary criteria to be in this study. Three participants were known only marginally to me through the guardians of the participants, the remaining five were not known at all. To ensure confidentiality, all participants received pseudonyms that are used within this research study. Table 3.1 gives a snapshot of the research participants and their respective pseudonyms used in this research study.

Table 3. 1 Participant Demographics

Participant's name (Pseudonym's used)	Grade level completed at time of interview	Gender
Erin	7	Female
Jake	6	Male

Nora	6	Female
Alex	7	Male
Olivia	6	Female
Jerry	7	Male
Isha	8	Female
Emma	7	Female

Eight middle school students participated in this research study. The sample size aligns with the recommendations by Miles, Huberman, and Saldaña (2014) who suggest that the number of participants in a qualitative study should address both broad understandings and confidence in the findings. Phenomenological research is designed to document the detailed experiences of its participants and caution against having too many participants (ten or more), lest the data become cumbersome. Ideally, the researchers recommend five (Miles, et al., 2014). Eight participants fits into range of five to ten participants recommended.

Purposive sampling identified possible research participants. Miles, et al., (2014) define purposive sampling as one of the general sampling approaches in qualitative research. Purposive sampling is more intentional than other sampling strategies due to the focus on the distinctive context of the research question which in this research study is “How do middle school students acquire and foster digital reading comprehension skills?” To address the research question, participants needed to be both a middle school student and engage in digital reading as part of their academic day. All participants fit both criteria.

Using both social and professional networks, I initially reached into the networks to identify colleagues and contemporaries who had middle school students and requested

permission to interview their middle schooler. After affirmation, both minor participant assent and guardian parent permission forms were sent so both the student and guardian could read over the information (see Appendices A and B). Network colleagues asked if they could send me other names and phone numbers of potential participants and I agreed. Upon receiving contact information, I reached out to those guardians briefly explaining the purpose of the research study and requested email addresses to send minor participants assent and guardian parent permission forms. Interview dates, times and places were agreed upon after guardians received the minor assent form and the guardian consent form.

Research Design and Rationale

This study used a hermeneutic phenomenological design. Ultimately, I wanted to have a better understanding of what it means to acquire digital reading comprehension skills. To examine the research question, I chose a hermeneutic phenomenological study so that an understanding of the experiences of the students can be brought into the open, shared, examined, and valued. Van Manen (2016b) wrote “Lived experience is the starting point and end point of phenomenological research” (p. 36) adding that phenomenology allows all the facets of phenomena of the lived experience to be examined: the mundane, the trivial, the surprising, confusing, puzzling, and impractical (not an exhaustive list) (Van Manen, 2016a). Through holistic examination, identification of the many ways a phenomenon is experienced by the individuals allows commonalities to emerge.

Other qualitative methods could have been used to examine the phenomenon; however, my intention is to illuminate the experiences of the students. By gaining an awareness of what is happening from within the circumstances (Van Manen, 2016a), to multiple participants, the

sameness of the experience begins to emerge. It is these essences that can give additional information about this phenomenon.

The question at the center of this research could be answered using another qualitative research method. Phenomenology is the best method to consider both the experiences of the participants and its portrayal (Johnson & Christensen, 2014) across all participants. Johnson and Christensen (2014) state, “The search for the essences of a phenomenon is probably the defining characteristic of phenomenology as a research technique” (p. 446). The questions situated within the open-ended interview kept me committed to an exploration of all the aspects including those that seem to be outside the normal. It is also expected the plain view, or routine to be attended, with the sum of the experience discovered (Van Manen, 2016a).

Ultimately an examination of the lived experience as it is held by those to whom the event(s) have happened, brings to fruition the experience. Others can read and begin to understand what happens when, from this research study, students engage in digital reading.

Bracketing

Bracketing in an hermeneutic phenomenological study allows the researcher to suspend any experience and cumulated knowledge of the phenomenon in the study so that hearing or seeing the participants’ viewpoints, experiences, and sensations can be recorded and transcribed exactly as stated. Freshness and novelty becomes the channel from which the experiences of the research participants can rely from me as the researcher to explain and describe the experience of the event(s). Bracketing (Johnson & Christensen, 2014) is an intentional, public process of placing the researcher’s own knowledge and proficiency with the phenomenon aside. Van Manen (2016a) suggests the same making known to self and others a description of the lived experience of digital reading as the researcher. Impetus for the research stems from my own

inquisitiveness about the phenomenon. As an educator of middle school students and beginning researcher in educational technology, it is necessary for me to recognize and make this known, and attempt to set aside the experiences.

As a staff member at a middle school implementing blended learning, I was expected to use the school's established blended learning time for student completion of the learning assignments as uploaded on the district LMS. I did not have any additional information about the blended learning lessons beyond the established daily content schedules. Occasionally, I would attempt to preview the lessons, but could not access them before the scheduled time roll-out. The response received when I made this known to the administration was that allowing an earlier roll-out also allowed students to access the lessons earlier potentially creating other issues for teachers.

My interest in students using computing based technology for learning is significant. As a designated teacher of gifted and talented students, a large part of differentiation of instruction utilized technology, placing the technology in the hands of the students for inquiry based learning. I have also received numerous grants and have extensive curriculum writing experience to implement technology in units of study in elementary and middle school. As a staff member of a 1:1 iPad blended learning environment, I was excited to be a part of a school that honored a constructivist approach to learning. The written narrative of this paragraph begins the bracketing process as I reflect on my own curiosity and experience in using and advocating using technology for student learning. The reflections from my field notes allowed me to remain vigilant in documenting what I was observing in the students of my blended learning class, noting only what I was observing. While conducting the interviews I kept notes to help me focus the interview as the participants sometimes jumped around in their explanations and I wanted to

make sure an idea, example, or story cursorily mentioned was revisited. After completion of the first few interviews and ensuing transcription editing, I began to see some intriguing patterns that felt very exciting to identify as a new researcher, but I also reminded myself that as a researcher, I must let all of the interviews and transcriptions become complete to allow the words of the participants be fully heard in their scope and breadth. The situation just described was a new paradigm for me. As a reading teacher, I have been trained to take anecdotal notes and immediately use the notes to inform instruction. Immediacy was something I had to work against in my role as a researcher positioned against the data, while immediacy was something I felt compelled to use with respect to transcription and placing the data into a useful format.

Research Methods

Introduction of Methods Used. *Individual in depth interviews.* This research used both in depth individual interviews and researcher field notes in the school setting during blended learning time. Gaining an understanding of the essence of the lived experiences of middle school digital reading was conducted using an unstructured interview. Moustakas (1994) suggested two protracted “open-ended” (Moustakas, 1994, p.114) encompassing questions that allow the participant to reflectively and thoughtfully engage in the experience. Van Manen (2016b) offers to researchers multiple ways to gain an understanding of the essence through an interview process. I chose to use an initial long interview, with a potential for a second interview if clarification was needed from revelations in the first interview. In my work with middle school students, I find their willingness to have their voice heard as important to them. Guarding against what Van Manen (2016b) called “temptation to let method rule the question” (p. 66), the prompting questions to begin the interview were: can you tell me what digital reading is, and do you remember the first time you read digitally? These two questions oriented the interview and

allowed the participants to reflectively and recursively explain through examples, decision making, and stories, the specifics of their digital reading experiences. Miles, et al., (2014) put forth that “qualitative research lives and breathes through the context; it is the particularities that produce the generalities, not the reverse ” (p. 39). Guided by what the participants stated, I kept track of the first remembrance of digital reading, then asked about the next grade level. If there was no remembrance, we moved onto the next grade level until middle school was reached where the descriptive experiences came from specific subjects. For example, having recounted digital reading experiences with science, I prompted Jerry to tell me more about other subjects: “Okay, so that's science. So what about in social studies? You guys studied Texas history this year? 7th grade is Texas history, right? Okay. So what did you do with?” Before I could complete the question, Jerry immediately began describing what he remembered.

Researcher field notes. As a researcher, I also kept hand written observational field notes during the blended learning time at my school site. Using this “indirect, close observation” (Van Manen, 2016b, p. 68) gave me portrayals as someone who is experiencing digital reading from a teaching perspective. During the scheduled blended learning time when digital reading was required of the students in my class, I wrote my observations. Later, I reflected upon the documented close observations and used the reflections as part of my investigation of the phenomenon. I wrote my field notes by date using a designated notebook. Each page was divided into two columns titled at the top with Field Notes on the left column and My Thoughts on the right column. My thoughts were handwritten and completed in the evening at home. Field notes were typed later in the same format with additional column added for coding. My researcher field notes became another source of data.

Using experiences from divergent dimensions of the same phenomenon aligns with Van Manen's (2016b) varying suggestions to investigate a phenomenon. Different than researcher positionality, reflective field notes allowed me to document what I was experiencing as a teacher and deliberate within myself the instances I recorded. Balancing the occurrences and practices the participants experienced helps to triangulate the data.

Stages of Data Collection

After securing IRB approval, I reached into my personal and professional network to locate participants. The middle school campus where I work as an Interventionist was initially proposed as the research site, but district approval was not obtained. My personal and professional network yielded a total of nine participants willing to participate in the interview process. One participant was unable to find a convenient time for the interview although flexible times and locations were given. In the end, eight participants were able to be interviewed, five females and three males. This number is congruent with suggested parameters in phenomenological research by Miles, et al., (2014).

Once identified, participants confirmed they were middle school students at the time of the interview and confirmed understanding of digital reading. One participant recently completed middle school, but had not matriculated into high school at the time of the interview. The SES of the participants was not known to the researcher. SES information is usually known to guardians and identified within a school setting. As mentioned previously, the district in which I sought to conduct this study did not grant permission, therefore, I did not have access to SES information for the participants. In this research study, guardians served as gatekeepers of time for the participants as in this geographical area of this study, middle school students have limited modes of self- transportation, relying instead on guardians to facilitate transportation to the various

places where the interviews took place: grocery store bar, fast food restaurant, and a café. Five interviews took place at the homes of the participants. All participants lived in the same suburban county in southeastern Texas.

Description of Methods

Initial open ended questions allowed the participant and interviewer to engage in a conversational style interaction (Van Manen, 2016b). In this way, the participant's experiences focused the exchange, giving the researcher the opportunity to ask for more information centered on participant experience, forming a triad among the researcher, participant and phenomenon. During the first participant interview it became clear that while the intention of the initial open ended question held true, the participants needed a method to recollect and speak about all of their experiences. Initial recall of the first digital reading experience served as the gateway allowing me to use that experience to underpin the interview. For example, one participant, Emma, stated the first recalled experience in digital reading was third grade. Then Emma could recollect the breadth of digital reading experiences in all subsequent grades and describe digital reading experiences through middle school content areas such as ELA, mathematics, science, social studies, theater, etc. This same process was followed for all eight participants.

Interviews were conducted over an eight- week period week period, during the summer months after completion of the school year, at a mutually agreeable time for me and the participants. All interviews were conducted during the day and recorded then transcribed for analysis. Written permission to conduct and record the interview was obtained from each participant and participant's guardian (see Appendices A and B).

Researcher field notes were organized in a hand written two column table to document observations and thoughts about the observation. Field notes were collected during the school

mandated twenty- five-minute blended learning time only when the blended learning assignment warranted reading as the lesson focus. For example, if students were accessing a link to play a math game, field notes were not collected because the focus was on gaming. The instances where digital reading occurred were limited. During high stakes mock testing and state mandated testing dates, the school schedules changed so there were no blended learning assignments uploaded on the LMS.

Data Analysis

One in depth interview lasting approximately forty-five minutes formed this study in order to determine the essence of the experience of digital reading. Transcriptions began after the second participant interview and after each interview thereafter. Using artificial intelligence voice to text software, the interviews were initially transcribed electronically then copied and pasted onto a document formatted with a secure code. Transcript formatting was absent from the artificial intelligence transcriptions rendering the document confusing, so I edited each transcription to correct and revise the format putting it into a recognizable document for analysis. To accomplish this step, I listened to each recording multiple times. Second transcriptions were completed in succession.

After all transcriptions were complete, codes were created aligned to the frameworks that inform this study as suggested by Miles et al., (2014), eliciting a selective hermetic reflection and orientation of reading the transcripts (Van Manen, 2016b) As each transcript was read, notes were made according to the codes. Coding with the first reading generated an association between the participant words and an explanation of their meaning (Miles, et al., 2014). It also supported “horizontalization” (Moustakas, 1994, p. 120; Creswell, 2013, p. 82) placing equal footing in naming all the meaningful and noteworthy statements of each participant. In vivo

coding (Miles, et al., 2014) using short words, phrases or statements from each participant were also highlighted. For example, initial codings were selected based on digital reading, blended learning, print reading, content areas, situations, and descriptive experiences. These areas came directly from the frameworks used to inform this study. For example, the phrase "...read online and answer questions on a worksheet..." was coded as biliteracy as defined in this research study. After grouping all the biliteracy in vivo statements together, the different types of academic work were clustered together, such as daily assignments, ongoing work, and project work. Emerging from the three types of academic work demonstrated that middle school digital reading was an integral part of the academic day in the required content areas such as ELA, mathematics, science, and social studies. Only two participants mentioned digital reading assignments in their electives. Elective digital reading assignments became part of the data even though not all participants recalled reading digitally during electives.

