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The Use of E-books, Computers, and Tablets To Enhance Reading Skills

Nicole B. Ingram

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To Enhance Reading Skills

Nicole Bernadette Ingram

Kennesaw State University

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Raynice Jean-Sigur, PhD, Chair

Debra Coffey, PhD, Committee Member

Mark Warner, EdD, Committee Member

Dedication

When I started this journey, I did not imagine I would learn so many things about myself and my family. I learned that even when I got discouraged, frustrated, tired, and even sad, my family stood by me. Especially my mom. She dedicated over 45 years in education. Accepting this quest to fulfill the requirements for this degree was because of her. As a child in the womb, I was molded to become a great educator like my mom. Therefore, I dedicate this body of work to my super mom, dad, brother, nephews, and angles above. Thank you for never giving up on me, pushing me when my car was almost out of gas, and standing with me to receive the trophy at the finish line. I love you all to pieces and I could not be prouder to call you my family, my heart, and my world.

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Abstract

The purpose of the study was to identify teacher's opinions of technology and its usage with reading instruction. The study explored teachers' use of e-books, computers (reading programs), and tablets to enhance reading skills. Specifically, the researcher wanted to investigate elementary teachers' beliefs regarding the use of e-books (electronic books), computers (reading programs), and tablets for enhancing reading skills with students who struggle with reading. To determine the impact of e-books, computers, and tablets on reading practices, data were collected from four urban elementary teachers in a southeastern school district. The research was conducted using surveys, interviews, and observations. The research questions guided the study:

1. What are teachers' beliefs about e-books, computers, and tablets
   in motivating elementary students to engage in more reading at school?
2. How do teachers scaffold knowledge and facilitate learning using these technological devices?

Key Words:

Teacher Leadership, reading instruction, teacher beliefs, technology, e-books, computers, tablets

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Chapter 1: Introduction

Teachers at times may need to utilize different teaching resources to support and enhance reading. With recent events and increase use of technology, materials such as e-books, tablets and computers are being implemented into elementary reading classrooms. Research is needed to determine if there is an impact on reading skills using e-books, computers, and tablets in early childhood education. The focus of this research needs to include information on how teachers are utilizing technology such as e-books, computers, and tablets during classroom instruction to help students improve reading and writing skills. According to data from The Nation's Report Card (2020), reading scores in Georgia have decline from 2017-2019. The data were measured using Northwest Education Assessment Measures of Academic Progress (MAP) (2020). School and state data results signal traditional reading strategies implemented alone may not be working effectively to bridge student reading score gaps in especially those in urban settings. Using additional technological strategies during reading instruction may motivate students to read and write more proficiently.

As a teacher and researcher, I have observed children's positive attitude while engaging with technology during play, using computers at school, and video games outside the school environment. Many students carry that same motivation into the classroom when engaged in lessons using computers. However, formal research regarding the use of electronic books (e-books), computers (used with reading programs), and tablets as additional resources to use along with traditional reading strategies when teaching reading in the classroom has not been done. Children in the 21st century are exposed early to technology in the form of e-books, computers, and tablets; therefore, it might be an easy transition to encourage them to read using this technology.

What are E-books?

E-books or electronic books are a new type of electronic book that connect children to reading. These books can be shared with friends, parents, and teachers while improving literacy in all environments (Wright et al., 2013). Many e-books provide dictionary features using digital devices such as I-pads, Nooks, and Kindles. An I-Pad is a computer tablet developed by Apple. The Nook is a device created by Barnes and Noble that uses a touch screen like the I-Pad. The Kindle which is created by Amazon is also a tablet style computer. However, it uses a keyboard to manipulate screen features. All these devices support e-reading. Furthermore, you can use an app to sync information such as books to read using the devices. Using these devices to read e-books gives flexibility on when and where reading can take place (Falcone, 2012). E-books must be used with other interventions to provide improved vocabularies so that children's reading and writing skills will be enhanced (Drori et al., 2009).

E-books and Reading

Reading is being impacted by the introduction of e-books along with print books. Emerging digital media and increased collection of digital documents have greatly impacted reading (Ziming, 2005). I-pads, Nooks, Kindles have given rise to an increase in reading e-books because these tools can be used to access e-books. Reading e-books may work better for some people because they offer features that enable the reader to change the text by increasing the size of the font. Studies show that the impact of new ways that people read digital media compared to print material, is easier for persons with disabilities (Ziming, 2005). Some authors of e-books have found ways to use the computerized tools such as e-readers, and I-pads to help students improve their vocabularies and phonological awareness. Research has indicated that computers

and software can provide exciting and interesting materials that help readers improve their reading/writing skills (Adina et al., 2012). E-books provide students engagement, which improves reading comprehension. Part of the reason students become engaged in e-books is because there is action along with the print material. Students can get involved in the reading. When e-books are used compared to reading print books, teachers must select e-books that contain animation and sound effects if they want students to become engaged in the reading. Not all e-books offer these features, so care must be taken when e- books are selected.

All e-books are not designed for young readers; therefore, teachers must be selective in the books they choose for early readers. Whereas studies show that children benefit from well-designed e-books with sound, music, and visualizations (Roskos et al., 2012). E-books that are designed for young children to begin to read, need to place emphasis on beginning reading strategies. When e-books are designed to introduce vocabulary and teach word sounds, they will help young readers become aware of concepts in the story. The electronic books provide dictionaries and pictures that make reading enjoyable (Greschik et al., 2011).

Teachers must consider children's stage of development when selecting e-books as learning tools. Teachers can use CD-ROM storybooks to teach young children to begin to read (Pearman, 2008). The use of reading standards and goals must be used along with CD-ROM storybooks in order for the young child to benefit and learn to read. When considering e-books for beginning readers, a choice of fiction and non-fiction books must be carefully selected. Fiction books are often used to teach students to begin to read. E-books on CD-ROM, the internet, and using digital devices can provide readers with story books for reading. The good thing about using technology to read these e-books is they are usually up to date books. Printed textbooks used for school activities may be out of date, whereas e-books are published at a faster

rate, and can be easily updated (Maynard & Cheyne, 2005). Tablets and e-readers are necessary

mobile digital devices that can make reading easy for children. Tablets and e-readers provide

dictionaries, and other search engines when word meanings are not clear (Grant, 2004). Digital

devices are changing the way children read and locate information-books provide a variety of

stories in interactive format that engage children in reading (Pena, 2010). Technology may be a

new approach to teaching children of all ages, cultures, and disabilities how to become better

readers.

The explosion of e-books demands that they be used to help students become better

readers. Teachers need to use laptops, tablets, and other digital devices in order to plan and

integrate technology in the classroom (Johnson, 1996). Using reading software as a motivational

tool encourages students to read more (Ciampa, 2012). E-books can be used to motivate students

who do not like to read. A possible positive effect of using e-books is the motivation students

must read, thus exposure to additional reading opportunities. Reading and writing work together

because writing is the result of information that has been read and understood. Some studies

reveal that e-books are ineffective in comparison to printed text because readers rapidly browse

through e-books and remember less (Dunbar & Murat, 2012). Problems may occur if the teacher

does not provide guidance when e-books are being used. Therefore, education programs in

schools must require future teachers to engage in methods of teaching that use technology and

materials other than print books (Johnson, 1996).

Statement of the Problem

Based on research and conversation with educators, Elementary students have been struggling with reading for years. According to the Georgia Report Card, reading scores have continued to decline in the state of Georgia (Georgia Department of Education 2019). I have also witnessed teachers struggling to find additional strategies and resources to help students meet their academic needs in reading. I have realized following my observations that teachers are not applying technology strategies nor using reading resources enough to assist with daily instruction due to a lack of reading professional development sessions. Furthermore, teachers might not receive enough professional development opportunities that prepare them for applying technology instructional uses into their teaching lessons, such as using e-books, tablets, and computer programs. I am extremely interested in the ways in which teachers may use technology to help them support reading lessons. According to Jones and Brown (2011), electronic books (e-books) are becoming popular personal reading sources because they offer a large selection of reading materials. In a study of a comparison between e-books and traditional print books in an elementary school, children welcomed e-books and the technology but did not ignore print books. According to Wigfield et al., (2008), the amount of time children spend on reading activities is an indicator of their motivation to read and make gains in reading achievement.

Elementary teachers where I teach try to focus on assisting students with a variety of interventions to help shrink their weaknesses in reading. Teachers, administrators, and staff members work collaboratively to create a plan and form partnerships to assist students with their academic needs. Some students are struggling to read on grade level and cannot enjoy a variety of reading experiences in school. As reading strategies are implemented into instructional practices, students reading skills should improve. Teachers in my school including myself, are

trained to perform many instructional practices to assist with struggling readers. However, I believe there is still more work that can be done to help students successfully learn to read and enjoy books in hard copy or electronically. According to Schmoker (2018), "The most important component when assisting students in reading is to make sure they receive effective instruction in school which can be a life-changing benefit" (p.94). Furthermore, students need to be involved with the tasks and resources their teachers may expose them to in the classroom According to research materials provided in the home by parents (Arzubiaga, et al., 2002) or classroom material chosen by the teacher are vital in children's literacy development (Flowerday et al., 2004).

Schmoker (2018), suggests that " teachers must be well trained in basic elements of effective teaching when presenting daily lessons to help students meet academic goals rather than focusing on technology usage," (p. 93). Schmoker (2018) further states that "many school districts use a large portion of their budgets for technology initiatives and training for professional development for teachers, and some of them have not learned to implement effective lessons or a coherent curriculum,"(p.93). The study will also explore teacher beliefs and scaffolding approaches to technology and reading in order to assist in professional development opportunities for educator resources for learning. Bauerlein (2009) indicates that the use of digital devices does not increase vocabulary or improve thinking skills, but reading does. Many U.S. schools use computer-based games, tools, and instructional programs to improve learning and lower the student achievement gap (Schmoker, 2018). According to this researcher, none of the highest achieving countries is spending the bulk of their money on technology. Schmoker (2018) also suggests that" we invest in evidence-based practices to improve student learning offer professional development opportunities,"(p. 95) but many do not offer hands-on

experiences and continuous learning for teachers and staff. Support through provision of various resources from school staff, district staff, and administrators could assist with improving reading skills of students who read below grade level. My intent for the research is to provide stakeholders with evidence needed to determine whether teachers believe if resources such as e-books, computers, and tablets should be used to enhance reading skills of students to support reading lessons. This study will be guided by the research questions below:

Research Questions:

1.What are teachers' beliefs about e-books, computers and tablets   in motivating elementary students to engage in more reading at school?

2.How do teachers scaffold knowledge and facilitate learning using these technological devices?

Definition of relevant terms:

App: A computer software or program generally small in size that can be used with mobile devices such as a smartphone or tablet. An app can also be used on a desktop computer

CD-ROMS: A computer digital reading operation memory system used for accessing education software on computers

Computers: A computer is a device that accepts information (in the form of digitalized data) and manipulates it for some result based on a program, software, or sequence of instructions on how the data is to be processed

Digital Devices: Digital devices are various types of technology, such as laptop computers, I-pads, Nooks, Kindles, and I-phones

(Definitions from whatis.com) and (definitions from Google.com), 2018

E-books: An e-book is an electronic book or digital version of a book using different reading devices such as e-readers, I-pads, I-phones, and CD-ROMS

IELS: IELS is an interactive e-book learning system used to improve reading with children in Elementary Schools

MAP: Measures of Academic Progress- a norm-referenced measure of student growth, (https://www.hcpss.org>mapfaq)

Tablets: Tablets are smaller versions of computers, also called handheld devices, such as I-pads, e-readers, and I-phones

Purpose and Significance of the Study

The purpose of the study is to identify teachers' beliefs and the use of e-books, computers (reading programs), and tablets to improve reading skills. In addition, the research will observe and investigate how elementary teachers scaffolding reading using technological devices. With recent increase and requirement of technology to be used in instruction, there is a need to study the perceptions and usage of technology such as e-books, computers (reading programs), and tablets, on individual learners with reading deficiencies because technology is a part of daily living experiences in the 21st century. The technology revolution effects on reading comprehension are being studied because there is not a multitude of research available to guide teacher's instructional strategies. Evidence on technology use to teach reading in elementary schools is somewhat limited and require further study because of the vast amount of technology being used in education settings. I believe the use of technology is rapidly growing in schools

and the world even without evidence of the effects of use in reading sessions. According to Wyatt (2016) "education must become more productive in its work and more responsive in its program without losing its perceptive in the process" (p. 8). Teachers provide new strategies that include the use of technology along with research-based reading strategies to improve reading.

It is particularly important that students be given the best learning experiences in order for them to succeed academically and socially. My goal is to assist all my students in achieving at the highest levels in all subjects. Teachers should use technology when possible, along with research-based reading strategies to determine if reading improves amongst students who have reading deficiencies.