A second reading yielded patterns and helped to center the experience generating themes (Van Manen, 2016b). Accompanying statements were then clustered around central themes from the in vivo coding emerging from the data. Construction of a pivot table helped organize and conceptualize themes, magnitudes, and textual descriptions. An examination of magnitude placed an emphasis on varying degrees of the experience. Also, circumstances and situations were documented and examined in the context of the phenomena. Analysis of researcher field notes followed a similar process.

The final step in data analysis was to describe the essence of the findings as a composite of the participants. Written as themed passages, its purpose was to gain a common understanding of the experience of the phenomenon researched; to uncover the seemingly surface disparate and make known essential commonalities. These thickly described, richly detailed examples were

taken from the participants own words serving as descriptions so that others who read the findings can begin to understand the nature of what the experienced, vicariously.

After compiling the excerpts from all the findings, each participant received a written description of his/her experience in relation to the themes. The written descriptions served to give and ask each participant to review the findings for accuracy of understanding both on the part of the researcher and the participant (Moustakas, 1994; Van Manen, 2016b). Phrases and meanings may have different understandings and agreements have an opportunity to emerge when the individual essence is written. Feedback for the individualized essence of the experience was offered to each participant to ensure the substance was captured accurately and with care. Feedback was written on a template with respective participant quotes and context for the quotes with a middle school friendly tone and word choice. Participants agreed with the context and accompanying quotes in the findings.

The request for feedback was sent to the individual participants by me as part of this research study. In the event the participant did not concur with what was written, suggesting a misinterpretation, I would have requested to meet again with the participant at a mutually agreed upon time and place to hear more fully the position of the participant in relation to the interpretation of what was written. Hermeneutic phenomenology explores the lived experience of the participant, however, to make the experience linguistically understood there may be “conversational relation” (Van Manen, 2016b, p.116) where participant and researcher can explore more fully the relationship of the participant to the experience. As a researcher I may have a different understanding borne of my experiences that may fall short of explication and the participant may have the same. The process described would be documented as part of the

research study and explained fully as the conversation would be recorded, transcribed and added to the research findings.

Individual participant narratives. Participants sharing their experiences exposed themselves to the phenomenon as itself, and the meaning it has had in their lives. Summarizing individual participant narratives relinquishes the subsumation of their individual differences of the study's phenomenon. I acknowledge that all information gathered during the interviews and observations does not have equal purchase, however, unique experiences add "depthful understandings" (Van Manen, 2016b, p.126) and that according to Van Manen (2016b) "we should be mindful as well that in everyday life circumstances, knowledge is like living: *things are always more complex!*" (p.126). Individual participant narratives were included on the template of each participant's written description of his/her experience in relation to the themes.

Ethical considerations. Few ethical concerns were present in this study. One concern included participants description of both affirmative and adverse experiences. The open-ended interview questions were designed to evoke and probe the participants to gain an understanding of the experiences of participants, not explain the phenomenon as something that is happening to them. Participants shared both uncomfortable and pleasing experiences in a plain spoken and direct manner. Few participants were known to me, therefore quickly establishing rapport allowing attention of the experiences to emerge and remain open minded and mindful of the participants was essential. Proactive respectful contact of guardians and participants helped begin this rapport and ongoing dialogue with guardians and participants decisions about site locations added to continuing trust building. Participation was voluntary and before each interview participants were reminded they could choose not to continue to interview, choose not to answer any of the questions, or request part of the transcription not be used in the findings.

The audio recordings and transcriptions were kept confidential in separate documents that were password protected. Each participant transcription and audio recording was a separate file, for a total of sixteen files. All participants were given pseudonyms and the identifying document was password protected during the research study.

Measures were taken to safeguard ethics during this study. Participant assent and guardian consent forms were actively sought and the template format and contents received IRB approval. Guardians were emailed both forms prior to arranging a date, time and location for the interviews. Upon arriving at the agreed upon site and after introductions, I provided printed copies of the assent and consent forms for signatures and to prompt questions and/or explanations and an approximate timeline for requesting feedback about individual participant written descriptions. Participants were also reminded throughout the study they could opt out or decide not to answer any questions.

As stated previously, part of the outcome of this study is supporting praxis of the teaching profession, of which I am a part. As a faculty member at a middle school the importance of suspending previous knowledge and experience has been made transparent.

Data Trustworthiness and Reliability

Unique to qualitative research is its proximity to the event and its intentional use. Miles, et al., (2014) offer that instead of addressing validity in data results, a focus is placed on trustworthiness and reliability of data to increase the assurance and accurate representativeness in the findings. Trustworthiness of the data begins with the participant sampling. All participants must have experienced the phenomena in the research study. In this study all participants had to be middle school students, thus having completed at least grade 6 and all participants must have experiences with digital reading during the academic day as a middle schooler. One participant

completed grade 8 at the time of the interview but had not yet matriculated into grade 9. All participants met the criteria.

The epoch or bracketing of the researcher's experience with the phenomena also made transparent the range of familiarity, interest, and knowledge about the phenomena. I concede that moving an idea from a wondering to dedicated time to research demonstrates a focus and intense curiosity about the phenomenon. This was made transparent so anyone reading the research can have a detailed understanding of the length, breadth and view of my experience with the phenomena.

Richly described details are meant to surround the theme with examples from all participants in their own words and this is fully described in Chapter 4. This visible reckoning allows the reader to hear the words of the participants and corroborate and connect the identification of themes with the "voice" of the participants. Miles, et al., (2014) acknowledged and warn that some types of interview data from participants may be stronger than others, which was the case. All participants may have experienced the phenomena, but their own word choice, emotions, and thoughts are also influenced by their own setting and maybe directly related to the phenomena. Tangentially related influences were also considered and written into the research report.

I held dual roles: as an Interventionist and as a researcher of the phenomenon keeping field notes and this was made known. I documented the immediate shift in how to guide the conversation and interview in response to the first participant who needed a framework to think about and talk about digital reading experiences. All subsequent interviews followed the same process. Timeliness of transcribing the recorded interview and re-reading the notes helped instigate reminders of building necessary ongoing dialogue. As the process of finding the essence

of the phenomena to build understanding was the purpose of this study, instead of discarding or ignoring outlying circumstances documented in the interview, taking a closer look made transparent the event and its relationship to the phenomena. These unusual events and perspectives were addressed and written into the findings.

A description of the setting for researcher field notes and the use of the reflective field notes was made known. Both researcher field notes and participants interviews were analyzed through the same frameworks to interpret the pedagogy occurring from divergent events adding another layer of reliability.

Finally, provided to each participant was an individualized written description of their quotes and context for understanding how the quote was used. Written on a template, participants' review of the transcribed interview gave each a detailed look at their responses checking for accuracy and (dis) agreement thus, building an additional layer of trustworthiness. The process was documented and reported in the final written research report.

Researcher's Bias and Summary

At the onset, my epoch and using personal experience as impetus for this research study (Creswell, 2014; Van Manen, 2016a) has been made known. I have both significant experience as an educator in English Language Arts and using technology for student learning. Nonetheless, the purpose of this research study was to understand the essence of the experiences of middle school students as they experience digital reading. I acknowledge my own part in explicitly expecting students to leverage print reading skills for digital reading. I have not had any conversations with students referred to in my field notes, nor with the participants in this study about this expectation.

This section outlined the research design for this hermeneutic phenomenological study, stating both selection and questioning purpose. The purpose of this research was to discover and name the essence of the experience of digital reading in middle school. The research sites and participants were described, research methods, stages of data collection, and description of methods have been detailed. Data analysis, ethical considerations, and researcher's bias were also explained.

Data, Findings, and Interpretation of Findings

Introduction

This section details the data collected, findings that emerged from the data, and development of meaning and interpretation of those findings gathered from one-on-one interviews with middle school students who use digital reading during their school day, the phenomenology studied. With a hermeneutic phenomenology approach, I sought to describe and understand academic digital reading from the perspective of middle school students who employ it. Van Manen (2016b) describes hermeneutic phenomenology as gaining understanding ‘from the inside’ (p. 8), as a lived experience. Rather than a theoretical understanding of digital reading, this study examined the perspective of those who practice and use digital reading in the learning environment to gain insight so that a vicarious understanding of their experiences can be made known to others, thus, informing pedagogy. Hermeneutic phenomenology suggests that in trying to make meaning of the combined lived experience of participants, finding what is shared among them can be intransitively captured by using a thematic structure (Van Manen, 2016b). Themes help to focus the sameness of the experiences while allowing the differing ways the participants experienced the phenomenon to be valued. To capture the similarity of the

experiences, I employed a coding methodology grounded in the frameworks of both upper- and lower-case new literacies and social constructivism, both which inform this study.

I also kept field notes as another set of data to add an in situ observational and reflective perspective to digital reading. In this study I hold the role of a Reading Interventionist which requires the use of specific print reading materials for teaching, however, the school schedule included a daily twenty-five-minute school wide blended learning time with common grade level lessons for students to complete. During the blended learning time, I captured field notes. The coding methodology for the field notes is the same as the participant interview codes.

The purpose of this study was to give middle school students an opportunity to describe their digital reading experiences during their academic day. I have a personal interest in understanding the digital reading experiences of this population because I am a middle school Reading Interventionist at a campus that is in its second year of implementing blended learning.

The school year commenced with lessons on digital citizenship during the common blended learning time. Lessons or guidelines for student responses in Discussion Posts, using device features to enhance or augment reading experiences, or time efficient ways to capture student self- knowledge to demonstrate understanding were not part of building the range of digital literacy skills during the blended learning time. The content and nature of the blended learning assignments, however, required the use of digital reading, discussion posts, and using device tools such as video recording.

Reading digitally is new. Reading digitally is a new phenomenon. Wolf (2018) a prominent reading researcher, states the reading brain is a wholly human endeavor and has been central to the development and documentation of human culture. The transformation of digital reading to the print reading brain parallels the transformation of human culture from an oral

tradition to a written one which fundamentally changed human culture, our interactions, including our ability to read for ourselves the words of the past (Wolf, 2018). Most teachers, administrators, curriculum writers, and educators grew up learning to print read with a high likelihood that reading digitally was required of them much later in life. Students growing up in the 21st century have access to technology and devices from a very young age and learn how to use them with help and support from significant others (Plowman, McPake, & Stephen, 2008). Reading and English Language Arts (ELA) teachers support ongoing development and progression of print reading skills in increasingly complex ways as exemplified in a range of English Language Arts (ELA) designated grade level outcomes such as Common Core Standards and state specific mandated standards. In survey research by Hutchinson, Woodward, and Colwell (2016) preadolescent students reported they spend more time in school engaged in digital activities than outside of school and they believe that they would learn more from print sources than digital. Students reported adequate skills in online research and comprehension skills. Given the sample size of more than 1200 students, this suggests that using technology to complete academic work is expected and required of 21st century learners at a level higher than they perceive they have not yet attained. Rodrigue (2017) offers that similar to a progression of print reading skills (Hill & Ruptic, 1994; Fontas & Pinnell, 2007), a progressive continuum to identify and develop digital reading skills with explicit instruction about using print reading skills when reading digitally, and alternatively, when skills solely needed for reading digitally are necessary. Rodrigue (2017) found that college-aged participants in the study used beginning reader skills such as tracking online reading with the cursor. In print reading, this is akin to finger tracking. While not a significant problem, as important, Rodrigue's findings suggest that digital reading requires time to become familiar with the layout of the text. As reading from the

Internet is mostly non-fiction, part of the being an engaged reader is knowing the reading pathway, or the commitment the reader must make to engage in and with the text to support comprehension. A large part of digital reading is the self-motivation to engage in the text, including how much time a reader wants to devote to the information seeking task, or how deeply the reader wants to understand the meaning and nuances of the digital text. Marginalized readers devote less time to digital reading (Rutherford, Singleton, Derr, & Merga, 2018).

Named “biliteracy” (Wolf, 2018), readers who read both print and digital text will increasingly become the norm in schools and school districts. Much, but not all, is known about print reading and what constitutes a proficient, basic, or exceptional reader. Digital reading is becoming an expectation in K-12 blended learning academic environments. As such, we still know very little about what middle school students are experiencing as a digital reader in their academic environment. This study served as a way to gain perspective of middle school students who are increasingly expected to become “biliterate” (Wolf, 2018) or reading in both print and digital mediums, and how those experiences are shaping their progression. Therefore, this study aimed to learn about the student occurrences so that an understanding of the phenomenon can be made known and relationally, support students as they gain practice in both print and digital reading in the 21st century.

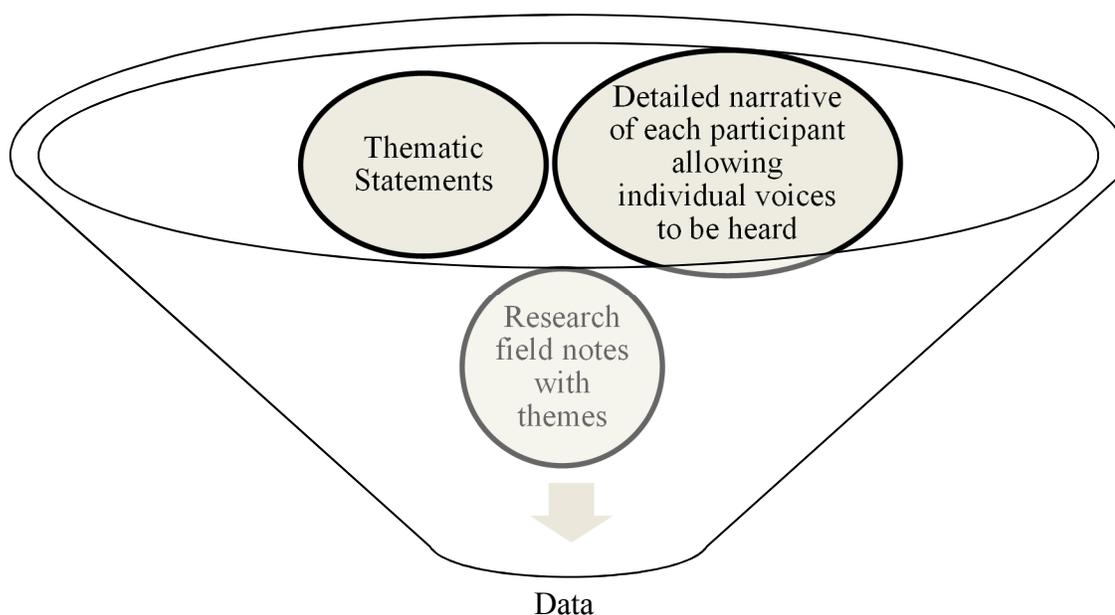
To gain a full understanding of the essence of the participants’ experiences, the major research question studied was as follows: How do middle school students acquire and foster digital reading comprehension skills? The following sub questions were studied to gain an understanding of the experiences of the participants:

4. In what ways do middle school students leverage print reading strategies and skills for digital reading?

5. How do middle school students comprehend digital content?
6. How does digital reading shape the learning environment?

The data and findings are organized in the following format. First general codes aligned to the two frameworks which inform this study, upper- and lower-case new literacies and social constructivism, were created. Each interview and my field notes were coded using the same coding. Using a “selective or highlighting approach” (Van Manen, p. 93b) to identify data, the text is read several times to discover or capture the salient and sameness of the experiences. Statements are highlighted and noted to become representative quotes that help reveal and describe the cohesion of the experiences. Next, the commonalities are captured in themes helping to organize the understanding (Van Manen, 2016b). Participant quotes detail the richness and “textural descriptions” (p. 80, Creswell, 2013) using the words of each participant, allowing individual voices to be heard. Next a detailed participant narrative follows capturing the particular aspects of the individuals so that deviations of the experience are included in the phenomenon (Miles, et al., 2014). Deviations allow the breadth of the experiences to be documented, addressing the experiences more fully, and allowing the participants to be appreciated as the students they are. Finally, researcher field notes captured as in situ observations with a reflective component for each entry. Researcher field notes use the same codes as participant codes.

Figure 4. 1 Organization of Data

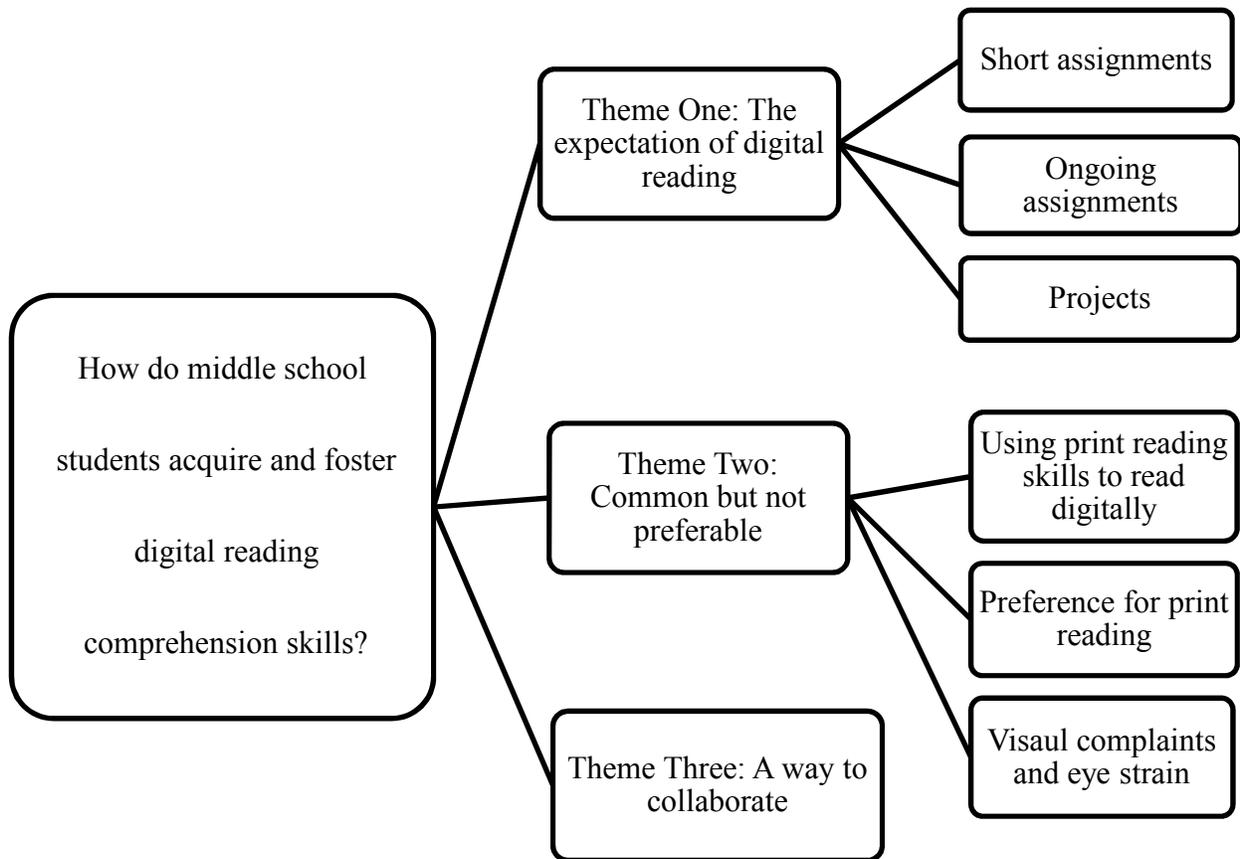


Findings

This hermeneutic phenomenological study gave eight middle school students an opportunity to describe their academic digital reading experiences. Their voices in these experiences included thoughts, feelings, frustrations, and surprises heard by me in my role as a researcher. The explication of their experiences centers around digital reading. As important, the experiences show what is both present and absent in their experiences. Non-inclusion of information can serve as evidence of the phenomenon (Van Manen, 2016b; Miles, et al., 2014) as it nudges and abuts against other information but is not explicitly stated. I identified seven common areas listed in ascending order: types of digital reading experiences, engaging in new literacies, blended learning opportunities, print reading experience, biliteracy, self- motivation, and social construction. The seven areas were further refined and three main themes emerged:

the expectation of digital reading, digital reading is common but not preferable, and digital reading is a way to collaborate. Findings are discussed and aligned with the frameworks that inform this study. Figure 4.2 describes the key themes.

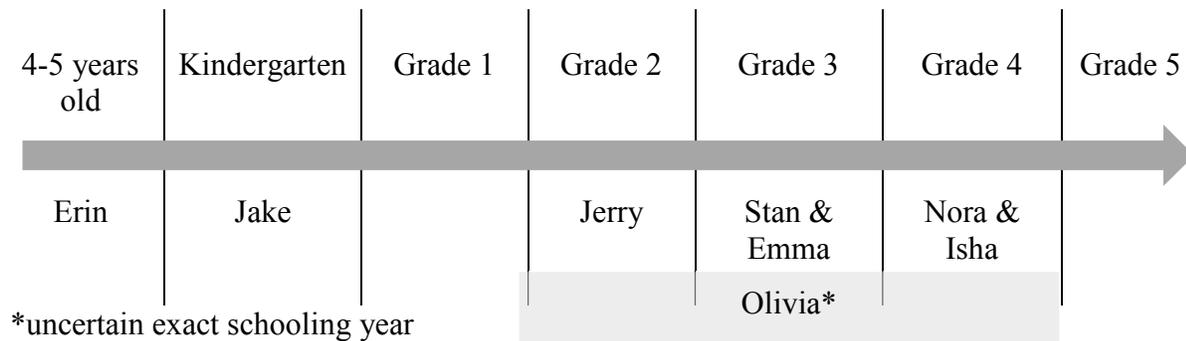
Figure 4. 2 Key Themes Outline



Theme 1: The expectation of digital reading. Upper- and lower-case new literacies is one framework that informs this study. Lower case new literacies theory featured prominently in the descriptions of the participant experiences. The act of comprehending while reading digitally is part of new literacies because it is concerned and concentrated on one part of the broad range of

New Literacy practices in the 21st century. Participants recalled the longevity of their collective occurrences throughout their schooling; thus, digital reading experiences are abundant and for some, inextricably entwined with both their print and digital reading experiences. In formal schooling beginning to read digitally for all participants began in elementary school. The grade level varied with some participants beginning to read digitally as young as kindergarten and even before entering school. Digital reading in elementary school generally was a positive experience for all participants. Nora moved from another geographical area within the United States during her upper elementary school years and began reading digitally for the first time after arriving in the geographical area of this research, which was fourth grade.

Figure 4. 3 Commencement of participant digital reading



As a reading teacher and Interventionist, knowing that students begin reading digitally in their formal learning environment is meaningful because of the amount of time in elementary school schedules dedicated to teaching learners how to print read. In the geographical area of this study, the print reading resources are state mandated although their use is discretionary. I have at times opted to use state mandated resources and also sought and received funding for additional print and digital reading resources to support the development of reading skills and

comprehension. As an experienced reading teacher, printed text featured prominently in the instruction of a range of reading skills because those resources are aligned to grade level reading comprehension skills and are explicitly taught. Digital resources supported ongoing practice to secure reading and comprehension skills, offering another way to engage in reading.

Lower elementary digital reading experiences supported specific reading skill practice and reading choice. Most participants expressed these experiences as positive, but it had the potential to become frustrating if platform or Internet issues occurred.

Table 4. 1 Selected examples of statements of elementary digital reading

Participant statement	Type of reading practice
“...we did like this website type of thing where it just helped us with reading skills and giving us practice problems [reading material] and like test questions on like inferencing or like recognizing figurative language and stuff like that...I can remember like a reading passage and then having to answer questions about the passage...” Stan	Reading skills
“ They’d have a thing called Tumblebooks where you like get books and read online....You could pick, or sometimes there’d be things like you have to take one nonfiction book to read and then you can pick any other book you wanted. I had favorite books....but to be honest, I don’t like reading the same book over and over...I’d like to submerge myself in different things.” Jake	Reading choice
“There [were] also reading games. I don’t remember exactly what type of reading games, but it also like, it you clicked on it, it would say it out loud.” Olivia	Reading skills
“...there was an app where there’s a bunch of like little stories and books that we would do assignments on. ...at first it was more interesting because it was something new but then it also got a little harder to focus and things would also glitch and you would lose your page a lot...” Emma	Reading skills
“ I know we had to read these paragraphs and then analyze them with the teacher...yeah, we would read these short stories and then analyze them.” Isha	Reading skills
“ ...there was this iStation which was like you had stories to read and then answer things. It’s like a read and answer thing. Then I remember in the library in our class we would go to like	Reading skills/ reading choice

Tumblebooks and you could like read off the iPad or the computer about the story...” Erin	
“ I think I liked it [reading on the iPad] because it was a change, like it was a nice change because it was a lot easier to get information. Because there were just so many things that you can get to or like, look up, and sometimes I do all the other stuff or whatever and I have to get put back on track or like, it’d crash or the website wouldn’t load...” Jerry	Reading choice

Entering middle school, participants already had at least two years practice with digital reading and for some, their entire academic career. Projects, on- going assignments, and short assignments requiring Internet research featured prominently in middle school digital reading. Teacher vetted and participant selected websites guided the research projects. On- going and short assignments sometimes required specific Internet subscription content databases. Content areas included science, social studies, and English Language Arts, theater, and mathematics.