Significance of the study

The study is significant due to the fast-growing use of technology in education settings and at home. Teachers and administrators need to know if the money spent on technology reading programs, e-books, and tablets is justifiable. They need to know if the use of technology will yield the reading results they expect. I want to know the same thing because every child deserves an education that will address 21st century job skills. Students must be able to read in order to acquire jobs that require highly trained workers. Reading at an early age supports learning. Therefore, researchers are searching daily for strategies teachers can implement in the classroom. Educators are not sure if e-books, computers, and tablets improve reading skills. Teachers need to know how technology benefits their students when implementing the tool during instruction. The study is also significant because the research will provide teacher leaders with insight to provide assistance in finding techniques, lessons, and resources that will improve the reading of their students. The use of e-books, computers (with reading software programs), and tablets provided additional research that determined what if any impact

use of technology enhances reading skills of elementary students in grades second through fifth..

The focus in this study is on teachers' beliefs about the use of e-books, computers, and tablets

and how students can benefit from technology and reading instruction.

Conceptual Framework

It is especially important that students be given the best learning experiences for them to

succeed academically and socially. In constructing my conceptual framework for this research, I

followed two guiding research questions to direct the research to determine teacher believes

about e-books, computers, and tablets and reading performance. I understand that different tools

must be used to capture and promote the learning of all students. There is no one size fits all

model for teaching and learning. My research was guided by the constructivist's theory of

Vygotsky, which suggests that teachers must apply his learning theory that promotes the belief,

"What is learned must be taught" (Wilhelm, 2001, p.8). If there is no teaching, then learning does

not occur.

The conceptual framework is to serve as a guide for developing the research

based on what has been learned. The conceptual framework was used in planning and

conducting the research according to Ravitch and Riggan (2012). A case study design was used

to observe, survey, and interview four participants who were highly qualified teachers who

taught reading in an elementary school. According to Ravitch and Riggan (2012) the conceptual

framework is what guides and aligns the research process. Participants used some or all the

technology featured in the study to supplement reading lessons. Research questions were

answered through qualitative data related to teaching practices using researched -based

strategies.

Researcher's Perspective

Personal teaching goals have led me to pursue further research on the use of e-books, computers, and tablets to improve reading skills. Teachers in the study have acknowledged students at the urban elementary school tend to struggle with reading and score lower than students in suburban schools in my district based on school and district data. Having worked in a previous urban setting as a teacher, I noticed the same trend. School test data from the local Department of Education's website revealed lower test scores in reading and math than schools in the suburbs. I wanted to find solutions to change the statistics reading deficiencies an urban elementary school setting. I am driven by my personal interests and goals to help students succeed in reading. With that being said, I understand the importance of teachers being knowledgeable and prepared to tackle any issues that may affect students academically. As a teacher leader I would like to assist other teachers, paraprofessionals, and other coaches through voice, modeling of skills, resources, and advocacy for needed tools to help students grow. One assessment tool that I as well as other teachers use to monitor and assess reading growth is MAP reading. Using Measures of Academic Progress (MAP Reading) scores through Northwest Evaluation Association (NWEA), I Ready data and Georgia Milestone Assessment System scores (GMAS), I can monitor, and assess student growth in reading at a local inner-city school through formative and summative assessments used in the classroom. According to school data many students are not reading at grade level; however, the goal is to have one hundred percent of the students reading on grade level or at least show a significant amount of growth. Reading sessions are being taught to students in grades second through fifth by grade level teachers and one Early Intervention Program (EIP) teacher. Due to my concerns for every child to become a successful reader, and data indicating low reading scores, I am driven to find additional reading

strategies to implement in reading lessons. Several students possessing low MAP scores, below level achievement on iReady diagnostic test, as well as GMAS data have displayed the need to receive additional help through an Early Intervention Program (EIP) teacher.

Additional interventions from the general education teacher like myself will help stimulate the development of reading tools to promote success in reading. According to Schmoker (2018) all subject areas should include reading lessons if student's reading skills are to improve.

Worldview

The worldview that technology is a vital component of twenty-first century teaching and learning is based on pragmatism. As a pragmatist my approach to teaching is based on the learning theory that children must be taught to read (Wilhelm 2001). As a researcher my assumptions that technology can enhance reading lessons must be further studied. I believe that more research needs to be explored on the impact of technology when used during reading lessons. My orientation to the topic, my understanding of the school setting, the socio backgrounds of those involved in the study have led me to dig deeper into research regarding the use of e-books, computers, and tablets to improve reading.

Chapter 2: Literature Review

The literature review examines research and studies to better understand how e-books, computers, and tablet use affect learning through the teaching process. According to Salmon (2013) the establishment of computers and other technological devices have played a significant role in the lives of many students and adults. One major role being the implementation of computers and other devices from the technology world being used inside and outside the classroom to teach students (Salmon, 2013, p.85). The internet has seen an unprecedented amount of growth in usage since first being introduced in the United States. The internet/network can be viewed as a colossal resource that stores and disseminates huge amounts of information (JIA-Rong Wen etal., 2012).

According to Goodfellow (2004), the desire to prosperously interact with textual reading opportunities and interplay in digital atmospheres is more so greater now than before due to a more evolving technology abundant society. Access to computers once was considered original, but now is thought of as a vital component of everyday life and school instruction (Roskos, et al, 2009). The effect of tablet ownership is significant and is expanding rapidly, therefore educators have been swift to explore what benefits these touchscreen devices may offer in an educational setting (Bannister, 2010; Merchant, 2012). On the other hand Zucker et al. (2009), suggested that electronic books (e-books) are accepted methods for merging technology in preschool and elementary classrooms; however, there is no consensus agreement regarding the magnitude to which e-books expand literacy skills in the areas of "comprehension and decoding" (Zucker et al., 2009, p.47).

Technology has continued to grow as well as the debate on the interpretation of what reading, and literacy are defined as by definition; attention in reading digital texts has risen, as indicated by retailers having more customers interested in purchasing text in digital formats rather than printed (Miller & Bosman 2011). The use of e-books is winning popularity so much, that some restaurant chains that offer drive through service, and offer CD-ROM books inside kids' meals, "featuring characters such as Arthur and Junie B. Jones" (Amster-Burton, 2007). Together with marketing power, those who study literacy can now in the notion that e-books can be an asset to comprehension development (Leu, 2000).

While e-book availability on several electronic gadgets have become an increasingly popular method of choice to read, many researchers have examined how to utilize this modern technology practice for learning (Bierman et al., 2010; 2010; Grimshaw et al., 2007; Woody et al., 2010). There have been many studies conducted that investigated undergraduate students' experiences with e-books, however no attention has been directed to children's learning experiences with the use of e-books, in conjunction with other reading features, choices, and cognitive abilities (Salmeron & Garcia, 2011). There has been no easy partnership established of how reading and comprehension connect (Schugar, et al., 2013). Pearman (2008); Zucker, et al., (2009) stated research that pinpoints that affiliation between reading and comprehension is just simply limited.

Although there is an emergence of, and an increasingly popularity of e-books, there is still a lack of clear evidence that supports whether e-books truly effect children's development in literacy and to what degree those effects measure (Zucker et al., 2009). Reading patterns play a particularly important role in determining a student's overall reading status and may be associated with specific cognitive abilities and reading effects (Cole et al., 2011). Therefore,

Liang and Haung (2013) concluded it is necessary to execute more in-depth studies with interest to the use of e-books with children in educational circumstance.

Children are interacting with digital text, inside school classrooms and home environments evermore with the availability of electronic storybooks and interactive storybooks via CD-ROMs. There is a dramatic growth of the number of young individuals who find themselves engaging in reading using an e-book text format (Labbo & Kuhn 2000; Levy 2009; Smith 2001). Digital technological devices have a variety of uses in the home environment rather than a school setting, even when made available for educational purposes (Kerwalla & Crook 2002). Facer and Kent (2009) suggested some technologies may be more appropriate for home-school communication than others. Arguments have developed suggesting that too much research into educational uses of digital technologies centers around the possible learning benefits of technology use outside of engaging with the compounded forced realities of education technology use from the outside world (Selwyn, 2010). Children need to obtain proficiency in the contemporary literacies of today's technologies to become literate (Leu, 2000).

Technology can offer positive benefits for struggling first grade students' literacy learning, but the bulk of evidence is limited and focuses on technology-infused intravenously (Cheung & Slavin, 2013). E-books are appealing to many educators because they can simply be merged into literacy instruction, involving students to have little procedural understanding beyond the ability to operate a mouse (Zucker et al., 2009). Progressively, there have been policies, and learning norms put in place to ensure teachers apply technology tactics to aid literacy instruction, therefore electronic books provide a popular method for capturing these standards and promoting children's literacy development (Zucker et al., 2009).

Zucker, et al., (2009) stated for this reason, there is a lack of agreement regarding e-books with respect to:

a) the extent to which electronic books support different aspects of students' literacy

b) which students may benefit from use of this technology; and

c) which "supportive" features within e-books improve literacy outcomes

   (Anderson-Inman & Horney 2007; Leu, 2000, p.49).

Tensions continue to exist between "what can be done and what should occur with e-books", along with a variety of other technology resources (Labbo & Reinking, 1999, p.49). Although many have displayed opposition towards the use of computer technology for young adolescents learning (Cordes & Miller, 2000), the benefits of implementing technology into educational environments with children has recorded positive results. For instance, children who become engaged with daily use of a computer, tend to display an increasing rate of growth with their intelligence level, fundamental knowledge, problem solving skills, and language abilities in comparison to those individuals who choose not to include technology use in their lessons (Clements & Samara 2003; Haungland 1999; Swaminathan & Wright 2003; Vernadakis et al., 2005). However, obstacles in early childhood education may rise when teachers and administrators start looking for new possibilities with integrating technology into the educational regiment, as young children seek stimulation and involvement with their own learning (Couse & Chen 2010). For this reason, best practices of reading preparation must expand beyond print and into digital reading settings if students are to prosper in the second decennium of the 21st century (Couse & Chen 2010).

E-books and their usage in early childhood education

To understand how e-books are integrated into an elementary/early childhood setting, there first must be a definition established as to what an e-book means. An "e-book" is recognized as an "electronic representation of a book" (Garrish 2011, p.1). The design of e-books can use an array of software platforms in which team leaders may have an issue locating them easily (Sargeant 2015). Sargeant (2015) found:

> The educational theorist, Bill Cope explains a nonspecific meaning of the term "book": According to Cope (2001), "a book is no longer a physical thing" (p. 6-7). *A book is what a book does…*a book in this definition does not have to be printed. It can be rendered in many ways, including electronic-visual and audio (talking books). A book [is] not a thing. It is a textual form, a way of communicating. *A book is not a product. It is an information architecture (*Cope 2001, pp. 6-7; emphasis in original, p.455).

As Cope (2001) stated there is no one form a book can be created. Books can be developed by hand, printed through a machine, viewed electronically, and listened to through audio (Sargeant,2015). Additionally, the possibility of books being created using only visuals and no written text can exist (Nodelman, (1988). Many theorists acknowledge that the different interpretations of books and digital formats being introduced, may eliminate the significance of an original book format Stephenson (1999). Despite apprehension, digital and printed text will continue to give readers an option of the type of text format they may obtain (Eisenstein 2011; Yokata & Teale, 2014). Nevertheless, "basic text and image documents" were a result of the creation of e-book software established to be used in conjunction with e-reading gadgets (Garrish 2011, p.458). As a result of the discovery e-books, they are known to be and still are, changeless

digital alternatives of printed books or books formatted to be compatible with handheld devices, such as e-readers (Sargeant, 2015). Since 2010, there has been an enormous increase in the amount of tablet like computers being used, made, and sold (Sargeant ,2015).

The massive growth in production and sales was attributed to the introduction of touch screen tablets, such as the Samsung Galaxy Tab and the Apple iPad (Sargeant,2015). Researchers found that these devices are very much in high demand in the technological world (Goodwin 2012; Murray & Olcese, 2011; Rideout, 2011; Tahnk, (2011). Rideout (2011) conducted a recent survey with the United States Department of Education that revealed that fifty two percent of children ages two though eight were able to retrieve some type of handheld device inside the home. More than eleven percent of those same children spent at least forty-three minutes a day engaging with the device. The survey also concluded that thirty-eight percent of children had prior contact with the devices (Rideout, 2011). According to Neumann and Neumann (2013) tablets may play a vital role in the cognitive development of children today and in the future.