Short assignments. Participants described two types of short assignments: a worksheet or written response that accompanied digital short content-based assignments or student-centered formative assessment using teacher created or content database embedded quizzes. A worksheet served as a guide to locate information while reading through the required digital content. Participants explained this process in a similar way and expressed satisfaction in this type of task completion. Stan described it this way:

Yeah, in science we did a website....it’s kind of like a lab experiment but it’s just on an iPad so you were able to do your own thing, but also follow a worksheet that show what you need to do and answer questions about it. It was kinda cool...because like you got to read the information and also like find certain things like once you find it you kind of feel satisfied in a way. I kind of like reading it and then like finding the information you want.

Written responses to digital reading assignments varied and included paper and pencil notetaking, reading passages with a formulaic response, or a discussion post in a digital platform. Participants had diverging thoughts on notetaking. It could be a frustrating exercise if the amount of digital reading felt overwhelming or its completion appeared to do little to support learning yet, others expressed motivation to read beyond the assignment after taking notes. When having a large amount of digital reading to complete an assignment, Nora stated this:

And so I think that since there were so many websites, that not every [website] focused on my mineral. It made it harder...I think if [the teacher] had given us less websites or like an actual area where you could find your certain mineral, it would have been easier...I made notes for the first three [websites], but after that....

Isha also found frustration with her task as she believed she was completing an assignment knowing she had an alternate successful way to study:

I rarely used my notes to study because the website links always stay and we know when the tests are, so whenever, the day before the test, we can just go back and read it again. It'll be fresher in our brains anyway, so there's no point...

Erin determined digital reading and pencil notetaking was beneficial:

Mostly kernel notes, like the popcorn notes. You have to jot something down every once in a while that you think is relevant because if you didn't do that, there would be a quiz and you wouldn't be ready for it because you did not take notes.

Reading passages accompanied by formulaic responses are part of the teaching nomenclature in my school district and designed to prompt learners in the necessity of citing text evidence with an explanation of its relationship to the writer's position. Emma observed:

...we would have big [digital] passages [to read] every day or a question to answer using the ACE method and discuss....and then we would have to respond to three people [in the discussion post]...

Digital reading with student informed formative assessments served as feedback. Jake and Emma found the reading and quiz taking helpful in their learning. Jake said:

We'd find...information in folders labeled like, 'Geology test number one and two' and we'd go to those folders and it would have website information in it, and links to various places for you to prepare for your test and get information. There would be practice tests you can do...

Emma conveyed, "So we did keep a fill in the blank note [paper]. And then at the end, there was a five question quiz. They were good."

Ongoing assignments. On-going assignments occurred over a teacher determined amount of time with teacher selected resources that included both digital and print. Jake observed:

Everyone had to do a presentation on this one person. I found most of the information for her online and in books. My teacher would give you like an orange paper and it would have a bunch of websites on it that were really useful...

Nora stated "...sometimes it would be vice versa where we would be doing something online..like a discussion post and then [read] from a physical copy." Erin described an ongoing assignment with both print and digital reading:

[The teacher] would give us a little book with like A, B, C, D through Z then we'd have to fill it in with Texas history related terms and we could use the textbooks. [The teacher] would [also] make us go online and read all about them and we'd have to explain them...then we'd have to write them on the [A-Z] book.

Isha's process and decision to use websites depended on her belief in the reliability of web based content. Tasked with finding many websites on a research subject, seeking words like "research shows" and statistical information, she also selected key words in the topic to locate sources:

I would pick three thing about compassion...why I think it's important. And then I'd try to find three sites that have research similar to what I am saying....one of them said that statistics show it's important to have a network...and I found [an] article that said networking helps you prove something like that.

Pedagogically, cognitive tasks accompanying digital reading are similar to the work expected of middle school students engaged in print reading. With either digital or print reading, the pedagogy of reading to learn features prominently, and the participants completed assignments according to teacher expectations. Using both print and digital reading, side by side, gives readers the opportunity to develop "biliteracy" skills (Wolf, 2018) where both types of reading are used and their value is seen as equally important.

Project work. Project work required research focused on one topic and constituted a large part of the digital reading using both teacher evaluated and self-selected websites, sometimes

with a condition of at least one printed book as a reference. Projects enabled blended- learning where access to the requirements and expectations were placed on a learning management system. Participants talked at length about their methods for topic selection, collecting information, and organization of their finished product. The recounting of these processes were peppered with thoughtful minutiae indicating the intense motivation and positive challenge the projects presented. All participants described the importance of citing and verifying sources on the Internet and mentioned both .gov and .org in the URL as the method to recognize and use for verification. Participants did not mention books as being questionable resources, however, they noted the time it takes to read a book versus reading a website, and in comparison, the simplicity of locating digital information.

The decision to read an entire website depended upon the self-perception of knowledge about the topic and ensuring meeting project requirements demonstrating active, in the moment awareness helps propel digital reading. Reading the entire or multiple websites to gain information demonstrated a willingness and risk believing the time invested in the task would be beneficial. Jake recognized he needed to build essential knowledge for his research project:

I had to study Roman gods. And I'd have to go to the website and I read the entire thing because I did not know anything about Roman stuff. I went through an entire website reading about the personality and who is Zeus. And I had to read the entire thing because I didn't really know what was really important about him...[I was] trying to find out basic, basic details on him.

Nora echoed similar thoughts, understanding the necessity and time commitment to read an entire website:

I actually read the whole thing once without writing everything down in the areas. I would go back and reread a little bit before and a little after...[sometimes] you have to read the whole website and that takes time.

Isha stated “They would give us a topic and then we got to do our own research. ...we got to choose whatever website we want...whichever one works the best for our essays.” Erin acknowledged having to read multiple websites creating her own pathway for learning:

[for my topic] there were a lot of websites that said the same thing...that’s the thing with digital reading, you never know which one to look at. I was just focusing on the release of the Titanic and how it was built. So you have to focus on like those points versus like the other ones which is like what happened after [the sinking]. I just wanted to know the beginning and the middle. That’s what I was looking for.

Investigative ways to find information led to robust and secure understanding of the topic as Olivia found:

...so basically, I had to go deeper into it and it was a little bit harder because...it would have been easier if I got disadvantage, but I got advantage and...you know diving deeper [into] learning you get a better understanding of the thing.

Quick, reliable access to digital information is the opposite of print based reading for research which can involve many more steps to achieve a similar goal in digital reading.

Participants stated this easy access to information as a positive and ordinary part of their overall research. Emma found printed books with limited information while websites offered detailed information that she could use:

Everything in the book was like common sense known things, and so I had to go to an actual library and find a better book and I think online was easier because there are so many websites...there's just a lot and it gets more specific.

With preference for printed books that gave detailed background information, the ease of web based research and reading proved helpful to Jerry:

It's usually simpler because you already have all the information that you could ever need, like right there....there's less of a challenge actually getting [information]. I like reading the books, but most of the time [they] don't have all the information you need, so you have to read several books to get the amount of information you can get out of a website or two...

Stan described the ease of using the Internet and digital reading “ It's easier to take, easy to log on...and go on a website than it would be to like take around a big book of papers and have to carry that around everywhere...”

Required to use both print and digital resources for research projects gave choice and in doing so, the development of non-fiction biliteracy skills (Wolf, 2018). Analyzing for usefulness of information with an eye toward integration requires reading for a specific purpose and the projects gave rise to that skill development. Although projects might be topic driven and interesting to students, they are also fact based akin to explorers in a vast ocean of information sailing to convenient shores, or sightings that helps build familiarity simply by doing. This recurring process winds its way throughout their middle school years in the content areas. Participants are repeatedly learning that the Internet is a repository of factual information to be harnessed (Matteucci, 2014). I found this an interesting paradigm because expository or non-

fiction reading requires specific reading skills and strategies that are different from fiction reading skills.

Having information available instantly, knowing how to access and trust its reliability, presents itself to digital readers as valuable, necessary, and expected as part of the learning environment. The digital research pathway is determined by the learner and as less time consuming for research. Participants presented themselves as confident digital readers because it is expected of them. Irritations with digital content rarely focused on digital reading, instead it illuminated issues with turning in assignments or misunderstandings with the learning management system, which is part of digital literacy.

Theme 2: Digital reading is common, but not preferable. A social constructivism framework also informs this study to examine multiple viewpoints of similar experiences (Creswell, 2013). Three areas featured prominently in the experiences of the participants when viewed through a social constructivism framework: knowingly using print reading skills to read digitally, preference for reading printed books, and eye fatigue. Collectively themed as common but not preferable, attention is placed on the thoughts, feelings and manifestations that happened to the individual, while reading digitally. In this study all participants engage in digital reading as part of their academic day and are expected to be capable digital readers although the acquisition of digital reading skills had not been explicitly taught beyond elementary school. Jerry's recollection of elementary digital reading lessons focused only on using the search function to skim through a website. "...my second grade teacher [taught us] because they didn't want us taking an hour looking one thing up [on the computer]."

Emma recalled while in elementary school working in partnerships simultaneously learning about software, how to use a laptop and conducting research "... the first time [we]

really did a research project,..... someone from the district came in and taught us how to use the laptop and how to use all the like PowerPoint and Word stuff,” emphasizing student acquisition of different types new literacies skills, but not specifically how to read digitally.

Knowingly using print reading skills to read digitally. Much about reading digitally is recognizable as reading print. In much the same way a bilingual brain acquires language and places both languages in one area of the brain, referred to as the Common Underlying Proficiency Model (Cummins as cited in Morales, 2017, p. 38) the brain recognizes what reading is and calls upon that area of the brain to perform. As participants examined websites, they employed systematic, familiar to a reading teacher, non-fiction reading skills. Erin described it this way:

I start from the top and go to the bottom, unless there is a table of contents with page numbers we can scroll down to. I look at that then I'd look at subheadings and headings...and then I read the paragraphs underneath them.

Emma also used non-fiction reading skills for digital reading “ [on the websites]...each page had a title...so I really just read the header.. and sometimes I will search and skim to look for vocabulary words.” Nora and Stan had similar views about being taught any type of digital reading. Nora observed:

I'm just going to say like...I guess nobody ever taught any of us how to read digitally because it's basically like reading a normal book, except you're just doing it on a computer screen.

Perplexed at the question of learning to read digitally, Stan said, “I mean, it wasn't really how did I learn? It's mainly just like I learned to read digitally because my teacher told me to....I just

started reading off of a computer screen.” Isha’s experience is similar as exemplified in her statement, “No, [the teacher] didn’t teach us how to read on the iPad. We just...figured it out. [There was]...a link in Schoology and the you just read [the article].”

Middle school students are practiced schoolers. They are familiar with routines and responsibilities of the academic environment and as such, are expected to marshal their experiences, reliable or not, in the hope of correctly developing new understandings. Aided by the absence of being taught different nuanced digital reading practices, they undertake and accept that using their print reading practices to read digitally is correct and supported by teachers because they have not received instruction specifically about digital reading practices nor feedback to the contrary.

Preference for printed materials. Being schooled in both a print and digital learning environment, most participants favor reading printed material. The reasons for the preference for print reading varied. Stan, Olivia, and Nora’s emotional responses to print reading illustrate deep connections and practice as print readers. Stan powerfully said this about print reading:

It just feels like when you’re reading on a computer screen it feels like artificial or it doesn’t feel like, authentic....it doesn’t feel like the author is really there with you. But in a book it shows that you can really tell the storytelling inside the book...the author tried to put his or her efforts or thoughts into...

Olivia and Nora favor holding a book over digital reading. Olivia likes the pleasant feeling of being able to “turn the pages, and keeping it because...if I want to go back and [re-] read something...I can read it many times”. Nora perceives more self- success when print reading “ I think it’s easier to read in a normal book..it’s like a physical copy and I feel like I do better whenever I’m holding the actual book rather than scrolling through it on the device.”

Comparing print and digital interactive reading strategies, she observed of herself ... [with digital reading] you can go back and read, it's not only [that], [with print reading] you can go all around [and re-read]"....Jake's affinity for printed books is similar to Nora's, "...I get a better visionary examples and I learn more and I get better vocabulary out of it." Emma and Jerry concisely stated, respectively "I prefer an actual book"; " I just like normal books".