There are several pre-requisite emergent literacy skills that may contribute to reading and writing abilities in the future. The skills include letter name, sound development, early stages of writing, print concepts, and phonological awareness (Bowman & Treiman, 2004; Cohen & Cowen, 2011; Whitehurst & Lonigan, 1998; Snow et al.,1998). Emergent literacy skills may be formed due to tablets offering print-based connections with various features (Neumann & Neumann, 2013). Touch screen tablets seem to offer a friendlier interface when compared to those of a traditional base computer system (McManis & Gunnewig, 2012). Therefore, tablets can prepare multimedia displays that are able to trigger many kinesthetic sensory structures and generate immediate feedback based on a child's response, (Copper 2005; Tahnk, 2011). For this

reason, children are fit to use computers fast by investigating, learning new skills, and obtaining

early literacy understanding (McManis & Gunnewig, 2012).

E-books provide interest, and enjoyment in reading experiences which prepares children

for learning (Roskos,Bustein, & You, 2012). When children read e-books, they get involved in

the technology aspect of them, especially if they are interactive books. Interactive e-books offer

readers a chance to use gestures and respond to noises made when they activate the books'

features. Interactive books get children involved in the story by allowing them to click hot spots

or features that produce sound. The reading behavior of people who prefer e-books is different

from those who prefer print books.

When children experience e-books, they can mark the text, search for content

information, and track what they have learned. Interactive e-book learning systems (IELS) are

used in elementary schools to help children increase their learning experiences and keep up with

information learned. Personal experiences increase children's desire to learn more. The reading

behavior on electronic devices is based on how people who read books on paper feel about

electronic books (Greschik et al., 2011). Teachers can observe students to see which type of book

is best for them to read. If students have never tried e-books, there is no advanced technology

attachment to show them what to do, or there are no notes for teachers to plan instruction.

Research does show there is a need to use multi-media sources based on children's

development as learning tools in the classroom (Lefever-Davis & Pearman, 2005). Pre-K

students, and those in kindergarten will need books designed for their age groups. E-books

designed for first graders will be different, because they have developed skills for more advanced

reading than beginning readers in pre-k and kindergarten. Teachers must also consider the

content of e-book reading materials. The content used with e-books includes fiction and non –

fiction as well as audio and animation features (Maynard & Cheyne, 2005). Researchers state

that e-books are more flexible, and more readily available than paper texts (Huang, Liang, Su &

Chen, 2012). Using e-books in education may improve reading among young beginning readers

and should be considered to improve literacy of young children. If children are to be impacted by

e-books in reading and writing, they need more exposure to them in school. Based on my

readings, the more educators use e-books, the greater the impact on learning, especially if they

are used with traditional researched reading strategies.

Technology Skills

Technology requires strategies that are beyond reading from a printed book or writing on

paper with a pencil. In order to use today's technology, skills are needed to enable the user to

interact with other technology users, using reading strategies to understand the text, and integrate

reading and writing (Tancock & Segedy, 2004). In other words, just having technology serves

little purpose if the teacher, and students do not know how to use it. The internet gives teachers

an opportunity to help students construct knowledge using multimedia environments. Using the

internet can present challenges for young children; therefore, teachers may need to provide

instruction before introducing e-books, and other technologies to them. Children can learn with

the help of teachers when technology is integrated into the classroom activities. The e-book

industry's current focus is on changing printed books to electronic books.

Technology also includes the laptop and desk top computer. The computer can be used to

assist non-readers in instruction. Word identification is a basic skill that is taught in schools to all

students including those with physical, and cognitive disabilities. Technology can help these

students learn to read using strategies that help them with fluency, word identification, and comprehension. Computer assisted instruction as an effective method to provide identification of words in a non-verbal reading approach is useful in teaching reading and writing to students. Students who have severe speech impairments and physical disabilities, and autism were given instruction in decoding and word identification instruction using non-reading approaches (Coleman-Martin et al., 2005). The computer can assist these non-readers while the teacher works with others who may need her help.

Children who cannot use technology may be embarrassed to ask the teacher for help. While doing so may waste time, they need to learn technology skills in today's digital world to benefit from e-books. Children who are skilled at using computers, and other technology to read do not experience time delays as those who have no experience with computers and digital medium (Grimshaw et al., 2007). Children must learn to use digital devices at an early age, including I-phones, I-pads, computers, nooks, and kindles. Software designers should consider children's literary knowledge at different ages when designing books to support language and literacy of preschoolers who have not learned to read or write (Korat, 2010). The development of reading software will improve the reading and writing skills of the students who use technology devices. Not only will preschoolers' benefit, but children in kindergarten all over the world, especially in Israel will benefit. Children from Israel were a part of a study using e-books. The study indicated that computer assisted learning promotes language, and literacy development of children in other countries using e-books (Shamir et al., 2008).

Digital Devices

Digital devices refer to electronic tools used to read books or access information. These devices include reading devices such as Amazon's Kindle, Barnes & Noble's Nook, and Apple's I-Pad. The devices are portable, and provide storage capabilities for children's story books, both fiction and non-fiction. While the I-phone was developed in the past ten years, there is little if any research on its use as a classroom digital device. Interactive e-books may be read on digital devices designed for reading. Most of the reading devices are compatible with their own computer applications (apps). E-books provide interest and enjoyment in reading experience which prepares children for learning (Roskos et al., 2012). When children engage in e-book reading, they have a sense of control of multi-sensory behavioral communication. If children could not read these interactive e-books using digital devices, they would miss the pleasure of reading (Roskos et al., 2012).

Using e-books, e-readers, and tablets, also called digital devices may change the behaviors of readers due to the type of technology involved (Zambarbieri & Carniglia, 2012). The advantages of digital reading devices can be due to the interactivity they provide. The text, pictures, sound, and visuals can benefit readers. With the addition of digital devices young children, and adults have more opportunities to read. The price of e-readers, and I-pads is dropping, and more book publishers are promoting electronic books (Jones & Brown, 2011). Schools are beginning to purchase these devices for their students as well as for teachers. E-readers need to become a part of the classroom in order for children to have immediate access to e-books. When using digital technologies with electronic books, vocabulary building strategies need to be used to encourage reading. Vocabulary building strategies along with animation are beneficial when used with e-books, but there is no difference in comprehension when compared

to printed books (Higgins & Hess, 2000). In the new digital learning environment, multimedia offers opportunities to meet some of the learning needs of students (Roskos et al., 2012). Due to the limitations of the human mind, multimedia programs such as cognitive theory of multimedia learning by Mayer (CTML), provide cognitive theories that exceed the human mind, and promote the thinking process (Kim, Kim, & Whang, 2013). Just reading e-books alone does not promote reading achievement even if they are multimedia. Researched-based reading strategies are still vital to promote fluency, vocabulary building, comprehension, and motivation.

Electronic books may not be a satisfactory replacement for printed books read by adults or children who are read to by adults. Reading electronic books to children introduces digital devices, and technology at an early age. As children read more stories using digital devices, they become less dependent on animation to understand the story. Internet research-based strategies need to be explored in the teaching and learning environment so that using digital devices in the classroom is beneficial to students and the teachers. The internet has brought about interactive informational text; therefore, new types of reading strategies may be needed for students who use the internet to locate information, and narrative text (Corio & Dobler, 2007). The internet has also brought this new technology into the classroom. The introduction of technology takes students beyond reading from a printed text and beyond writing on paper with pencils.

The role of the teacher in e-book and e-text instruction

Researchers found evidence suggesting that many changes are happening such as the development and teaching methods in an online environment. A call to re-examine the role of a teacher is essential when incorporating technology into the learning environment (Salmon, 2000; Bonk, 2003; Jones, 2004). Especially because of the essential role pedagogy has played in the e-

learning setting. A debate from teachers regarding this information is plausible to determine the true purpose for learning and educating (Singh, et al., 2002). The researchers found e-learning environments clearly develop new roles for teachers, such as "e-authoring and e-moderating" (Singh, et al., 2002, p. 44). As a result, difficult questions in education form regarding pedagogy and curriculum (Berge & Collins, 1995; Mason, 1998; Salmon, 2000; Anderson et al., 2001; Laurillard, 2002; Bonk, 2003; Garrison & Anderson, 2003). Researchers indicate this is happening because finding alternative methods of turning traditional teaching items into electronic artifacts is not an easy process, instead it fosters individuals to think about pedagogy in a critical and technological sense (Bonk & Cunningham, 1998; Bonk, 2003; Jochems *et al.*, 2003; Westera, 2004). Jones (2004) indicates that pedagogy is the most significant element, as this ascertains student engagement. In addition, it was stated that university leaders should examine information and communications technology as a new way to look at curriculum based on newly added pedagogies that are in collaborative and constructive form (Jones, 2004).

However, Weller (2002) signaled a warning stating the following:

"In order to successfully deliver an online course, it requires a strong pedagogical strategy. This may require much more thought and reflection that is perhaps given to a traditional lecture series" (p.44).

Present-day pedagogical practices are widely invaded by tools, and semiotic resources of the digital era, an age which as recently sustained transition metaphorically characterized as expected from the hard culture of the 19th and 20th centuries to the fluid informational culture of the 21st century (Area & Pessoa, 2012). Therefore, e-books and e-textbooks may be defined as examples of such instruments, which suggest current opportunities as well as obstacles for

teachers and learners in a constant developing educational atmosphere (Oliveria et al., 2013). To date most research conducted on e-books, has been on undergraduates, who are anticipated to have greater experience with refined study methods, and work routines, than students who are enrolled in an elementary setting (Sun et al., 2012; Quan-Haase & Martin, 2011; Rose, 2011; Nicholas et al., 2010).

One conclusion reached through the study while conducting the research regarding e-reader use is that many users lack time at using devices. The lack of time may attribute to the level of expertise individuals can perform tasks using the devices. Some tasks that face hindrance include reading, while engaged with technology tools/devices (McAnulty et al., 2012). Researchers agree with this debate and recommend that before using e-readers for academic use, teachers should look at taking time to assist students with learning the key functions of these multi-touch devices and the body language to engage with them. New users can find easy tasks such as opening a book, turning pages, and adapting to the screen could be major obstacles. Therefore, it is recommended to enlighten students with reading books on the iPad, or other e-reader using specific steps. Schugar, Smith and Schugar (2013) recommend these steps:

Demonstrate to students how to turn on the device and gain access to the apps they seek.

Model to students how teachers can control devices such as implementing locking features.

Model to students how to open an e-book, flip pages, and use interactive features based on the app being used on the device.

Give students specific expectations regarding their use and interactions with devices as they read and re-read information in the future (p.618).

Teachers must not be naive when it comes to the level of experience students have with using tablet devices (or other mobile devices, like an iPhone), instead, teachers must be sure students are prepared with all the necessary training using technological devices to obtain and read an e-book efficiently, (Schugar, Smith, & Schugar, 2013). Furthermore, researchers state that teachers should teach students to transfer what they know about print reading to e-reading (Schugar, Smith, & Schugar, 2013). Teachers involved in reading e-books with their students can aid comprehension through scaffolding the skill with a specific strategy when teaching practices are being implemented (Schugar, Smith, &, 2013). Mainly it is important that teachers demonstrate how they implement strategies to reading e-books, and clearly reveal how the implementation of the strategy is either related or divergent across the two options (Schugar, Schugar, & Penny, 2012). Strategies used when reading such as inferring, predicting, retelling/summarizing, and comprehension are appropriate ones that may be applied when transferring from print rich to electronic text (Schugar, Schugar, & Penny, 2012).

Nevertheless, all strategies are not transferable between the various types of text. Researchers found strategies such as coding and previewing are troublesome or unachievable to do before engaging in the reading process in numerous interactive picture e-books (Schugar, Schugar, & Penny, 2012). Additionally, teachers must review with students the proper use (s) of those supports that involve interactive use (Schugar, Schugar, & Penny, 2012). Features such as a dictionary and option to read to the individual, are necessary skills students should know how to use, when teachers are assisting them with the transfer of targeted print-based reading skills (Schugar, Schugar, & Penny, 2012). Researchers believe students should not depend on the features when engaging in e-reading opportunities because the time necessary to use dictionary functions may interfere with the reading process (Schugar, Schugar, & Penny, 2012).

In order for students' experiences with use of e-books to be positive and not negative, teachers can help them in negotiating a balance between using the interactions to support comprehension, and using them in a way that hinders their opportunities to implement strategies while reading (Schugar, Schugar, & Penny, 2012). Additionally, teachers must take a role when students are e-reading on tablet devices, so that they may assist the students with applying their existing strategies for establishing main ideas and important information as well as overcoming distractions within the text (Schugar, Smith, & Schugar, 2013). E-books have become easily available to teachers and students in many languages and offer instructional support features/ and or multimedia features for use (de Jong & Bus, 2003).

According to Korat and Shamir (2004) today's e-books come in a variety of versions, such as animated and interactive. They reported there are many children's' e-books which are programmed to be interactive including having multimedia effects, written print, oral, musical sound, and animation (Korat & Shamir, 2012). These features enable young children to enjoy e-books in addition to allowing them to learn new words and storytelling (Korat & Shamir, 2012). Researchers stated that there are e-books that were developed using thinker reader software which, enables teachers to match the e-books to identified comprehension strategies that support the instructional needs of students (Zucker et al., 2009). E-books provide the technology component of instruction for students.