In an academic setting Isha and Erin stated no preference either way for digital or print reading. Isha perceives them as exactly the same. Erin described her experiences with digital reading as being able to " drown out noise, and then that's only when I'm on a computer. If I read through a book, I actually can hear everything, but I can read it at the same time."

Research on reading preference aligns with this study's participants. In their survey of middle school reading preferences, Loh and Sun (2018) found that students choose to read printed books for pleasure. Rutherford, et al., (2018) had similar findings. Beyond choosing what to read, how to read is common in 21st century culture milieu. This has implications for paper and pencil administered high states testing and the resulting outcomes. When students spend a portion of their academic day absorbed in and, by default, practicing digital reading, there is less time spent developing deeper print reading proficiencies. Competently employing digital reading skills and being equally accomplished in print reading surely was not part of the high stakes testing movement of the 1990's and the No Child Left Behind wake. The millennium brought with it rapidly changing technology embraced because of momentum (Webster, 2017). Reading comprehension scores of fourth and eighth- grade students have stagnated for three decades with two thirds of our country's fourth and eighth graders achieving basic or below basic reading levels (National Center for Education Statistics 2017). The inclusion of digital reading with a supposition of its equinity to print reading is imbued in the paper and pencil high stakes testing

that exists in this country (Gorman, 2016; Herold, 2016) and international testing (Komatsu & Rappleye, 2017).

Why some students see both digital and print reading as equal without an expressed interest for one is an area for further research. Another finding by Rutherford et al., (2018) indicated that proficient readers have no preference for either type of reading. Isha and Erin had different starting points as digital readers, with Erin beginning reading digitally before entering school. Isha's first memory is four years later. In the interviews, both implied reading fiction digitally beyond their school day and, perhaps it is this practice of both reading digitally and the choice of genre positioned within their own motivation helping to build biliteracy skills. SES may also inform an interpretation of this. If their families have Kindle or other devices for digital reading, then there is access for reading fiction or reading for recreation via digital sources. If they do not have access, or models, but only the public library full of print books, that may inform the interpretation of this finding as well as free time and the value of reading for pleasure in a family that may also be a mediating factor of parental education level.

Visual complaints and eye strain. Sustained use of digital devices is a growing concern with research pointing to a two hour threshold before eye fatigue begins (Alamri et al., 2018). Olivia, Jake, Erin, and Emma described eye fatigue and related eye issues when reading digitally. Olivia observed of herself:

...when I am reading a book, like digitally, it's just words after words... [I] have to keep scrolling and staring at the computer screen for a long time...it just hurts my eyes sometimes.

Erin self-regulated and found that pausing when reading helped with eye fatigue. "...it just hurts my eyes sometimes [and] every once in a while have to stop reading the essay....I gotta finish

[reading] it eventually.” Emma was more circumspect, “After a while, like, if I'm reading on an iPad or something, my eyes start to hurt probably from the screen, but I'm not really sure.” For Jake, the consequence of digital reading is vision decline; recently he found out he had to begin wearing glasses. He stated the reason is digital reading and the school district’s Bring Your Own Device (BYOD) policy necessary for school work. “...my eyes start to hurt probably from the screen ...the doctors say it’s because of too much screen time.”

Whether bothersome or a decline in eyesight reading digitally appears to have physical consequences for some students. Knowing that some students need to have a physical break from digital reading underscores reasons to include in school dynamics that digital reading may require breaks and that teachers can expect students to oblige themselves when necessary. Schools and school districts have a duty to consider ongoing research in this area that can influence policy.

Theme 3: Digital reading is a way to collaborate. Blended learning gives the learner choice in time, place and pathway of their learning (Innosight Institute, as cited in Vanderkam, 2013) that can create a solitary learning path in a self-contained classroom with one teacher. A learning model opposite of collaboration, unless ways to collaborate are intentionally built into blended learning. According to ISTE student standards, pillars of blended learning models are composed of seven central principles designed to build capacity in student learning. As one of the seven standards, collaborative work is considered a necessity. Equally important is using technology to build conceptual knowledge in individual pursuits. The theme of collaborative learning addresses participant digital reading and work required aligning to the collaborative standard of ISTE.

Collaborative learning, sometimes referred to as cooperative learning (Johnson, et al., 1993) postulates that working together in partnerships or small groups sharing a common goal produces beneficial learning that values differing perspectives while adding to the common knowledge and experiences of the group membership. It looks different in a technology based assignment, but the overall goal is the same. Sharing of resources may involve having one device where the resources are found. Students may all have a device, but are reading the same website, or students may be researching and reading different websites to gather information for an assigned purpose with the express intent of sharing the information. Leu, Kinzer, et al. (2013) found that collaborative learning may be an unexpected benefit of digital reading, however if the learning model already exists in print reading, a natural adoption of collaborative learning for digital reading seems likely. Participants shared collaborative print reading experiences during the interviews. Stan said,

...we really didn't use technology when we had our own reading. You usually just had our textbooks with the passages inside them and we read from that and then we discussed and then we came back to the group or the teacher and we shared what we found....

Participants described occurrences of collaborative work across their digital reading assignments, whether sanctioned by the teacher or not. Unsuccessful at finding information on a website, students turn to each other for help as Jerry states when he says "...they'd ask a friend if they got the information..." Isha's collaborative experiences consisted mainly of contriving a work around to support learning and openly involved seeking assistance from others:

Usually one person would find a good website and they will say this one's good for that....we have different topics or we'd look at topics different ways....Usually they'd

help me finding websites and if I found a good website that's good for them and then I would just tell them about it....we're not supposed to be working together, but they let us talk and they don't know what we're talking about...

An intentional teacher decision in Nora's class described working in groups and sharing digital reading responsibilities. As interesting is Nora's perception that working collaboratively is easier than working alone:

...we would work in groups because it's not supposed to be like a hard class or anything. And so we'd all take turns and it didn't feel like it was actually that much [work] because...you were focusing on one thing and you could bring all of your ideas together. So it was like you read the whole website.

Jake's group work involved "going on websites" to collectively find information to present an assigned concept to the class, essentially teaching a mathematical concept to the class. Each group had a similar assignment with a different concept. This process repeated throughout the year in his math class.

Emma's collaborative digital reading gave the added benefit of choice in the process of how to work together:

...sometimes we both have an iPad so we go and set up separate times then conference about what we found out....sometimes [we're] on the computer together and we would just read out loud together.

Olivia articulated instances where collaborative digital reading featured prominently:

We [worked] in partners. And [we] had to search up a science fair project because we didn't know what we [wanted] to do. So we found [one]. [After completing the experiment] we typed it up.'

Another collaborative project involved using a teacher selected website and presentation software to document understandings. While working on the project, the team used online collaborative software:

“So I had two other people working with me and we split it [the work] up....we worked on different parts, but we had to learn all [the information]. We can all work on [it] at the same time on the computer and it would show the changes that were made [by] one person. And so we would all work on that together until we were done.”

Researching and reading websites for learning can be a challenging process to a middle school student. With little to no instruction in the development of digital reading skills as compared to the intentional, practiced, grade by grade development of print reading skills, leveraging the knowledge of others delivers a quid pro quo relationship helping to build some digital capital (Morgan, 2010). Apart from the similarities of print and digital reading, understanding how the text is structured and what can be inferred from the text are skills taught in upper elementary school and further developed in middle school (Fountas & Pinnell, 2007). Content based subscription websites are believed to have developmentally appropriate reading levels for students, but not always. Emma astutely noticed this when the district's science subscription based website that she used for successive years became tedious to her.

“ I liked it... it was okay, but once I started getting older and it got less and less useful because there was like one or two paragraphs per animal. So it was very simple...sometimes that got boring.”

Expected to repeatedly gather cognitive skills in reading tasks that are no longer challenging can negatively affect motivation to read. Websites that are too challenging can do the same. Websites may be teacher or student selected, but the reading ability of the website is not something known openly. When working in partners or groups, the strength of the capacity of all can reverberate through the group, where students feel supported while being challenged.

Individual participant narratives. Individual narratives let individual voices emerge about the phenomenon of digital reading. Original experiences produce exceptions that are not separate to nor from the individual. According to Miles, et al., (2014) including the uniqueness of the individual experiences gives a place for the participant to be viewed as a middle school student.

Participant 1 Stan. At the time of the interview Stan, a male, recently finished 7th grade. Stan described his first memory of digital reading as reading from a computer in third grade, “ I can remember reading a passage and then having to answer questions about the passage....it was different than reading a piece of paper.” Receiving rapid and valuable feedback about the accuracy of his answers, Stan used that learning experience in his future digital reading including answering digital test questions. To Stan, digital reading is “more like learning” so he has developed an association with digital reading as purposeful learning.

During middle school, Stan completed many self-directed research projects to find information about the assigned research topics. Digital reading is an opportunity to engage in “different ways to get things done” while recognizing the situation it places on him in making

choices about research. "...there's a dilemma when you have to [choose] because...you're faced with a lot of different ways to choose...", admitting sometimes the best choice is the quickest or easiest.

Reading serves two purposes to Stan: learning and enjoyment. He perceives them differently and separately. Up to this point in his academic career, digital reading is about learning, "it's a way to learn new things...it's not really fun" while print fiction reading is a pleasurable, immersible experience.

Participant 2 Jerry. Jerry, a male, completed 7th grade during the time of the interview. His first memory of reading digitally is second grade using an iPad. Its novelty engaged him in reading, while learning to use the platform challenged him "...I liked it because it was a change...it was a lot easier to get the information, but it was kind of confusing to my second-grade brain." With help from teachers and administrators in elementary school, he became adroit at digital reading.

As a practiced digital reader, skimming headlines is one strategy he uses to find information believing that reading from websites offers limited information, "you get a small chunk of information" and "if it's not there [in the website], it's not there" so one doesn't have to keep looking within the text. Book reports, essays and research projects involved digital reading and research. Printing information he found from different websites, organizing the information to generate the final product for his teacher completed his assignments, getting them done as quickly as possible. "My thought process for a book report or research project...using websites is just getting this done as fast as possible" even though he admits he likes reading websites.

Allowed to use their own device for digital reading a class play, unexpected encounters with the platform that locked or accessing the wrong link in the LMS, Jerry's familiarity with

digital reading gave him confidence to work past the issues to re-engage. School wide issues with Wi-Fi challenge digital reading and blended learning opportunities where his pragmatic perspective of “I can’t do anything about that” are both candid and unique among the participants.

Participant 3 Erin. Erin, a female, completed 7th grade at the time of the interview. She readily admits that she likes to learn and shared the difficulty she experienced in 1st grade learning to read, although her first memory of digital reading was before entering school.

As a middle school student in 6th grade, her ELA and science classes included significant blended learning. Lessons placed on the district LMS allowed the students to access according to their own timetables including during ELA or science class. Teachers provided links to textbook pages, project work, and fiction based stories. Social studies classes used textbooks to springboard student inquiry that required students using web based information to expand their knowledge base making learning relevant. For example, Erin stated

...we’d have to read [the textbook], and they weren’t really up to date... we had a project...to find something of each industry like the cattle, wholesale, or chemical, so we have to go online to find something related to it [the industry]...

By 7th grade, students used their own devices, such as a phone, to read assignments digitally and respond to others in a discussion post. The amount of time to read and respond took most of the class time, so students completed the focus of the lesson on their own, “...every day we’d do a 30 minute warm up out of the 55 minutes [and] basically that would be our lesson for the day.”

Erin believes that lessons placed on the LMS are environmentally friendly because large amounts of paper that would be used to photocopy reading literature are conserved instead. The benefits of blended learning include being able to read at your own pace, including manipulating the font for comfort.

Participant 4, Nora. Nora, a female, completed 6th grade at the time of the interview. She read digitally for the first time in 4th grade taking an online reading test to determine her reading level. Forced by the limited interactivity available on the reading platform to engage physically with the text, she was unable to use her practiced print reading strategies to engage in the digital online reading. She believes digital reading is easier to read than print, even though she is a “huge [print] reader.”

Test preparation for the State of Texas Assessments of Academic Readiness (STAAR) stands out most in her academic digital reading. Reliving the experience of the online reading test from 4th grade, she finds the process of trying to make notes while reading digitally too cumbersome as compared to print reading, “...reading online, I think it’s normally harder and like you don’t want to as much...write the notes to the side on what you just read...because it’s not that easy...” Taught how to type notes onto digitized text and to highlight text in a portable document format (PDF) as the year progressed, she still finds the process of notetaking within digitalized text burdensome. Now that digital reading has been introduced, she believes it to be an economical way to conduct academic learning.

Participant 5, Isha. Isha, a female, completed 8th grade at the time of the interview. Isha reads digitally outside of her school day on her Kindle. She likes the ease and convenience of it when traveling with her family because she can read both day and night.