However, there has been a huge push in policy and learning standards for teachers to use technology to support literacy teaching. Electronic books seem to be a favored approach for assisting students with meeting the standards and acquiring development in their literacy stages (Zucker et al., 2009). Nevertheless, there is a deficiency of solidarity concerning e-books regarding the following statements listed.

Anderson-Inman & Horney's (2000, p. 49) study found the following:

- the extent to which electronic books support different aspects of students' literacy development.

- which students may benefit from the use of this technology; and

- which "supportive" features within e-books improve literacy outcomes
  (p.49).

Researchers urge teachers to provide guided instruction when implementing the use of interactive picture e-books through initiating students' experience before reading, eliciting students to answer comprehension questions during reading, and assisting students with the process of extending their thinking beyond the text after reading. It is possible teachers may be able to guide students, so that they may be able to overcome problems that may arise with interactive features when using interactive e-books. Additionally, educators are encouraged to consider how some interactive features of the text may motivate students, while diverting them from important information in the text. It is imperative that teachers model strategies for e-reading, help students in shifting traditional reading actions to electronic texts, and make selections on quality interactive-e-books that will scaffold students' reading. Furthermore, according to Schugar, Smith and Schugar (2013, p. 623) the following should be considered when implementing e-books:

1. Review whether the interactive qualities in the e-books you use with children disturb, aid, or expand their understanding of the text.

2. Give students an interchangeable strategy when instructing, that can be used with e-book reading.

3. Examine e-books for value, precision, and readability before utilizing them for instruction.

4. Offer students chances to practice reading with both traditional and electronic books.

Scaffolding and Teaching Reading using Technology

By implementing the components of social constructivism in the classroom environment, reading and writing can be taught using approaches based on the theories of Vygotsky (1978) in Blake and Pope (2008). Teachers may use e-books, I-pad, I-phones, and internet technologies to enhance teaching strategies that improve learning though cognitive and social theories ascribed by Piaget and Vygotsky (1978) in Blake and Pope (2008). Social constructivism and cognitive constructivism can assist teachers in developing tools for an effective classroom (Blake & Pope, 2008). Teachers often use Piaget's theory of cognitive or individual constructivism to help students to learn but have ignored Vygotsky's social theory in the classroom. Blake and Pope (2008) indicated that teachers who incorporate the theories of Piaget and Vygotsky into their teaching strategies, will have a better opportunity of increasing the achievement of their students than those who do not. According to Blake and Pope (2008) Vygotsky emphasizes the roles of social interaction and instruction. It is suggested that development does not occur before socialization. However, social relations enforce developmental functions according to Vygotsky (1978) in Blake & Pope (2008).Vygotsky's theory developed concepts of cognitive learning zones referred to as the zone of actual development (ZAD), which form when students can independently complete tasks (Blake & Pope, 2008). In the study for the research being undertaken, observations will be used to document students who engage in social activities as well as charting their cognitive growth during progress monitoring. There is also the zone of

proximal development (ZPD) which shows a gap of what learners can do without the help of the

teacher, and those tasks that require help or assistance (Daniels, 2001). Both instruction and

learning occur in the ZPD, and students can experience success when the theory is given thought.

While researchers believe that tablet devices have excellent potential for classroom instruction,

they argue that educators should use caution when determining whether to introduce them into

the classroom to assist with instruction. Various circumstances should be considered by teachers

when developing and scaffolding reading instruction.

Schugar, Smith, & Schugar (2008, p. 623) recommend the following questions for

teachers to ask:

1. Will the e-reader allow access to content that is unlike or better suited to the

assignment?

2. What kind of help will the students need to read e-books?

3. What will be the proportion of devices to students (e.g., one to one or many to

one)?

4. What monetary limitations exist for incorporating these devices into the

classroom?

Furthermore, researchers are hesitant to completely support e-reading for instruction until more

research has occurred on how students read interactive books. E-book reading does have a place

in a 21st century classroom according to Schugar, Smith and Schugar (2013).

Theoretical Framework

Teachers need to have a greater understanding of the theories of Vygotsky and Piaget to

assist them with student reading challenges. Today's classrooms should be designed to give

greater power to students to become involved in their own learning (Creswell, 2014). Teachers need effective professional development and researched based resources to be effective in their presentation of instructional strategies (Creswell, 2014). Teachers also need to understand how to incorporate the theories of Vygotsky and Piaget into the classroom for a positive result in student learning (Creswell, 2014).

Schools may need to be restructured to include the developmental theories of Piaget and Vygotsky (1978) which might be useful in raising student achievement. Teachers have various opinions about reading sessions that might help students with reading skills in elementary schools. Not all teachers believe that e-books, computers (reading programs), and tablets motivate students to engage in more reading at school and home. In fact, some teachers believe that computers are babysitters and should be used as a reward for students who do not misbehave. Teachers need a better understanding of the use of technology in conjunction with psychological theories such as those introduced by Vygotsky and Piaget (1978). Using Piaget's and Vygotsky's (1978) theories in teaching strategies in elementary classrooms, student learning might increase when those theories are used with technology assisted instruction.

The theories of social constructivism provide a framework for teaching reading from a cognitive and social perspective, such as engaging students in scaffolding learning, and are the foundation for the development of early reading programs used in classrooms, such as Reading Recovery and Guided Reading (Creswell, 2014). Using Vygotsky's theory, the teacher can guide his or her students through instruction (Creswell, 2014). Students will engage in scaffolding, small groups, cooperative learning, and group problem solving, peer tutoring, assistive learning, and/or alternative assessment (Blake & Pope, 2008). Vygotsky's theory focuses on social interaction through play to impact student and adult learning (Blake & Pope, 2008). Fogarty

(1999) stated "Vygotsky's theory suggests that we learn first through person-to-person interactions and then individually through an internalization process that leads to deep understanding" (p.77).

Vygotsky"s Zone of Proximal Development (ZPD) suggests peers or other adults give help to students who cannot successfully finish a task alone; the ZPD refers to the gap between what students can do by themselves and what they need assistance with (Daniels, 2011). Students experience success in the ZPD when they receive instructional support. According to Northrop and Killeen (2013) using iPads to build literacy skills suggests that technology creates a new opportunity to use technology tools in early literacy skill development. Although technology increases student engagement and motivation, it does not automatically lead to increased student achievement (Northrop & Killeen, 2013). The instructional framework of gradual release must be used when students work with iPads and tablets (Northrop & Killeen, 2013). Teachers must ensure that students are working at their instructional level or independent level and accessing and working with the desired literacy content (Duke & Pearson, 2002; Pearson & Gallagher, 1983). The instructional framework of gradual release of responsibility can be changed and made usable with other technology devices (Northrop & Killeen, 2013). Neumann and Neumann (2014) suggest use of ipads, tablets, e-books, computers, computer programs are linked to student-centered learning. Northrop and Killeen (2013) do not offer any empirical data for using apps and other technologies, just a framework for effective teaching. The framework would benefit this qualitative study because it provides evidence of effective teaching strategies such as scaffolding (Vygotsky, 1978). This needs to be investigated with the use of technology (Vygotsky, 1978).

Chapter 3: Methodology

Process of Research

This study utilized qualitative methodology as its research design. The dependent variable in this case study was e-books, computers, and tablets. The independent variables were teachers, students, and one administrator. Qualitative data from observations, interviews, questionnaires, school MAP (Reading) scores, videos, art projects, and emails were collected during the research process. The collected data was used to determine the effects of e-books, tablets, and computers on student performance (pre and posttest MAP). The targeted population included second-fifth grade students, grade level teachers, and an administrator. Eight students in grades second-fifth grade, four grade level reading teachers, and one administrator made up the numbers for the targets of the study. The teachers who are participants facilitated reading lessons to students who were not reading on grade level. Field notes of observations, and interviews were conducted with each participant. The case study included a principal, and four teachers who taught grades 2-5 in an elementary school. Teachers that were used in the research taught students in an inner-city school in which many students were under performing in reading. All the students in the study were on free or reduced lunch, of black ethnicity, and ranged in ages 7-12. All research took place in an inner-city school that is a newly constructed two- story facility with a modern media center, and an interior gymnasium for student use.

Qualitative research was chosen because it is designed to open a target audience's scope of behavior and change the perceptions that push it with specific subjects or issues. Qualitative research uses in depth studies of mini groups of people to facilitate, and support the construction and hypotheses (Yazan, 2015). Additionally, qualitative research desires to get a better

understanding through immediate, honest reporting, and quotations of actual discussions. Furthermore, it serves to understand how the participants gain meaning from their environment, and how their meaning impacts their behavior (Yazan, 2015). There was a concern that many students were not prepared for working in a global society driven by technology resources that are not available at the school nor in some of their homes. I believe the students need to be immersed in reading using various technology programs which may provide active engagement when reading lessons are occurring. Therefore, using qualitative research may assist with data collection for writing grants to secure technology and reading resources that support reading during instruction. According to several readings, it has been determined that qualitative research uses more than one format and may be used to solve the problem associated with reading using technology. Qualitative research explores the problem through observation, interviews, and explanation of artifacts (Creswell, 2014).

Purpose Statement

The purpose of this study is to investigate e-books, computers, tablets, and the how they enhance reading skills. There is a problem with reading achievement as measured by the MAP assessment in reading achievement of student performance in the case study. According to data from the Georgia Department of Education's (2018) report card found on their website, there are several Georgia schools struggling to meet the required proficiency level in reading among students to include children in this case study. Despite providing additional reading interventions to increase overall test scores from eighty percent to eighty five percent passing, based on reading scores (MAP-reading scores), students reading scores continue to decline in the state of Georgia (Georgia Department of Education, 2018). The problem has negatively impacted the students in elementary grades second through fifth because they are struggling to read on grade

level. A possible cause of the problem is a lack of the use of technology resources, along with researched-based reading strategies during reading instruction from teachers. There may also be a need for more professional development and learning opportunities to be available for teachers to assist students with relevance of having students direct their own learning, and the proper use of implementing research-based reading strategies to mediate the use of technology.

Research Purpose

The purpose of the study will add to the body of knowledge concerning the use of e-books, computers, tablets, and its impact on the reading achievement. As a result of the study, the qualitative findings will be added to the body of research to determine whether reading with e-books, computers, and tablets improves reading comprehension. There is a need to study the effects of technology resources such as e-books, computers (reading programs), and tablets to assist individual learners with reading deficiencies. The technology revolution affects society, and I believe the use of technology is rapidly growing in schools and the world. According to Wyatt (2016), "education must become more productive in its work and more responsive in its program without losing its perceptive in the process" (p.8). Teachers should provide new strategies that include the use of technology along with research-based reading strategies to improve or enhance reading. Evidence of the impact of technology use in elementary schools must be explored so that teachers do not use it for babysitting students who are under performing in reading.

Qualitative Research Questions

1. What are teachers' beliefs about e-books, computers, and tablets
   in motivating elementary students to engage in more reading at school?

2. How do teachers scaffold knowledge and facilitate learning using these technological
   devices?

Case:

Historical Context
-Teacher
-Student
Reading History
Economic conditions

Functioning
To deepen students level of reading using computer programs versus traditional methods of teaching reading.

Educational Context
Reading Lab
School educational Policies
Need for reading software.
Political condition of school district.

Particular Activities
Running records
Tutorial sessions after school
Parent Meetings
Use of technology resources

Sites of Activity
School classroom
School Media Center
Computer Lab

Previous Research Context
Journal articles
Case studies

Data Gathering
Interviews
Observations
Web Based Questionnaires
Surveys

Minicases
4 Teachers
1 Computer Lab Teacher
1 Media Specialis

Documents

Students' reading logs
Computer assessments
Anecdotal records
Pre /Post Test Scores

Social Context
Research on Teaching Reading

Issues
Can computer based reading programs improve learning in elementary classes?
Do computer based reading programs provide activities that meet the needs of all learners?
Are strategies used in computer-based reading programs more
effective than those used in traditional methods of teaching reading?

Topics
•Computer Based Reading Program
Versus Traditional Methods of Teaching Reading
•Background of teachers
•Computer Generated Reading Instruction Program
•Traditional Reading Instruction Strategies
•Expected Outcomes

Information Questions
Are students reading on grade level?
Are there any types of reading programs used in the school?
Can computer-based reading programs improve reading comprehension?
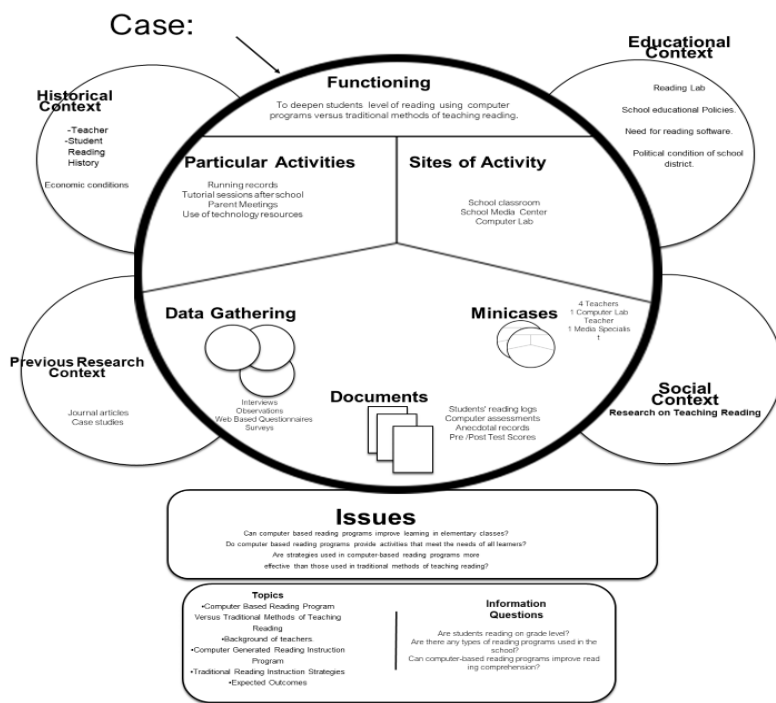
Adapted from (Stake, 2005)

Figure 1: Study Context: A visual representation of a research design

Context

The study follows a qualitative interpretive approach, case study design for my research. The research tradition that best suites the study is case study research. According to Creswell (2009), "case study analysis enables the researcher to make a detail description of the case and its setting" (p.163). The purpose of the research is to determine the use of e-books, computers, and tablets to enhance reading skills of elementary students. A qualitative research design using case study will be implemented (Creswell, 2014). Raw data were collected from four observations, four from each participant: two interviews per participant, and two questionnaires, school data such as, MAP reading and Georgia Milestones Assessment System scores. The participants in this study are certified early childhood education teachers. Teachers work daily in an elementary school with students in grades second through fifth. Additional artifacts such as, videos, art projects, audio, and emails will be used while conducting the case study.

Research Setting and Participants

My research takes place in a K-5 elementary school within a local school district. The school is a Title I school with 98% of the school population on free and reduced lunch. The assumption is that ninety-eight percent of the sample size of eight students were on free or reduced lunch. However, my research will include teachers from grades 2nd through 5th grade in an elementary school. Since instrumental case study has been chosen, the use of the conceptual structure of case study for research will be used, which are functions of certain types of activities, and sites of the activities, data gathering techniques, documents, and mini cases (Stake, 1995). The function of the research was to determine whether teachers found if students were motivated and engaged with the use of e-books, computers, and tablets during reading class

sessions to improve learning. The activities that were used during the research included paired reading using e-books, computer reading programs, and the use of tablets during independent reading sessions. Teachers modeled and used instructional scaffolding to promote deeper learning as suggested by Vygotsky (1978) in Blake and Pope (2017). The reading sessions/activities took place in designated teachers' reading classrooms and included students who were currently enrolled in my reading class due to declining reading scores on Benchmark test. There was total of four participants (teachers) used in this case study.

Table 1 shows participant demographics All participants were female. Participants ranged in ages 35 -60 years of age. Two teachers had 10 or more years of experience; one had 5-10 years of experience; and one teacher had 1-5 years of experience.

Table 1.

Participant Demographics (N=4)

Demographic	*n*
Age	
35-40	3
60	1

Education

Masters	3
Specialist	1

Years teaching in an urban setting

1 to 5 years	1
5 to 10 years	1
10 to 20 years	1
20 to 30 years	1

Sampling Procedures

Teachers were selected using purposive sampling strategy (Palys, T., 2008). According to Palys (2008) purposive sampling was used to guide the research. The choice for sampling was

based on the best method that suited the objectives for the research. Institutional Review Board

(IRB) approval from Kennesaw State University, and request for permission to conduct research

from the Office of Accountability, and Assessment in the school district in this study was granted

before any task could occur. Teachers who teach in grades second through fifth were given a

letter requesting participation in the study. Prior approval was requested from administrators

granting participants (teachers) permission to receive letters to be a part of the study through

written communication. The principal/building leader approved all correspondence before mail-

outs were completed. Lastly, at the end of the study, teachers were informed of the data

collection, and analysis process used in the study as well as what the study revealed regarding

how they used technology in the classroom.

The strategy was chosen because it allows for selecting teachers who teach children

reading in which those students must measure a certain level of proficiency to achieve the district

benchmark and state testing goal. I relied on the judgment from administrators, and other

teachers for selecting the teachers in the population I worked with daily. Also included in the

study were students from the teachers selected, one administrator, and parents of the participants.

Before any type of research began that included human subjects, an Institutional Review Board

(IRB) review was established. There were important guidelines that must be understood and

followed, set by the IRB and the Office of Institutional Effectiveness. There were IRB

workshops and information session request forms that were made via Kennesaw State

University's IRB web page. Once understanding of the IRB process was completed, the

applicant started the process of submitting and IRB application. During this process the applicant

reviewed several important aspects that were listed on the KSU IRB website such as: IRB

review classifications, IRB application form, consent templates, consent checklist, KSU mass

email policy, what to expect during the process, and progress report. The process was followed, and permission was obtained from site supervisor (principal) before research was begun. Any additional data, permission, and correspondence needed was initiated through the principal.

Data Collection and Instruments

The data collection was a result of observations that took place in computer labs, classrooms, and media center. As a qualitative researcher, "data must be gathered by observing information that can be seen, heard, or felt" (Stake, 2010 p.90). Some observations were participant based and included teachers and an administrator. The types of survey instruments used were questions given to interview participants to determine their understanding of the research questions. Surveys were based on predetermined questions with data converted for qualitative purposes. The researcher used journals to keep records of information obtained during the study. There are many technology tools that were used to assist in the gathering and collection of data. Google forms assisted with creating questionnaires along with several other technology apps and programs to support data gathering methods, such as Storify, Kobo Toolbox, Dragon mobile, and field notes app. Advanced qualitative methods were used to collect data. Teachers viewed student data to assist with the research process. In order for student data to be used and accessed the following persons were contacted: homeroom teacher, testing coordinator, parents for consent, and administrators. The data needed included test scores (MAP) by Northwest Evaluation Association, Georgia Milestones Assessment System (GMAS), iReady data, federal applications for free lunch, FTE count, observations, surveys, and interviews (teacher/student).

The environmental conditions of the school and classroom were considered. The amount of time teachers spent on instructional lessons was determined to ascertain effects on reading. Time students spent on reading at school and at home was also considered to determine reading progress. The methods and approaches used to teach reading along with interventions used with students who are not reading on grade level were noted. Finally, the methods used by teachers and parents to motivate students to read more included using reading logs to monitor reading times and sessions were determined. Permission from the building/district level supervisor was obtained before any data collection for the study can began.

Data Analysis

According to Creswell (2007), "the central steps of data analysis are: preparing and organizing the data; coding the data; combining the codes into broader categories or themes; and representing; displaying and making comparisons in the data graphs, tables, and charts" (p. 180). Before the data was analyzed, it was collected using the steps mentioned. Data collection included text, audio, images, and video (Creswell, 2007). The data analysis spiral presented by Creswell (2007) was used to collect and manage the data in the study by organizing into files and units. Creswell (2007) also recommended reading the data, writing notes, and reflecting, and describing, classifying, and interpreting data (Creswell, 2007). The data were represented using a matrix, trees, or propositions as suggested by Creswell (2007). According to Saldana (2009), "a code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative salient, essence-capturing, and/are evocative attribute for a portion of language-based or visual data" (p.3). A single word, sentence or entire page may be used to code data (Saldana, 2009). Saldana (2009) suggests research concerns should be considered as coding takes place. Our research was coded using Atlas ti (2012) which addressed many of our concerns. A list of

questions pertaining to the research were provided for participants' response, which were then coded using the Atlas ti (2012) software. Open coding as described by Saldana (2009) was used to sweep through data and mark sections of the text selected codes or labels (Saldana, 2009). Axial coding was done to accommodate many codes as recommended by Saldana (2009). Atlas ti (2012) which is a software program used to code data, was used in assisting coding. The items that were coded included: behaviors, events, activities, strategies, states, and meanings which were recommended by Lewins et al., (2005). In addition, participation, relationships, conditions, consequences, settings, and reflections were coded. Using open coding, data was circled or highlighted in sections of the text, selected codes, or labels. Atlas. ti. (2012) enabled me as a researcher to create a hermeneutic unit/ project. In this research project, primary documents were imported, and three families were created for the primary documents. Open coding was selected to code documents. During the coding stage of documents, the creation of quotations, coding textual documents, and coding graphic documents took place. Holton (2010) found, "that memos can be used as theoretical notes pertaining to the data and the conceptual connections between the categories" (p. 32) which was done for this research.

As previously stated, data were collected for the research, and I used Atlas ti (2012) software to analyze the qualitative components. The open coding strategy was used and coded according to each piece of data. Examples of items for coding included activities, software, hardware, and reading observations. Coding took place after categories were identified, relating to patterns or themes. The use of descriptive coding provided a summary of the data. I used descriptive coding which provided a summary of the data. My data was coded according to categories and sub-categories based on themes and key words. Also, I used theoretical coding after categorization of data took place

THE USE OF E-BOOKS, COMPUTERS, AND TABLETS

The study that was proposed followed a qualitative interpretive approach in which trustworthiness, dependability, transferability, and conformability, was used as recommended by Stake (1995). The data was checked for errors through an independent investigation using an external auditor, which enhanced the validity of the study. Peer debriefing among teachers was used to ask questions and review reading data of the students they teach. Electronic surveys, face to face interviews, and observations were conducted during the study. Videos, audio artifacts, and lesson plans were also implemented as resources included in the study. The process enhanced the validity of the study.

Trustworthiness

The trustworthiness of the study is created by a framework of credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985; Polit & Beck, 2008). **Credibility** was assured by presenting honest viewpoints of participants in the study. **Dependability** documented note changes made during the study. Notes were taken during interviews and observations. **Confirmability** is how others perceive the study. The researcher assured confirmability by triangulation to reduce effect of investigator bias; admission of researcher's beliefs and assumptions; recognition of defects in study's methods and their potential effects. Triangulation is the method used to create credibility and was done during the research period by comparing participant's surveys, interviews, and observations. Self-reflection was done during the study to avoid inserting bias into the data interpretation. Interviews and observations were transcribed and coded using Atlas ti 7 (2012) to analyze the qualitative components. **Transferability** allows the same study to be duplicated in a different environment. That is not always the case in qualitative research.

Confidentiality and Ethics

The researcher must earn the trust and confidence of the participants. In an in-depth-qualitative study there is a limited number of participants (Creswell, 2013). My study was limited to four participants from the same school. Trust and confidence were earned because I used a password protected computer that was always locked. The research was not extended to students.

Before any type of research began that included human subjects, an Institutional Review Board (IRB) was established. There were important guidelines that would be understood and followed, set by the IRB and the Office of Institutional Effectiveness. There were IRB workshops and an information session request forms that were made via Kennesaw State University's IRB web page. Once the understanding of the IRB process was completed, the applicant started the process of submitting and IRB application. During this process the applicant reviewed several important aspects that were listed on the KSU IRB website such as: IRB review classifications, IRB application form, consent templates, consent checklist, KSU mass email policy, what to expect during the process, and progress report. The process was followed, and permission was obtained from the site supervisor (principal) before the research would occur. Any additional data, permission, and correspondence needed was initiated through the principal. I followed and maintained all ethical standards that applied while conducting human subjects research. I assigned pseudonyms to each participant for interviews and surveys. The information obtained would only be utilized for this study.

CHAPTER 4

FINDINGS

The purpose of this research was to determine whether e-books, tablets, and technology instruction influenced elementary teacher instructional practices. Specifically, the researcher investigated if instructional practices using technology such as e-books, tablets, and computer reading programs would be useful if implemented into the learning environment. The following research questions guided my study:

Research Question 1.

What are teachers' beliefs about e-books, computers, and tablets

in motivating elementary students to engage in more reading at school?

Research Question 2.

How do teachers scaffold knowledge and facilitate learning using technological devices such as e-books, computers, and tablets?

This chapter contains the findings and data analysis of this study. Atlas ti. 8 (2019) was used to analyze the data and to help address the research questions of this study. The organization of the data were structured to support an understanding for the various instructional practices used when teaching reading.

Description of Participants

Table 2.