Sometime in elementary school is her first memory of reading digitally she read from a computer screen short stories to be analyzed, with teacher guidance. This example of teaching analyzing skills on digitized text may have contributed to her belief that print and digital reading are similar.

In 6th grade during school she read articles on the iPad and responded to them. 7th grade digital reading focused on researching articles to write about them in her English Language Arts class. With a teacher selected topic, students found websites that supported a persuasive essay about the theme. The research required a minimum number of articles, but she discovered that with more articles, she obtained a higher grade. 8th grade digital reading had a comparable process that changed midway through the school year, addressing fiction reading she found un motivating:

I don't think we have to write what the internal or external conflict is. Sometimes it's really obvious, like if someone is climbing up a mountain and...there's snow...it's obvious that its external. You don't really need to write that.

Isha described her middle school digital reading experiences as mostly repetitive and unchallenging. Novel at first, assignments soon became methodical and uninteresting. Digital reading of short paragraphs to repeatedly demonstrate mastery of a reading skill, Isha indicated she and her fellows students were presumed to habituate their routines in order to become successful in class.

Participant 6, Emma. Emma, a female, completed 7th grade at the time of the interview. She recalled 3rd grade as her first memory of digital reading using an iPad, accessing an app with short stories with assignments.

Digital reading in 6th grade concentrated in the content areas of English Language Arts and science. Reading a page or two, the students posted a response in the district LMS to answer a question related to the passage. 7th grade ELA had a slight variation to the previous year LMS assignments. After reading a passage, students cited evidence to support a position. Her ELA teacher created numerous assignments that became overwhelming.

Assignments also helped students build academic vocabulary. Skimming through the digital text to find vocabulary words was a common practice. In those instances, she used the search bar to find the assigned words and contextual definition.

The process for using the science website changed from previous years. After learning the science concept, the teacher opted to use the science comprehension quiz as concept check-in so students could monitor their understanding with feedback from the website.

She read fiction novels in her ELA class, but only with printed text. Sometimes group responses to the novel involved using technology.

Participant 7, Olivia. Having completed grade 6 at the time of the interview, Olivia, is a female. Her earliest memory of digital reading is in elementary school where she recalled reading on a computer and being engaged in academic computer games.

Sixth grade digital reading consisted of project work in her ELA class, and locating her own websites when those provided proved inadequate. When reading websites, she uses the mouse to help track even though she is aware she can turn on the voice reader to have text read to her. Over the years, she has grown accustomed to reading digitally even though she prefers a book due to tracking issues, “I guess over the year, I got used to it and we started [reading digitally] a lot more, so it [became] easier...” and thinks that researching projects using the computer is “pretty cool” and that it is helpful. She offers caution about only completing research

and work digitally and sees the need for students to know and be practiced in both print and digital research and learning. “It’s not a bad way to have paper and pencil to be to write [projects and assignments]”.

Participant 8, Jake. At the time of the interview, Jake, a male, completed 6th grade. His initial memory of digital reading is kindergarten where he preferred digital books which made choosing books to read easy. Reading from a specific digital database called Tumblebooks, he continued to have access to digital leveled books throughout elementary school.

Although his teachers provided websites and print material to complete research projects, Jake sought alternate websites to further develop his understanding of concepts at the risk of being successful. When questioning his own understanding of a concept, instead of asking others, he prefers to seek answers on the Internet. “I just go to my computer and I start Googling my question.” Through this process, he has come to trust the information on specific websites such as Khan Academy. He has become practiced at using a few websites to find the answers to his questions. “I prefer to just use one website instead of going through the craze of searching bunches or random websites that I’ve never heard of...”

When certain of his own background knowledge of a content topic, instead of completing a digital reading assignment, he simply skimmed through the information. “... I had basic knowledge and I just skimmed the website and got even more information.”

With substantial experience in digital reading, Jake feels comfortable seeking alternative ways to get information across all the content areas. Finding out that he needs to wear glasses due to extensive and ongoing digital reading, Jake still enjoys reading digitally, but he is now aware he digital reading has other potential consequences.

Researcher field notes. My field notes consisted of entries of digital reading assignments within a blended learning model. Weekly scheduled content areas had specific days of the week with some content areas lending themselves to digital reading assignments that were anonymously created and posted as blended learning assignments. The designated timeframe of twenty-five minutes remained the same throughout the year. Standardized testing dates usurped all other assignments due to scheduling issues and all grade levels. Sixth, seventh, and eighth graders sit for different exams on different days. Field notes reflected this with gaps. A month before the school year began to close out, blended learning assignments ceased, but the scheduled twenty-five minutes for blended learning remained in the schedule. Assignments became print based work.

Two column reflective field notes allowed me to document what was happening in the classroom through the lens of a teacher- researcher with one column dedicated to in situ events and a second column for reflection about the events. Although using the same codes, the viewpoint differs so I could view digital reading in a blended learning environment also as a person who is experiencing it but in a different way: as a reading teacher.

The class where I observed and kept field notes consisted of seven, 7th grade boys identified as needing intense reading support to build print reading skills. Slightly larger than the recommended maximum of six students in a small group (Fountas & Pinnell, 2007) nonetheless, the boys sat together in one large group, allowing the students to freely interact with each other in a calm atmosphere. Online reading assessment data ascertained all boys read and comprehended at approximately the same level. Reading lessons used only print reading materials selected for their engaging topic interest. Introduction to the text, reading, and vocabulary development formed the backbone of the lesson for each text. Routinely after

independent reading, summarizing the text, identifying text features, and inferencing skills from text summary formed the strategic systemic actions to develop comprehension of the text (Fountas & Pinnell, 2007).

The blended learning assignments did not resemble the daily reading work of the students. After logging into the district LMS, students accessed the assignment with very little prompting except from each other. Digital reading assignments varied in their presentation. Links usually indicated a text of approximately one page. Routinely, all 7th grade students read, comprehended, and responded to a prompt in a discussion post.

Viewed through new literacies theory the first theme of the expectation of digital reading also surfaced relative to a student developed understanding of how to accurately access and respond to the assignment. The posted information for the assignment might simply be to post answers in the discussion post without thought to the differing ways the information could be posted, or how to access the information. With a math assignment, the students were expected to find the solutions to the problems, but students knew showing the solution process is an important part of the mathematics. Offering suggestions to demonstrate the solution process with the solution became the source of the conversation in the class. My observations state, “...students were to post answers to some math problems....did not know how to screen capture or create a quick video on [their device] to post answers to show work.” My thoughts on this included students making “...a good effort to complete [the assignment] but it is taking a long time or they are not sure how to use the device to complete the assignment.”

In the role of Interventionist, I am “...spending much time and effort to show students how to understand the question and then respond to it...”. My teaching position requires that I identify, and when necessary, teach bridging skills immediately, using context that gives students

academic momentum to engage the situation encountered. The observation noted the blended learning link accessed a set of images, where the discussion prompt required a response to describe how the "...people help[ed] shape America from the Colonial Era to the Civil War." My thoughts state:

...more than twenty photos. Students told me they did not [recognize] the names of the people nor the image. I am going through the information myself to understand what is asked of the students. I thought the students should click on a photo because there were so many and it seemed the question was too large. I clicked on a photo, hoping for a pop-up with some text, which is what happened.

iPads were the chosen device given by the school to support blended learning, however, only two students brought their device regularly to school and used it during the designated blended learning time. The rest of the students used their phones. My notes documented more than three times changing from reading on the phone to a different platform:

This keeps recurring-preference for reading on the phone, then switching devices or method to read from the projected screen in the front of the classroom....Student who is using phone to read text is having a hard time finding and keeping his place...Student asked to read content from the [projected] screen rather than own device...The students are commenting that reading on their phone screen is difficult.

Before the rise of digital reading and the numerous ways text can be read, print reading did not require as many decisions and potential interactions to access text. Text size, reading pathway and the anticipated time commitment are new dimensions that are made when deciding to read digitally. Conversations about how to make digital text comfortable to read, or engaging

can become part of the teaching of digital reading in much the same way the layout of text is taught and thought about when reading print non-fiction and fiction.

The small class lent itself to the students sitting in very close proximity to each other; they thought of themselves as one group of seven. Print reading lessons necessitated collaboration to augment learning and help students identify their learning strengths (Johnson, et al., 1993) and students did this effortlessly during blended learning lessons. My notes indicated that students formed additional ways to collaborate. For example, due to difficulties reading on the phone, students could opt to read out loud from the projected screen. Instead, the students with iPads "...passed it around to each other to read outloud..." One student requested that he reword a discussion post question into a statement and write it on the board for everyone to use. An unsuccessful attempt to post a photograph of an assignment, another student offered to help after achieving success after multiple attempts.

My field notes and reflections describe situations where students are presumed to be capable of reading and understanding the content, with very little direction about how to access the text, for example, simply numbering and writing the steps. As time went on, the students did become more practiced and comfortable during the blended learning time and reflective notes state this:

As I look back over my notes, I notice that students are becoming use to the routine of reading online. The preferences still exist: those who were reading using the iPad earlier in my notes are still doing so; others are using their preferred devices such as their phones. My notes also show [the students] are engaging in different ways with text. I have no idea the motivation the student[s] have for engaging in this way, I only know they [are].

Summary

This chapter has documented the methodology and findings for this research study and the experiences of the eight participants along with researcher's field notes and reflective thoughts to view digital reading from the perspective of those who are engaged in it. Using both lower case new literacies theory and social constructivism frameworks to guide the understandings of the findings centers the nature of the digital reading as a hermeneutic phenomenon and what it is like to this study's middle school participants. Extracting the similarities allows others to gain the knowledge of what the participants are experiencing, thus adding to and guiding our own knowledge of pedagogy for the 21st century and its learners.

Three themes emerged from the interviews. Middle schoolers are expected to read digitally in their learning environment. Digital reading is a common accepted practice in middle school in no small part because of its very close relationship to print reading. Practices of digital reading are not explicitly taught while print reading strategies are still taught and practiced in middle school, inferring that print and digital reading are viewed as equivalents, matching each other, while research to the contrary exists (Coiro & Dobler, 2007; Leu, Forzani, et al., 2014; Wolf, 2018). What is not clear is exactly how the two types of reading are different. The platform does make a difference (Leu, Kinzer, et al., 2013). Research is pointing to additional differences that are not quite understood and are more nuanced.

Centered around the interactions and effects of digital reading, the theme of common but not preferable included using print reading skills to read digitally and this practice seems logical. Subscription based academic websites are intentional in both knowing and creating content based, leveled reading so that students can engage and learn from the text. Research opportunities can pose different challenges because the reading level of some websites used for research is unknown, even those selected by teachers. Although self-directed web based digital

reading research is viewed as positive and engaging, most, but not all, participants have a preference for print reading. Eye strain and fatigue while reading digitally may be a contributing factor in the preference for print reading. Being familiar with print reading from an early age may also be a contributing factor for its preference.

Digital reading gives opportunity for academic social learning, or cooperative learning and teachers use this strategy or place students in situations where it can happen, whether or not it is allowed. Cooperative learning, in general, is part of the range of learning environments for the participants that now includes digital reading.

CHAPTER IV

SUMMARY AND CONCLUSION

Introduction

The purpose of this hermeneutic phenomenological study was to give middle school students a voice to reveal and describe their academic digital reading experiences. Eight middle school students, in grades six, seven, and eight- three males and five females- gave permission to be interviewed to tell about their digital reading during the academic day. Using an in depth interview process allowed the participants to share the range and types of experiences as readers, and specifically, as digital readers. The willingness to remember, explain, portray, and reflect on their experiences gave me an opportunity to learn about the breadth and kind of experiences they have instead of preconceived ideas from observations both in and outside of the academic day.

I gained an understanding of the essence of the phenomenon through the experience of the participants by exploring the central research question: How do middle school students acquire and foster digital reading comprehension skills? To gain an understanding of their experiences, the following sub questions were explored:

7. In what ways do middle school students leverage print reading strategies and skills for digital reading?
8. How do middle school students comprehend digital reading content?
9. How does digital reading shape the learning environment?

While this study did have limitations, the intention of the study was to make known the essence of the experience of digital reading from the perspective of a middle school student engaged in academic digital reading. Middle school students have securely acquired a significant range of reading and comprehension skills, therefore, they are expected to rely heavily on reading and comprehension skills throughout their day and in their content area classes to acquire knowledge, or read to learn. One limitation of the study is that participants were selected through my professional and social network, however, most of the participants were not known to me before the study and the interviews took place during the summer break, therefore, participants could be forthright with me. Participants were made aware they could leave the study, or choose not to answer a particular question as well, adding to their ability to be candid. Before the interview, each participant helped select the location of their interview facilitating establishment of a positive rapport in comfortable surroundings. Although limitations exist, participants were open, reflective, and engaging. The findings can add to the discourse and help inform educational professionals about the progression of digital reading skills and comprehension acquisition for middle school students.