Participant Pseudonym	Role in the study	Contributions to the data
Ms. Mann	Teacher	Interviews Observations Survey responses Reflection conversation
Ms. Dash	Teacher	Interviews Observations Survey responses
Mrs. Black	Teacher	Interviews Observations Survey responses Reflection conversation
Mrs. Delancey	Teacher	Interviews Observations Survey responses

		Reflection conversation

The participants in this study consisted of four teachers who partook in six-month observation sessions and interviews. The observations took place in the designated teacher's classroom during the school day while teachers were teaching reading. Interview sessions were held before, during, and after school in the classroom. In this study, I examined teachers' perceptions, instructional practices, and experiences in the use of technology such as, e-books and tablets used to facilitate reading lessons. Four female elementary teachers at an urban elementary school were interviewed and observed by the researcher in this qualitative study (See table 1) Demographic data, number of years teaching, and current teaching status were collected (See table 3). While this study was conducted, teachers at this elementary site taught reading to students ranging from 2nd through 5th grade. Consent to conduct the research was obtained for each teacher. Each teacher completed a pre- and post-survey as well as two additional surveys. In addition, participants engaged in two interviews and two observations with the researcher. This school has technological resources such as Chromebooks, I-Pads, desktop computers, and reading programs to assist students with learning. Some of the teachers in the study used various technology resources to supplement traditional reading strategies in their reading sessions as sited in interviews and questionnaires.

The school district serves over 38,000 students in the county, including elementary schools. At the time of the study, the elementary school had an enrollment of 385 students in grades Preschool through Fifth Grade (P-5). The student to teacher ratio in the school during this time was 20:1.Seventy-nine percent of the students are from economically disadvantaged

backgrounds. The student population at the time of the study was 94% Black, 3% Multi-racial, 1% White, 1% Hispanic, and 1% Pacific Islander. Most of the students struggle to read on grade level or above based on test data. Lack of reading, motivation, and parental involvement are issues that appear to challenge students to achieve at their optimal potential. The qualitative data collected from the research participants' individual interviews and observations notes were transcribed. Atlas.ti 8 ("Atlas.ti", 2019) was the data software used to assist me during this process. I used open coding to identify themes that emerged in the qualitative data that were collected to address the research question in this study. These codes emerged through interviews, observations, and surveys, which allowed for the research questions to be examined and answered (Appendix A). A brief description of each interviewee will follow in the chapter. Each participant completed a survey data form and included descriptions of the individual.

The qualitative data obtained from the research participants are organized based on themes developed through participant interviews and surveys, which later assisted with answering the research questions. A brief description of each interviewee is given.

Professional Experience

Table 3.

Teacher Name (Pseudonym)	Ethnicity	Highest level of education	Number of years teaching	Grade Taught	Teaching Status
Ms. Mann	Black	Masters	9	2nd	Current
Ms. Dash	Black	Masters	25	3rd	Retired
Mrs. Black	Black	Specialist	19	4th	Current
Mrs. Delancey	Black	Masters	1	5th	Current

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Participant Interviews

Ms. Mann: Ms. Mann is an African American woman that currently teaches second grade reading. She has nine years teaching experience. She has taught at other schools in different states. In addition to her teaching role, she has held a position as academic coach for an elementary school. Currently, Ms. Mann is the department chair for second grade. During an interview session, Mann stated that she has concerns regarding the students in her class' low performance during the reading sessions. Therefore, she is constantly researching strategies she can implement to address her students' reading deficiencies. Ms. Mann stated that she has a true passion to elevate students in her class to the next level. She also discussed how she currently seeks resources, and educational learning experiences, to assist her with improving her students' learning in reading, with instruction that utilizes best practices.

Mrs. Dash: Mrs. Dash is African American, with more than twenty years teaching experience in various elementary schools in several states. During an interview session, she stated that she enjoys teaching reading to the youth because having the ability to read is a powerful tool. Additionally, she stated young students must be equipped with a strong reading foundation early in their education. According to Ms. Dash, many of her students are already struggling with their reading skills. She presses hard every day to give students a high level of instruction, so that student growth can occur.

Mrs. Black: Mrs. Black is African American, with nineteen years teaching experience according to the demographic sheet she completed during the research process. She has taught in a Kindergarten through eighth grade (K-8) setting, as well as elementary Kindergarten through fifth grade(K-5). After the completion of my first observation with Mrs. Black on February 8,

2019, it was obvious the passion she encompasses for wanting to help students strengthen their

reading skills. Every classroom observation or interview conducted with Mrs. Black was filled

with high esteem displayed to help students achieve their academic goals. When asked, what is a

goal that has been set forth that you would like to accomplish this school year? Mrs. Black

replied,

> "I want all students to have the opportunity to read on grade level or at least get a few
>
> steps closer to meeting their individual reading goal. I want my students to see progress
>
> in their learning. Often, students are not successful because they lack motivation. As
>
> their teacher, I want to provide them with all the necessary tools to help motivate and
>
> ignite their learning."

 She also stated during the first interview, her main goal was to ignite her student's mindset for

reading. She stated,

> Reading is my favorite academic area; I understand how it shapes a child's life and is a
>
> necessary component throughout their education. As a reading teacher I understand the
>
> essentials needed to be a successful reader. Vocabulary, reading comprehension, fluency,
>
> and phonemic awareness are just a few areas I am constantly focusing on with students
>
> during whole and small group instruction, so that a positive impact can be made on
>
> student learning when teaching reading. (Ms. Black's Interview)

> Mrs. Black also stated she was willing to try any reading strategy or computer program

available, that would engage students with becoming better readers. Additionally, she reported

participation in numerous professional development trainings in order to learn new strategies for

reading.

Mrs. DeLancey: Mrs. DeLancey is African American with fewer than three years teaching experience in an elementary school, as indicated by the demographic sheet she competed at the beginning of the study. When speaking with Mrs. Delancey during the first interview, she shared with me her intense desire to aide young children with the ability to read fluently, and on appropriate grade level. She stated the following during the interview,

> "I want all children to have an opportunity to be able to speak fluently, write proficiently, and communicate orally. I am very much aware of the need to help my students improve their reading. As a personal goal, I want to improve my teaching instruction for comprehension and vocabulary skills. I honestly believe my students lack motivation, and desire to perform positively in the area of reading."

Presentation of the Data

In the following section, I will share the findings from the study, as well as emergent themes.

Findings and these themes will be discussed in relation to the research questions.

Research Questions and Participants' Responses

Research Question. 1

What are teachers' beliefs about e-books, computers, and tablets in motivating elementary students to engage in more reading at school?

Participants were asked by the researcher questions during interviews and the survey instrument was used during this research phase.

As a result of two interviews conducted with participants, there was a common theme established. The impact technology has made on motivating students with their learning. *Ms. Dash* further shared how the use of technology has played a minimal role in motivating students with reading instruction. She states,

> What I established that works best for gaining students' attention is using a variety of teaching resources and styles. By understanding children can easily be distracted both positivity and negatively, I am aware of what actions are needed to obtain a positive outcome. Students who struggle with reading seem to display a lack of interest. They barley complete assignments and when they do, those assignments lack enough understanding of the concept (s). There are many students at the school who share similar backgrounds. When teaching practices are occurring, sometimes it is hard for students to keep their attention on the lesson. Their desire to read lacks motivation without assistance from tools, resources, and individuals. However, when teachers exude a high level of interest and well-being of a student's academics, positive learning outcomes are achievable. Also, implementing the use of technology and programs into the lessons often seems to spark children's attitude towards reading. The issue that sometimes may block motivation is the teacher's ability to obtain the necessary tools, resources, or training needed to assist with learning.

Mrs. Black described what an interested and motivated pupil looks like during reading instruction.

> Students involved in lessons using technology tend to exhibit lots of energy and curiosity. The students want to figure out the next steps when involved in reading using

the computer or the Mimio Board to access I-Ready. Sometimes students just want to

hear what sound or animation is going to catch their attention as they are completing

an assignment. They thrive for moments that allow interaction.

Ms. Dash acknowledged her experience with implementing technology and witnessing the tool

as a motivator was somewhat distorted, stating, it really does not impact the lesson a whole lot.

The use of computers during instruction is extremely limited. Traditional teaching methods are

what drives the instruction facilitated. Rarely are there assignments that include the use of a

Chromebook, Tablet, or computer program. In fact, the only time students use those devices

mentioned previously is to complete the district academic computer program (I-Ready). Every

week students are required to accumulate at least forty-five minutes of instruction in reading on

the computer using this program. Only then, do I provide students with time to use Chromebook

because I see them more as a distraction. Surly, when students are given the opportunity to use

one of the devices or programs, they are delighted. Yet, my use with these resources in the

classroom is extremely limited. Teaching students using basic lecture and small group instruction

is the best way to keep student's attention without any distractions from sound, animation, or

visual graphics. These all could be great tools to use when planning reading lessons. However,

education, training, and guidance may be a first option before incorporating them into the lesson.

Technology Used in Classroom

Table 4.

EPIC	A children's subscription book service that allows children to read chapter books and various other using the online platform. The website offers a digital library for students under 12 years of age. Epic.com, 2020	www.getepic.com
Google Classroom	Google collaborated with educators to create a classroom streamlined with easy to use tools to help manage student classwork and learning. Using Google classroom allows educators to communicate between student and teacher in a paperless fashion. Teachers can create multiple classes, post assignments, organize individual student work and view as well as grade student work in real time. Students can communicate among peers and the teacher as learning occurs. Googleclassroom.com, 2020	www.classroom.google.com

I-Ready	An online program that assesses student learning in the area of reading and builds an individual learning program to help improve student weaknesses in the area of reading and math. Ireadycentral.com, 2020	www.ireadycentral.com
Read Theory	Is an educational resource (program) for K-12 grade users that can be used in the classroom or home to help build on reading, writing, and critical thinking skills. The online comprehension program assigns students assessments that are measured by their individual skill level. Data is generated from the results. Readtheory.org, 2020	www.readtheory.org
Read Works	Provides online reading passages and lessons for all grade levels K-12. The program's mission aims to bring current research in the area of literacy to the learning environment. Read Works.org, 2020	www.readworks.org
SeeSaw	This app can be used by teachers to discover creativity amongst	www.seesaw.me

| | their students. This platform allows students to take pictures, draw, record videos and create an online portfolio. Once the portfolio is complete, teachers and students may share with parents via the internet. Seesaw.com, 2020 | |

Based on classroom observations and interview notes, teachers within the study utilized or had access to a variety of technology in relation to instruction. Table 4 provides a list of these resources as well as a description.

Emergent Themes

The case study interviews, surveys, and observations revealed five emergent themes that provided data for answering the two research questions of the study. The emergent themes in the study provided data, based on the reading strategies and approaches by each teacher, and their use of technology to enhance reading skills of elementary students. Interview data from teachers identified five emergent themes. Emergent themes presented the following: (a) technology as a motivator for student reading engagement; (b) time spent with reading technology is perceived as not beneficial reading instructional time; (c) technology is not viewed as an assessment tool for reading; (d) e-books/technological devices; (e) need for professional development; staff members participated in interviews, and observations, disseminating their experiences relevant to this case study.

Technology as a motivator for student reading engagement

The use of technology to motivate students and engage them in reading was tablets.

Tablets. Ms. Mann noted a lack of tablets at school revealed there was a lack of motivation for reading in the classroom setting. In contrast, *Mrs. Black* noted, students desire to use the reading apps and programs introduced in school and at home through a tablet or mobile phone were stimulating. Those programs included Google Classroom and Read Works. Students in the fourth-grade class would often share elements from a story such as characters, setting and events using the app or reading programs to access a book or reading skill. *Mrs. Delancey* stated, "using a tablet to engage in reading could be beneficial, however many students do not have access to a tablet." She also explained that lack of resources and devices may limit the effects of using tablets to motivate students to engage in more reading at school and/or home.

Reading Programs. Mrs. Mann noted students were excited about reading using the app called EPIC and I-Ready online program. "There is engagement and motivation to read when teachers give students other options for encountering reading experiences." *Mrs. Delancey* described her experience with students using I-Ready revealed students easily lost focus on their lessons." My students did not seem to have the proper motivation and drive to complete reading lessons independently." She also stated utilizing the program with increments of time would allow for students to maintain their interest in reading. *Mrs. Black* stated "Honestly, I believe students must have discipline when interacting with reading apps or programs because it makes them accountable for their actions." *Ms. Dash* stated, "I think when students hold themselves responsible for learning, they have a desire to stay on the right path." Participants noted students

engaged in more reading at home and school using e-books, computers (Chromebooks), specific reading programs, and tablets rather than traditional books.

Mrs. Black explained, "I see concentration and reading interest heavily displayed when students are given access to e-books."

Ms. Mann alluded to the "incentives given to students through media staff and teachers, can prompt pupils to enter into more time for reading. Bulletin boards that measure the amount of time spent reading (stamina); Accelerated Reader point system, limo rides, trinkets, free books, lunch, and certificates revealed students increased their reading time, with hopes of obtaining an incentive." *Mrs. Delancey* stated, "I find it is difficult even with e-books to motivate students who are not interested in learning." *Ms. Dash* noted, although students are engaged using e-books as a resource for reading, their attention span become unfocussed with a short amount of time."

Technology with Reading is Perceived as not Beneficial Instructional Time

Computers. Teachers noted students' attachment to wanting to access the computer regularly throughout instructional time. However, participants shared woes regarding computer usage integrated with reading instruction.

Time spent with reading technology is perceived as not beneficial reading instructional time

Ms. Delancey noted students get off track and lose focus using computers at school. She stated "having restrictions on the computers would be beneficial to keeping students on the proper track for learning. *Mrs. Black* described her experience with students use of computers was "very

restricted." She also explained that many students will try to misuse a computer, however the

teacher and parent must set parameters in place prior to the implementation of computers in the

classroom and home. *Mrs. Mann* stated, "you have to explain the rules for the computer, along

with the expectations."

Ms. Delancey discovered several behaviors with her students when they used chrome books to

access reading assignments. She shared a few of those by stating,

Reading instruction is difficult at times because students are not interested in learning

how to use certain strategies in reading. Most of them believe that if they call words,

they can read. Often, there are many challenges that arise during instruction that force

students to not be on task. The only time students seem to receive interaction is if a

video, power point, music, or e-book is implemented into the lesson. Students find great

joy in having a book read-aloud from the computer, Chromebook, or tablet, or a lesson

that talks to them via one of the tools mentioned above. They no longer view reading as

being boring and drab. However, sometimes students can become too involved with the

computer when given an academic assignment. There are several tasks I assign students

to complete using Google classroom or a computer program. When assignments are

given for students to complete, sometimes they take extended periods of time, just to stay

on the computer. Instead of them trying to put their all into lessons and produce quality

work, they just find themselves wasting vital time. For example, students are given

walk around the room, that the computer screen is flashing "are you still there?" This

message appears when students have not been engaged for a certain period. Lessons are

not being completed with enough sincerity regarding the quality of work that is being

developed and produced by students using Chromebook or tablets. More often than

enough, students are not doing the right thing on the computer. Instead, they are

minimizing computer/tablet screens, listening to music, and playing games. Utilizing the

computer to assist with instruction is good at times. Students seem to find joy and

excitement when working with technology. However, you must be aware of how much

technology you are using and whether it is making a positive or negative impact on

instruction and students.

Technology is not viewed as an effective assessment tool for reading

Throughout the interview sessions, all teachers indicated the value of assessment when

determining student growth. "Assessment is the process of generating, gathering, recording,

interpreting, using, and reporting evidence of learning in individuals, groups or systems, which

relies upon a number of instruments, one of which may be a test. Educational assessment

provides information about progress in learning, (*Assessment in the Primary School Curriculum,*

*Guidelines for Schools, NCCA:2007:4).*When addressing the question, what are teachers'

opinions about reading sessions that help students with reading skills in elementary students?

Participants discussed their opinions on the use of assessments through interviews. Many of the

responses included the following: assessments are attached to students' profiles throughout their

academic journey, and those assessments may include positive or negative experiences in their

education. Research indicates that the use of classroom assessments could increase achievement

of low struggling learners, when provided feedback to students on their learning. Furthermore,

assessments could monitor student growth and progress, and can be used to help teachers change

their instruction, to help students meet their goals, (Black and William, 1998). During further

discussions with interview participants, other comments were made.

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Ms. Mann stated,

> Too many assessments are given to students, throughout their educational time. We are
>
> constantly testing students in order to determine their abilities in learning. Often, teachers
>
> are not given an opportunity to voice concerns over the amount of testing that occurs
>
> daily. Instead, the teacher is charged with performing the task when given. Many of the
>
> computer or tablet to perform the test. Without background knowledge or experience,
>
> operating these devices can be difficult for a young school age child. Since reading and
>
> phonological test are given in a technological platform, young learners could benefit from
>
> a teacher guiding them through the process. If students are unaware how to use devices
>
> need practice opportunities, and other alternative options to assessing their learning
>
> without the dependency of technology. Particularly when it comes to assessing students'
>
> reading skills.

Mrs. Black acknowledged the number of assessments given to students on a year-round basis

was astonishing. Most of those assessments given use technology to deliver the tests. A battery

of those being reading achievement assessments. According to Mrs. Black,

> Students in elementary school start taking assessments incredibly early. Many of the
>
> children are very well versed in taking an assessment using a digital platform. Yet,
>
> students continue to struggle with their results. The test should be determining the
>
> obtain a definite outcome of the assessment. Benchmark tests are given three times
>
> grasped the information taught all year. Sometimes those assessments may not always be
>
> the best method of determining whether a skill has been mastered. Class work,
>
> measuring student knowledge.

Ms. Dash pointed out the importance of implementing assessments with fidelity, especially in the area of reading by stating,

> Teachers must be aware of the way they assess student learning. There must be a clear understanding of why the student is engaging in the assessment, and whether they have been prepared to be successful in the results. Assessments happen periodically throughout the year to measure student reading skills. Sometimes because of the number of tests given, it is hard to establish whether progress is being made. Therefore, assessments that are only given every nine weeks, should not be the only method of assessing student learning. Reading skills can be demonstrated in other forms besides an electronic test. Educators could engage in other types of assessment to measure students' learning. Currently, the assessments that are used for reading, do not align with each other. Therefore, the learning established may not be a clear determination, because the different assessments are not aligned to measure on the same criteria and weight.

Ms. Delancey stressed testing students in reading constantly is inevitable. She stated,

> Testing is a major component in the educational system. Many people are held accountable when you think about the outcomes of testing. Reading is such a key element in life. Yet, many individuals struggle to meet the basic goals of achievement. Finding solutions to the reading issue is especially important to young students. Reading deficiency needs to have a chance early, to be corrected or improved. Too much emphasis is placed on achieving on a test instead of mastering the skill of reading. Educators need to find various methods to determine students' ability to read without constantly testing them. Test results indicated recently; many students continue to struggle with

subject content in reading after three administrations of the same test. No testing results have proven to show a high rate of growth in reading. Providing students with alternative assessments that do not require them to incur test anxiety or other issues, may be a solution. Allowing students to flourish without depending on a benchmark test to determine absolute reading progress, could be the answer to motivating students to read more.

The participants all shared a concern for assessments (test) given to students in the area of reading and the time used. The interviewees, also established the need for implementing other methods of assessing a child's learning in reading, could be beneficial if test were not listed as the sole assessment. Three out of the four participants shared positive views regarding technology being used to motivate students to read. Teachers highlighted engagement, incentives, and concentration as factors that assist with students wanting to read more using e-books, tablets, computers, and reading programs. Understanding some of the teacher's beliefs that implementing technology resources into reading motivated students to read, lead to more lessons including technology as a part of the lesson planning and teaching stage. During the study participants were asked to share their lesson plans for reading as a way of documenting their use with various technology tools, and resources implemented in the lesson. All participants found this task to be immensely helpful because it allowed them to evaluate their teaching, planning, and facilitation. *Mrs. Delancey* admitted her experiences with technology being used to motivate students was not favorable. Thus, inferring in several interview sessions, she stated,

> I need more training on how to integrate technology into her teaching lessons. Perhaps,
>
> professional learning sessions that focus on planning and teaching lessons using e-books,

tablets, computers, and reading programs will be an additional support implemented in

the future.

Although, the perceptions of the more experienced teachers are favorable for technology

implementation into lessons, resources used to motivate students to read and improve instruction

displayed mixed views. The need for parental involvement was stressed by participants as an

essential component needed to help assist students strengthen their reading at home and school.

Partnerships were suggested for future recommendations to help bridge the gap with students

learning in the area of reading and parental involvement. While conducting an observation, I

viewed communication from teachers sent to parents soliciting them to accept a role in their

child's learning. Several newsletters given to parents included tips parents can use in order to

address low reading skills. Yet, participants mentioned there was not enough positive and

consistent involvement from parents with being involved in their child's education. Specifically,

the area of reading instruction. Overall, those teachers involved in the study shared their

connections with the research questions by answering the following:

Did technology guide and strengthen learning in other areas besides reading?

Were students motivated to see if there was a positive impact on reading using

technology to enhance reading skills?

Did teachers share their perceptions on the use of technology to facilitate reading

instruction?

Participants were able to provide the researcher with responses through surveys, interviews, and

observations conducting during the study.

Research Question 2.

How do teachers scaffold knowledge and facilitate learning using technological devices?

Participants were asked during interview sessions and surveys to share methods used to scaffold knowledge. The researcher observed scaffolding practices by the participant.

Use of E-Books/Technological Devices

All four participants stated during several interview sessions that they either use e-books, computer programs such as (I-Ready), tablets, mobile phones, and/or laptop/desktop computers as tools used with the facilitation of learning. These participants were able to display the tools being incorporated in the lessons through their reading lesson plans. These resources are linked as instruments used to scaffold knowledge. For example, Mrs. Black provided reading lessons plans that included differentiated instruction. The plans further detailed small group instruction in which the teacher lead a small group of students with guided practice of the skill being taught.

Mrs. Black discussed with me during an interview session how she scaffolds learning by stating,

> I assign lessons that have been previously taught by me as practice and/ or remediation for students using I-Ready. Students are given the opportunity to have the standard taught to them using a computer program with animated charters. Once the lesson is taught, students must take a quiz to measure whether they mastered understanding of the standard.

Ms. Mann shared how she scaffolds learning using technology by stating,

> I love for my students to see their progress with learning. Therefore, I use Seesaw as a technological portfolio that allows students to record and capture pictures of what they

> are learning using an online platform. Not only are my students able to capture their
>
> learning using technology, they can share their portfolio with parents and me (the
>
> teacher).

All the participants were asked in their interviews, if the use of the six components of reading,

which are: phonemic awareness, phonics, vocabulary, fluency, comprehension, and writing were

used to aide scaffolding in the lessons. They collectively shared the response that sometimes the

ability to master all those components are a struggle for students. However, the teachers stated if

they apply the following strategies such as visual aids, time for students to talk during the lesson,

pre-teaching vocabulary, giving students opportunities to ask questions, pause, and review as

scaffolding techniques, they may have a better chance of becoming proficient readers with the

usage of the components. They further added by the responses in Atlas ti, the ability to

immediately dive into these skills are somewhat awkward for students if there has not been any

prior exposure. Interviewees were asked during the second interview to expound on other

processes used to assist students while teaching, specifically those struggling with reading

instruction.

Ms. Mann's response: One experience mentioned was the development and publishing of a

book that was written and illustrated by her students. She acknowledged that while many of her

students struggle with reading and writing, she uses creativity when planning her lessons to

engage students in reading. She also stated the importance of differentiating lessons, so that all

learners are reached from some capacity.

Ms. Mann indicated that currently the school provides the program I-Ready and the resource

called Mimeo for teacher use with students in the classroom. I-Ready is a program by

Curriculum Associates that allows students to learn through an individualized on-line and teacher-led instruction tailored to each student's specific needs. Mimeo is an interactive board that allows students and teachers the ability to interact using the computer, app, website, video, or program.

I was able to witness students exemplify high intensity to perform reading and writing skills when using the computer program and/ or interactive board during a reading lesson. As a result of implementing Chromebooks and technology programs into reading instruction, Ms. Mann believes students are willing and eager to engage in classroom instruction with the use of Chromebooks. Particularly, those lessons that provide sound, such as the reading of the story or questions read aloud to them.

Mrs. Dash's response:

When speaking with Mrs. Dash during an interview, she noted.

> If there is a word or question that appears to be incredibly challenging, my students will
> quickly lose focus. I find myself having to physically go stand over them, for them to
> be redirected to answering the question or completing the task on the computer screen.
> (Mrs. Dash's, interview)

Mrs. Dash seemed interested in understanding how students were able to communicate with each other about the text when teaching a specific standard using a book. She further wanted to assess whether students seem to understand the reading skilled being taught when allowing students to have discussion with each other in pairs or groups. Additionally, Mrs. Dash acknowledged finding joy when students displayed high levels of energy when completing reading activities on the Chromebooks or with peers. She stated her passion and motivation for reading was because

students could earn rewards for a specific number of lessons completed using the program I-Ready.

Mrs. Black's response When asked, what is a goal that has been set forth by you, that you would like to accomplish this school year with students that show weaknesses with their reading skills.? Mrs. Black replied,

> I want all students to have the opportunity to read on grade level or at least get a few
> steps closer to meeting their individual reading goal. I want my students to see
> progress in their learning. Often, students are not successful because they lack
> motivation. As their teacher, I want to provide them with all the necessary tools to
> help motivate and ignite their learning. I hold a lot of responsibility in making sure
> lessons are provided to students that help guide their learning. I believe it is
> important for me to teach, but also for students to teach and learn from one another.