Summary Based on the Research Questions

This section focuses on the central question explored in this study and the conclusions from the participant experiences. The central question in this study, “How do middle school students acquire and foster digital reading comprehension skills” is a new area of research and part of New Literacies theory. Reading digitally is a 21st century phenomenon and while it relies heavily on print reading skills, as Chapter 2 suggests, comprehension from digital text can be

challenging for students, but the uncertainty of the origin or cause of the challenges to comprehension are unclear to researchers although it is believed to be related to both the text contents and the structure of the digital text (Leu, Kinzer, et al., 2015). The findings from this study can promote discourse for additional research in this area so that educators can help students acquire the range of digital reading and comprehension skills at ever increasing levels to become successful students, setting them up for success in their high school years and beyond.

To explore deeper the central question in this research study, “How do middle school students acquire and foster digital reading comprehension skills”, three sub questions contributed to the conclusions in this study. Conceptual frameworks positioned the findings to articulate meaning and understanding from participant interviews.

Question 1. The first sub question was, “In what ways do middle school students leverage print reading strategies and skills for digital reading?” The interviews from the eight participants revealed that participants rely heavily on their range of print reading strategies to read digitally. Participants specifically stated using print reading skills to read digitally, explaining in depth their thought processes, for example, “each page had a title...so I really just read the header.. and sometimes I will search and skim to look for vocabulary words” and “I start from the top and go to the bottom, unless there is a table of contents with page numbers we can scroll down to. I look at that then I’d look at subheadings and headings...” to “I guess nobody ever taught any of us how to read digitally because it’s basically like reading a normal book, except you’re just doing it on a computer screen. ” Similarly, “It’s mainly just like I learned to read digitally because my teacher told me to....I just started reading off of a computer screen. ” Likewise, “... [the teacher] didn’t teach us how to read on the iPad. We just...figured it out.”

Participants described a variety of digital reading experiences across their content areas. This range and breadth of assignments given to the participants exemplifies and supports that students are marshaling their print reading skills repeatedly for digital reading. Mckenna, et al., (2012) had a similar finding. Reading and searching for information on the Internet is a type of inquiry based learning (Mateucci, 2014). Daily assignments, ongoing assignments, project work, and collaboratively working within and across academic work places students in a position to read digitally with the goal of accomplishing and completing their assignments. My researcher field notes had a similar finding “students are making...a good effort to complete [the assignment] but it is taking a long time or they are not sure how to use the device to complete the assignment.”

Print reading strategies in middle school include critical analysis of text, author positionality, inferencing, and fiction and non-fiction text structure that are absent when the participants engaged in digital reading for the range of their assignments. Absent from the interviews were details or storied experiences developing digital reading proficiencies. Critical reading strategies are necessary and specifically taught to students in print reading, and likewise, it should become a part of online and digital reading competencies (Leu, Kinzer, et al., 2013) especially given that Internet publishing is an open forum. Void of knowing how to analyze a website to determine positionality of the author(s) and website content potentially renders students trusting websites without thinking about why the website should be trusted. Participants stated that using URLs with .org and .gov was one way to determine the trustworthiness of a website but that criteria alone may result in students learning that other URL’s are not trustworthy, which may not be true. It also precludes students from learning how to make judgements about websites that may have additional noteworthy information. Participants stated

such situations encountering difficulty locating needed information with statements such as “there were a lot of websites that said the same thing...that’s the thing with digital reading, you never know which one to look at” and “there’s a dilemma when you have to [choose] because...you’re faced with a lot of different ways to choose”. This suggests different strategies are required when reading digitally because the learning is tied directly to reading and comprehension of the digital text, in turn, helping to secure learning.

From these statements, I was able to conclude that participants use their print reading skills to read digitally and that specific ways to read and comprehend digital text is not taught as a 21st century comprehension skill. Viewed through a new literacies framework, students are becoming 21st century learners and engaging in new literacies as digital readers lacking guidance as critical consumers of information on the Internet as suggested by Leu & Zawilinski et al., (2014).

Question 2. The second sub question was “How do middle school students comprehend digital reading content?” From listening to the participants describe their digital reading experiences, my findings exemplify that participants were actively involved in digital reading purposefully centered around learning, thus reading to learn. Teachers contrived ways to guide learning while allowing students to work at their own pace. Participants mostly found this guided learning supportive, enjoyable, and challenging. Daily assignments to build understanding were seen as positive experiences “you got to read the information and also like find certain things like once you find it you kind of feel satisfied in a way” and “ You have to jot something down every once in a while that you think is relevant...” demonstrate that student response activities described in the interviews are designed to help students build knowledge. Importantly, there is a strong likelihood that the teacher has already vetted the information and designed the activity

intentionally. This suggests that the teacher has engaged in his/her own digital literacy development perhaps just ahead of the students and exemplifies teachers are making an effort to transition learning experiences into the 21st century but it is taking time. As mentioned previously, most teachers have grown up expected to use their print reading skills for digital reading and are facilitating their same print to digital experiences.

Other activities such as crafting a response with a particular format serve the same purpose as the daily assignments from a teacher perspective, giving students both practice in the creation of the written response and supporting understanding of the digital text: “we would have big [digital] passages [to read] every day or a question to answer using the ACE method and discuss”. Participants were clearly willing and motivated to read online and the motivation may be one reason they perceive themselves to be successful digital readers. Contextualizing their learning and offering supports helped to propel their learning through digital reading, clearly aligned with suppositions by Brown, et al., (1988) and Immordino-Yang and Damasio (2007) that situated learning helps define the reason for learning while understanding the personal benefits of it.

All the participants recounted Internet based self-directed project work, requiring the participants engage in Internet searches to find information necessary to complete the task. This is promising in that teachers are trying to integrate instructional technology, even as digital immigrants themselves.

Project work was seen as more time consuming, requiring more of the participants than shorter daily, or on going assignments. Project work aligns with the suggestion by Pitcher et al., (2010) that reading and understanding [digital] text is easier for students because of the existing motivation to comprehend it, which, in project work, is significant. Project work has

characteristics of blended learning, especially the learning path. A main feature of project work involved topic selection, Internet searches to find information, and assembling the information into a finished product. Aware of their own background knowledge helped to determine the digital reading commitment decision: “I’d have to go to the website and I read the entire thing” or deciding which websites to use “we got to do our own research. ...we got to choose whatever website we want” if additional information was needed “so basically, I had to go deeper into it and it was a little bit harder” or reading multiple websites “there were a lot of websites that said the same thing”.

My researcher field notes offer a different viewpoint of comprehending digital text. Initial blended learning assignments that required digital reading appeared to be confusing to students:

[I am] ...spending much time and effort to show students how to understand the question and then respond to it...and I am going through the information... to understand what is asked of the students. I thought the students should click on a photo because there were so many and it seemed the question was too large. I clicked on a photo, hoping for a pop-up with some text, which is what happened.

The students in my class are marginalized readers and are placed in the class to develop and secure comprehension skills using print materials. Findings by Hall (2016) reveal that marginalized readers are not aware of their own self-efficacy in acquisition of reading and comprehension skills, so it is plausible they may not initially know how to engage in some types of digital reading. Blended learning reading assignments appeared to be grade level reading assignments, yet it was already known that the students in the blended learning class described in my researcher field notes were reading and comprehending significantly below grade level, so

that may be more of a contributing factor. This area needs more research to develop an understanding of how differentiation of learning is situated within blended learning environments.

Student comprehension of digital reading content appears to be related to the supports the teacher puts in place for daily and ongoing assignments, and the motivation of the participants to be successful in their academic work. Lower case new literacies theory addresses reading online and comprehension as “a process of problem-based inquiry involving skills, strategies, dispositions, and social practices ” (Leu, Zawilinski, et al., 2014, p. 346) within the Internet and aligns with the practices and experiences of the research participants. It also aligns adversely with the observations from the researcher field notes as the students engaged in blended learning in my field notes were not provided supports nor instructions in their blended learning reading and comprehension assignments.

Question 3. The third sub question was “How does digital reading shape the learning environment?” Learning environments are fashioned by continual daily interactions among students, the teacher and the environment, including a blended learning environment. Teacher practices and pedagogy, including their belief in using technology for learning (Admiraal, et al, 2017; Heitink, et al., 2016) are instrumental in cultivating a digital reading environment. Participants stated they collaborated while engaged in digital reading as a fairly common practice “...they’d ask a friend if they got the information...” and “usually they’d help me finding websites and if I found a good website that’s good for them and then I would just tell them about it”, or reading together separately then talking about their reading “sometimes we both have an iPad so we go and set up separate times then conference about what we found out” or “sometimes [we’re] on the computer together and we would just read out loud together” and

working together to accomplish a task, “So I had two other people working with me and we split it [the work] up...we worked on different parts, but we had to learn all [the information]” holding each other accountable for learning all the information.

Researcher field notes documented instances of students working together in ways that supported the students access to reading and learning. I witnessed when the students “...passed it [the iPad] around to each other to read aloud...” and offering to write the a response template on the board for the others to use.

Analyzing and interpreting the participant statements and field notes, I was able to conclude that digital reading facilitates a cooperative and collaborative learning environment. This finding is consistent with Leu, Kinzer et al., (2013) that while researching can be either an individualized or a group activity, “online research...often appears to be enhanced when it takes place collaboratively.” (p. 7) and that “Online reading and writing practices appear to increase comprehension and learning.” (p. 8, Leu, Kinzer, et al., 2013).

A manifestation within the digital reading learning environment is eye fatigue. Some participants said “it just hurts my eyes sometimes”; having to stop and rest “it just hurts my eyes sometimes [and] every once in a while have to stop reading the essay” acknowledging that “my eyes start to hurt probably from the screen” and beginning to wear glasses due to digital reading “my eyes start to hurt probably from the screen”. I concluded from these very specific statements that digital reading affects some students in an unfavorable way. Unfamiliar to educators is the idea that using technology and helping students become 21st century learners, that students appear to enjoy, may also have particular physical consequences.

Using the three sub questions, I was able to gain an understanding and more complete picture of the overall research question “How do middle school students acquire and foster

digital reading comprehension skills?” The sub questions elucidated a different perspective than the conceptual frameworks, helping to understand more fully the essence of the experiences of the participants as middle school digital readers.

General Conclusions

Hermeneutic phenomenology aides the researcher in examining a phenomenon so that its essences can be described and made known to others to benefit ongoing discourse and inform pedagogical practices. The three major ideas from the findings help describe the essences of the experience in this study of the academic digital reading practices of middle school students. They are the substantial use of print reading strategies to engage in digital reading, the variety of learning opportunities through digital reading to help students learn content knowledge, and collaboration as a part of the digital reading environment. The conclusions gained from the in depth interviews of the research participants and researcher field notes indicate students are active digital readers in their school day. Absent from their digital reading experiences are specific reading strategies for digital reading, and in this vacuum, students are using their print reading strategies to read and comprehend digital text. The continual practice of teachers believing that print and digital reading are the same, or isomorphic, (Leu, Zawalinski, et al., 2014) suggests this is part of the hidden curriculum (The Glossary of Education Reform, 2015) where digital reading is an unapprised context of being a 21st century student.

The preference for print reading over digital reading insinuates that students participate in both, thus practicing both. Their academic work demands digital reading engagement of them and the interviews revealed that participants are comfortable, involved, and see the value of their digital reading because of the interesting ways in which teachers support students as they build

content knowledge through digital reading. The fluid mix of being given a task and then allowed to do it with template supports, at their own pace, shifts the nature of middle school learning to a learner centered approach. That teachers understand this and develop templates and processes to guide and facilitate learning in digital reading implies an understanding of its differences to print reading. Perhaps teachers are navigating their own print to digital composition of assignments. Completion of such work appears to give teachers the information necessary to inform instruction. Reading in both digital and print reading, as participant interviews revealed, gives teachers the passageway to teach, and students to learn about the differences and similarities in the types of text. It is a learning opportunity missed because digital reading is divorced from new literacy practices. Participant explanation of their digital reading positions them as building some parts of digital reading skills through repeated practice, accepting it as part of their learning, but unaware that there are specific digital reading and comprehension proficiencies because digital reading is a phenomenon that has manifested in this century and especially in the last decade.

Digital reading induces collaboration as teachers and students intentionally leverage its benefits. For students this could be due to a lack of additional strategies to gather and synthesize information from the Internet. Intentional development of digital reading practices strengthens skills allowing students time and opportunity to develop other skills in a continuum of digital reading practices to secure comprehension and critical thinking skills, so they have these skills in both digital and print text, a necessity for 21st century learners. My final conclusion, gained from the voices and expressed experiences of the participants and researcher field notes, is that although digital reading is an intricate part of middle school learning processes and is expected of middle school students, digital reading skills are not explicitly taught and are part of the

hidden curriculum in middle school reading. It is important to note that findings among both male and female participants were alike.

Recommendations

The findings from this study identified the essences of the experiences of middle school digital reading, in turn, described as themes. The themes encapsulate the similarities. The recommendations are separated into three sections by themes that emerged from the voices of the participants.

Theme 1: The expectation of digital reading. The participants in this study detailed their digital reading experiences beginning in elementary school. Digital reading is not a new experience for the participants and the shift to digital reading to engage in the curriculum and gain content knowledge is demonstrably a clear pattern in the teaching repertoire of teachers and learning proficiencies developed in students. The participants accept digital reading as part of their curricular practices and it should continue as the range of experiences, along with the expectation placed upon teachers to parlay their instructional strategies utilizing technology. This study did not focus on teachers nor teaching strategies, but the findings, through the absence of information, elicits teacher manifestations to develop digital reading skills through their use, albeit unaware that explicit differences in the teaching of digital reading exists.

This research is a good starting point in identifying those areas where belief of supporting digital reading exists can be modified to capture and embed specific digital reading practices. For example, when using search engines to locate information, explicitly teaching that algorithms, geography, and personal search history impact visible links. Using alternate search engines will do the same. It would also be beneficial to gain insight from teachers who assign digital reading assignments to know their motivations and beliefs about digital reading. Starting points for

developing understandings of 21st century reading includes a wider range of digital reading practices and can take its rightful place alongside best practices for teaching print reading strategies, as befitting 21st century learning.

Theme 2: Common but not preferable. This research helped to illuminate and articulate that an ostensible match between print and digital reading and comprehension pedagogical practices exist, while research suggests otherwise. The idea that print and digital reading are not exactly equivalent should continue to be part of the ongoing discourse and pedagogy. This is important to understand as time spent engaged in digital reading is time taken away from print reading, although print reading is the usual platform for high stakes testing and educators need to understand this difference in the context of what is valued. High stakes testing does little to consider 21st century learning and differing types of critical thinking skills required when reading from the Internet. The ease of access to information demands the reader quickly make sense of the few words given in lists of Internet search links and how the information may apply to the focus of the task. Reading digitally demands students make quick choices and continue along a learning path. The few lines of information and determining its value relative to the focused task is a different kind of critical thinking skill required of print reading. On the Internet it is a quick judgement based on task, while in print reading all the content already exists for the reader. Context and purpose are important in both situations and teachers should understand and support the development of the process for understanding each.

Rare is it that students bring up uncomfortableness when engaged in academic work. Cognitive demands are required when reading digitally, and awareness of physical debility should continue be addressed in the discourse. In some subjects, such as science lab work, measures are taken to teach students about safety to prevent harm. When reading digitally,

school districts and schools should encourage students to monitor their own comfort level and take necessary breaks to reduce eye fatigue. Students with disabilities engaging in digital reading as part of their academic day is an area for further study.

Theme 3: A way to collaborate. The importance of collaboration in the 21st century cannot be overstated because of its ongoing value in education. Technology has been touted as enabling collaboration in real time across geography. Teachers should continue to use collaboration as an important instructional tool and help students understand collaboration as instrumental in developing comprehension and valuing other viewpoints. Easy access to a variety of viewpoints on the Internet facilitates discussion of diverse views, adding collaboration helps to strengthen this. It is never exactly clear to a teacher when students need support in understanding a concept when engaged in academic work and is especially so when reading a website. Working collaboratively students can help each other while validating their own understanding. Facilitating students working collaboratively across geography appears to be more challenging for teachers.

Summary

This study gives insight from the participants about their academic digital reading experiences through retelling, reflecting and describing their experiences. They were able to articulate their thoughts, manifestations and feelings about digital reading as experienced digital readers, who engage in digital reading as reading to learn. They are encouraged to be digital readers as teachers expect it of them and provide supports such as templates and formative assessments to attain and realize success. Internet based project work appears to the participants to be easy to complete because the information is readily available and they are versed in determining reliable websites. Participants rely heavily on their print reading skills to read

digitally mainly because middle school teachers are not explicitly teaching digital reading strategies even though research suggests that different competencies are necessary. While academic digital reading features prominently in the school day, most students prefer print reading. Digital reading supports also occur with collaboration, whether explicitly allowed or not. Gaining insight from the participants helped me analyze how middle school students foster and acquire digital reading skills. The conclusions reached have helped me understand the broader context of digital reading and specific practices and proficiencies that must be addressed and included in reading and comprehension strategies in middle school. Enhancing and encouraging the importance of developing these strategies in the reading curriculum allows students to garner 21st century skills required of them. Therefore, it is important that researchers continue to provide discourse and help teachers turn theory into practice to benefit students.

As both a reading teacher and researcher, I suggest that teachers, curriculum developers, and administrators reflect on their own position of digital reading. Reflection allows a willingness to engage and be open to other paradigms which is necessary as we continually try to define what it means to be literate in the 21st century. A part of that is digital reading. Many of us are practiced and have become successful in both print and digital reading because of expectations placed upon us that we use our print reading skills for digital reading. A great benefit to most of us is that we had very secure print reading skills while we did not have to read digitally until adulthood. The students in the K-12 environment are developing and honing their print reading skills and are expected to be digital readers as well. As educators, we need to know how to support students in a new learning environment that as educators, we are learning ourselves. As learning leaders, we should exercise caution in replicating our own learning experiences in a 21st century learning environment that expects more from teachers and students.

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APPENDIX A

APPENDIX A

PARTICIAN CONSENT FORM

PURPOSE

We are doing a study about middle school students who read on their phone, a computer, iPad, or Chromebook, or other device. It is up to you if you are in this study. I will be discussing this with your parents too. Your parents are not allowed to have you participate unless you agree.

DESCRIPTION OF THE STUDY

In this study about middle school students who read on their phone, iPad, Chromebook, laptop, or computer you will be interviewed by yourself. The interview will take about 45 minutes. What you say will be audio recorded so we can be sure that we have correct information. It could be that another interview, at a later date, might be necessary. That interview will be shorter, only about 15-30 minutes. At any time during the study you can change your mind and not participate. Nothing will happen. You can also decide to skip a question during the interview. Nothing will happen.

After the research is over, the results will be written. These are called the findings. The researcher will give you the findings so you can read over what you said. If it is not accurate (describes your meaning) tell the researcher so it can be corrected.

RISKS

Participating in this study involves minimal risk. Risk that is no more than what happens in daily life.

BENEFITS

Your participation in this study will help us understand how middle school students understand and use digital reading.

WHO TO TALK TO ABOUT QUESTIONS

If you have questions about the study you can ask us now or later. Your parents have been given our contact information.

If you have questions about your rights in the study, contact The University of Texas Rio Grande Valley Institutional Review Board at (956) 665-2093 or irb@utrgv.edu.

I agree to take part in the study.

Child's Name	Signature
Date	

APPENDIX B

APPENDIX B

PARTICIPANT GUARDIAN CONSENT FORM



PARENT/GUARDIAN PERMISSION FORM FOR CHILD PARTICIPATION IN RESEARCH

Study Title: The Digital Reading Experiences of Middle School Readers: A Phenomenological Study

Permission Form Name/Child's Name:

Principal Investigator:	Laura Hayward	Telephone: 703- 945-2779
	Dr. Karin Lewis	karin.lewis@utrgv.edu

KEY POINTS YOU SHOULD KNOW

- We are inviting your child to be in a research study we are conducting. Your child's participation is voluntary. This means it is up to you and your child to decide if they want to be in the study. Even if you decide to have your child join the study, you are free to have them leave at any time if you change your mind.
- Take your time and ask to have any words or information that you do not understand explained to you.
- We are doing this study because we want to learn about the digital reading experiences of middle school students.
- Participation in this study requires audiotaping of each interview to ensure accuracy. By signing this consent form you are giving us permission to make and use these recordings in the research.
- Why is your child being asked to be in this study?
 - Your child is a middle school student.

- Your child reads on a device such as an iPad, phone, Chromebook, laptop, or desktop computer.
- What will your child do if you agree for them to be in the study?
 - Participate in two different one- on –one interviews about their digital reading that will include. The first interview will last 45 minutes. The second interview will last no more than 30 minutes.
 - Agree upon a time and place for each interview, before each interview and make sure that time and place is agreeable to you, your child and the researcher.

More about the interviews:

- In the first interview, your child will be asked to:
 - Talk about/explaining their digital reading with detail and an example, giving much detail about their digital reading example.
 - Talk about/explaining about how they think or what they think about digital reading, again with many details.
 - At any time during the interview, your child can choose to skip a question or choose not to answer a question.
- The second interview will ask your child to clarify details to ensure the researcher understands the meaning and intent of what your child said from the first interview. At any time during this interview, your child can choose to skip a question or choose not to answer the question. This interview will be audio recorded.
 - You will be contacted by me (the researcher) explaining the need for the second interview. The need will be based on clarification of an idea, thought or something that has been stated.
 - Agree to a time and place for the second interview. The time and place must be agreeable to you, your child and the researcher. This second interview will last 30 minutes.
 - It will not be necessary to sign another consent form nor assent form.
- After the interviews are complete and the findings are written, your child will be asked to read his/her portion and feedback to the researcher for accuracy and tone of the section. Feedback can be verbal, written, or both. Your child can contact me via email or by phone.
- Can your child be harmed by being in this study?
 - Being in this study involves no greater risk than what your child ordinarily encounters in daily life.
 - Risks to your child’s personal privacy and confidentiality: Your child’s participation in this research will be held strictly confidential and only a code

number will be used to identify their stored data. However, because there will be a link between the code and their identity, confidentiality cannot be guaranteed.

- If we learn something new and important while doing this study that would likely affect whether you would want your child to be in the study, we will contact you to let you know what we have learned.
- What are the costs of being in the study?
 - There are no costs to you or your child to be in this study.
- Will you or your child get anything for being in this study?
 - [You will not receive any payments for taking part in this study.](#)

CAN THE INFORMATION WE COLLECT BE USED FOR OTHER STUDIES?

We will not use or distribute information your child gave us for any other research by us or other researchers in the future.

WHAT HAPPENS IF I SAY NO OR CHANGE MY MIND?

- You can say you do not want your child to be in the study now or if you change your mind later, you can stop their participation at any time.
- No one will treat your child differently. Your child will not be penalized.

HOW WILL MY CHILD'S PRIVACY BE PROTECTED?

- Your child's information will be stored with a code instead of identifiers (such as name, date of birth, email address, etc.).
- No published scientific reports will identify your child directly.
- If it is possible that your child's participation in this study might reveal behavior that must be reported according to state law (e.g. abuse, intent to harm self or others); disclosure of such information will be reported to the extent required by law.

WHO TO CONTACT FOR RESEARCH RELATED QUESTIONS

For questions about this study or to report any problems your child experiences as a result of being in this study contact: Laura Hayward, 571-223-6782, laura.hayward01@utrgv.edu or Dr. Karin Lewis, 956-882-5704/karin.lewis@utrgv.edu

WHO TO CONTACT REGARDING YOUR CHILD'S RIGHTS AS A PARTICIPANT

This research has been reviewed and approved by the University of Texas Rio Grande Valley Institutional Review Board for Human Subjects Protections (IRB). If you have any questions about your child's rights as a participant, or if you feel that your child's rights as a participant were not adequately met by the researcher, please contact the IRB at (956) 665-2093 or irb@utrgv.edu.

Signatures

BY SIGNING BELOW, YOU INDICATE THAT YOU ARE VOLUNTARILY AGREEING TO HAVE YOUR CHILD PARTICIPATE IN THIS STUDY AND THAT THE PROCEDURES INVOLVED HAVE BEEN DESCRIBED TO YOUR SATISFACTION. THE RESEARCHER WILL PROVIDE YOU WITH A COPY OF THIS FORM FOR YOUR OWN REFERENCE.

PARTICIPANT'S SIGNATURE

___/___/___

DATE

BIOGRAPHICAL SKETCH

Laura A. Hayward

- Doctorate in Curriculum and Instruction (EdD), December, 2019 University of Texas Rio Grande Valley, Brownsville, Texas.
- M.Ed. Educational Administration, May, 1989, University of New Orleans, New Orleans, Louisiana.
- B.A. Elementary Education, May, 1982, Mercer University, Macon, Georgia.

Laura Hayward is a certified educator in both Texas and Louisiana. She holds a specialist certification in both states in Gifted and Talented Education. In addition to working in Texas and Louisiana, she has also held leadership and academic positions in China, Singapore, and Vietnam.

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