She also stated during the first interview her main goal was to ignite her student's mindset for reading. Mrs. Black shared the following as it relates to how she applies scaffolding withing her lessons.

> Reading is my favorite academic area; I understand how it shapes a child's life and is a
> necessary component throughout their education. As a reading teacher I understand the
> essentials needed to be a successful reader. Vocabulary, reading comprehension, fluency,
> and phonemic awareness are just a few areas I am constantly focusing on with students
> during whole and small group instruction, so that a positive impact can be made on
> student learning when teaching reading. I understand my teaching alone does not always
> get the job done immediately. At times, I must solicit other resources such as Chrome

books and computer technology programs to assist students with improving their reading

instruction. (Ms. Black's interview)

Mrs. Black stated, 'she was willing to try any reading strategy or computer program possible,

that would engage students with becoming better readers." The program I-Ready is a research-

based computer app that offers teachers the ability to differentiate instruction in reading for

students using its program. Incorporating differentiated instruction into the lesson allows

scaffolding to occur among students. Mrs. Black reflected on her own learning; she had recently

been involved with a training that focused on I-Ready.

Additionally, she reported participation in numerous professional development trainings in order

to learn new strategies for reading.

Mrs. DeLancey's response: When speaking with Mrs. Delancey during the first

interview, she shared with me her intense desire to aide young children with the ability to read

fluently in her teaching by stating.

> I want all children to have an opportunity to be able to speak fluently, write proficiently,
>
> and communicate orally. I am very much aware the need to help my students improve
>
> their reading. As a personal goal, I want to improve my teaching instruction for
>
> comprehension and vocabulary skills. Many of my students like to read. However, the
>
> types of text they choose did not always offer a challenge for them. I believe I need to
>
> find strategies that will appeal to all my students in wanting to engage in more
>
> stimulating text. Even though some of my students enjoy reading, I still have concerns
>
> for the remaining students who do not. I honestly believe those students lack
>
> motivation and a desire to perform positively in the area of reading. Therefore,

having an opportunity to attend professional trainings that address techniques that

enhance reading and vocabulary with struggling students would be welcomed.

Based on this information given by participants in the study, the theme in which a need

for professional development to use technology and reading instruction/facilitation emerged.

Need for Professional Development to use Technology and reading instruction facilitation

Teaching styles have changed somewhat according to the participants in the study.

Teachers now have a variety of resources and tools that are enabled by technology to assist them

with teaching reading. In this study, teachers discussed the differences in learning styles today,

versus the traditional styles using just a book, cassette tape, or record documented thirty years

ago. As the researcher, I observed teachers use multiple instructional delivery options, and tools

(resources) to provide learning for students. For example, two of the participants in the study

indicated through survey completion, they implement technology such as e-books, computer

programs, and Chromebooks to differentiate instructional time during reading. In addition, many

of the participants acknowledged during the interview sessions, using a variety of teaching

methods, reading strategies, and resources, allowed for an environment that offers differentiation

to meet the needs of many learners. According to Hess, (1999) differentiation can be an engaging

experience for teachers because it creates energy that is different from direct instruction. A

collaborative atmosphere for learning is also created as a result, Tuttle (2000).

While the teachers in this study point out in the data these resources are available for

teachers to use, there are no guarantees implementing these tools, strategies, and resources will

fix reading issues. While conducting an interview with Mrs. Black she shared the following:

I use I-Ready as a tool to help address reading deficiencies with all my students. Particularly, those who continue to not meet the grade level expectations. In conjunction, I use additional computer programs such Read Works and Read Theory. These technological based programs offer students the ability to practice reading skills using the computer with uploaded stories and questions generated from the program. Yet, my students are still struggling with becoming proficient with comprehension and vocabulary. I am using the programs offered, but maybe I need educational support on the techniques, strategies, and implementation with computer-based programs.

According to Mrs. Delancey, "she tries to incorporate many of the technology resources such as Chromebooks and I-Ready into her reading lessons, but often feels defeated because of the lack of knowledge in how to properly implement the strategies and technology resources in tandem." For this reason, participants in the study stated to the researcher, "educators have a strong desire to receive continuous professional development training, so they are better equipped with the education and training needed to help address the reading deficiencies of students in a productive manner." Furthermore, participants in the study completed a survey provided by the researcher that indicated the following, "curriculum, classroom management, and professional development are just a few of the trainings educators are exposed to at minimal in the educational profession. They would like to see trainings offered year-round with a more teacher specific focus, so they deliver a more meaningful result." According to the participant responses generated through an online survey, "often the trainings are offered for a limited time, usually at the beginning of the school year." Despite, some of the teachers in the study requesting to have professional trainings made available to them regularly." Mrs. Mann did not share that same notion. She stated,

I do not always feel motivated to engage in professional development because I feel no

one really understands the obstacles I face when teaching students. As a new teacher, I

do not always feel like I am being heard by my peers, academic coaches, or

administrators when I say I need assistance with implanting a resource into my lesson. I

become frustrated easily when I cannot discuss pros and cons of my lesson with other

individuals.

Mrs. Mann expounded further on the idea for more professional development by stating*,*

Perhaps, educators may desire more opportunities in being better prepared on applying

specific reading strategies using technological resources, and tools through professional

learning communities, if they can share input, and experiences they develop in their own

teaching environments.

Teachers must be knowledgeable on what reading strategies to apply in their reading

lessons such as scaffolding and how to use the strategies with the students; what interventions to

implement (example, "Think Aloud or interactive read aloud") (k5ChalkBox, 2020), and the

resources (Chromebooks, computer programs) needed to address the reading deficiencies. *Mrs.*

DeLancey stated,

As a new teacher, I think it is so hard to understand all the components that should be

focused on during a literacy lesson without training. Furthermore, it is extremely hard to

understand where to find assistance when you lack the exposure needed to be a

successful reading teacher. Now that I am aware of the difficulty's students face, I am

more driven to find information, and resources to assist me in the classroom. I am also,

open to trying new methods in my teaching such as: incorporating technology more in

my instruction. When I teach reading, I sometimes give students the opportunity to

complete assignments using the computer. Their engagement with the lessons is

somewhat different from the traditional whole group teacher lead lesson(s). Students

seem to be more engaged and enjoy their learning. At times they have had lessons that

require them to read from an e-book or a passage retrieved from a computer. The attitude

of the learner completely changes when I expose students to a new way of completing a

learning task. However, I can only use the e-books for a short period of time because I

have not received any training on how to use them in tandem with traditional reading

strategies. Reading strategies such as inference, making predictions, asking questions, re-

tell, predicting, summarizing, think aloud, visualizing, and making connections, to name

a few. My skill set with implementing technology into my lessons as I teach these reading

strategies is limited. Perhaps professional learning opportunities within my school or

district would allow me to become more familiar, and skilled with using technology

during teaching instruction.

Mrs. Black explained her experiences with using a variety of reading strategies, resources, and

teaching methods was at an exceedingly high skilled level. However, additional training to help

strengthen her use of integrating multiple technological resources in her lessons would be

favorable. She discussed in the first interview, her style of teaching by stating,

I like to incorporate multiple teaching practices when working with students in reading.

For example, I incorporate the use of multiple groups during reading. Using this form of

instruction allows me to reach students who are on different reading levels at the same

time but blended in one classroom setting. Students appear to embrace alternative

teaching methods, especially when they can perform the skill. I have further observed

when I utilize the flip classroom model of teaching, students self-direct their learning as they are practicing the concept currently being taught. Thus, allowing them much responsibility to accomplish their goal(s).They also love to interact with lessons through the Mimio board and Chromebook using programs like I-Ready and Read Theory. These resources allow students to interact using technology to communicate stories, and teaching skills using technology. I have found that students have a greater desire to read when they use e-books or interact with reading in a digital platform. However, I am not sure if an academic difference has been made in their reading growth due to the application of various strategies, interventions, and resources. I implemented a variety of reading strategies and interventions in a whole group setting, surrounded by new millennium resources. No matter how I facilitate the lesson, I make sure I use multiple strategies in either format for learning. Scaffolding is a strategy that I have found benefits students significantly when applied correctly into any type of the lesson. Unfortunately, not every teacher is afforded the opportunity to learn how to appropriately use scaffolding in their everyday teaching lessons. Perhaps, having a little experience or background knowledge about the use of e-books, and technology could possibly aide teachers with implementing resources in their lessons in order to improve and enhance reading skills of students.

Research Observation of Scaffolding Practices

Observations of the four participants included the following: introducing students to reading concepts using mini lessons; modeling and demonstrating the task for students to complete; explaining concepts in a variety of ways to assist all learners; apply guided practice opportunities; check for understanding; and activate prior knowledge. Observations occurring

January through March with participants who teach in grades second through fifth grade revealed scaffolding taking place with students' using differentiated instruction; interactions with e-books and tablets using various computer programs such as I-Ready and EPIC. Students were observed in groups using the I-Ready program for remediation of the standards-based concepts previously taught by the teacher. Many teachers were observed using various reading strategies during mini lessons and differentiated small groups with students. Teachers were observed using technology in their lessons by giving students a learning task to complete using the computer program called (I-Ready), to target the students' individual instructional learning ability. ***E-books.*** Interesting observations revealed students were engaged with reading books in an electronic format during reading instruction. Various reading programs such as EPIC, Read Works, Read Theory, and I-Ready were some of the program's teachers acknowledged using in the classroom.

Mrs. Mann's observation:

During the first observation, Ms. Mann was observed teaching a reading lesson focused on finding the main idea. There were three groups in the classroom engaging in different activities. All the groups included four to five students. The first group of students were sitting on the carpet participating in an interactive reading lesson using the Mimeo board. These students were receiving reading instruction through a program called I-Ready. Students took turns going to the board to answer questions by tapping on the correct answer, when prompted to answer a specific question following the reading. The text was read aloud to students throughout the entire lesson. The second group of students were working independently on the Chromebooks. Lastly, the third group of students were working with the teacher on a reading worksheet. Students read and answered questions prompted by the teacher. The teacher asked students to answer questions by acting out their responses and writing their answers on paper. Ms. Mann interacted with all her

students throughout the lesson. She was able to give attention to every group while a differentiated learning setting was observed. Often, I observed students becoming excited when answering a question correctly using the Mimeo board or Chromebook (computer).

Mrs. Dash's observation:

In the first reading session I observed, Mrs. Dash facilitated lessons that involved various tactics to interest students in reading. Her daily instruction allowed students to participate in the learning process using questioning techniques. During read aloud time, Mrs. Dash would insert periodic pauses for students to participate in pair-share reading. The use of this reading strategy allowed students to ask and answer questions from peers, as well as discuss aspects of the story.

Mrs. Black's observation:

After the completion of my first observation with Mrs. Black I was able to witness the passion she encompasses for wanting to help students strengthen their reading skills as exhibited. Every classroom observation or interview conducted with Mrs. Black was filled with high esteem for wanting to help students achieve their academic goals. Classroom observations on two occasions support the action of student engagement using I-Ready during reading instructional time. I especially noted students' facial expressions, body posture, and hands as they operated the Chromebook in a controlling manner. However, some students appeared to have been sidetracked or lost focus when the screen presented them with many words. Several of the participants shared similar experiences.

Mrs. DeLancey observation:

There were some instances observed when students got off task while Mrs. DeLancey was teaching reading. Constant talking, getting out of seat, and a lack of focus in a classroom setting were some of the actions witnessed, to name a few. Nevertheless, the off-task behavior did not prevent Mrs. DeLancey from displaying persistence and assisting her students. She used various strategies in reading to aide with the strengthening of reading skills. Many of the strategies observed such as pair share, small group instruction, and the use of video graphics displayed little academic interest from students. However, the positive relationships that Ms. Delancey had established with her students, appeared to flourish when ensuring that her students' learning was back on track following any distractions.

Based on the observations conducted in the study, I noticed that what the participants stated, matched what they did inside their individual classroom. For example, I was able to observe Mrs. Black's use of scaffolding to facilitate learning by allowing students to work in pairs. Mrs. Mann used scaffolding by forming four groups in the classroom during reading time. Additionally, this example displayed the use of differentiated instruction. Another group was teacher lead and the other three groups worked independently on different assignments. For instance, one group was working on vocabulary word sorts, the second group was completing a writing assignment, and the last group was working on a reading comprehension assignment using the Chromebook from Read works. Using small groups throughout instructional time was an example of differentiated instruction. Mrs. Delancey implemented videos of teachers demonstrating how to master a specific reading standard. These videos were displayed using a computer and an interactive board. Mrs. Dash applied visual aids such as pictures, interactive graphic organizers, and charts accessed using the desktop computer and interactive board to

scaffold learning. Based on the observations, participants used technology to scaffold learning

for limited amounts of time during reading instruction. However, as I observed many of the

teacher's lessons, I was able to see students take ownership of their learning. For instance, as

students were called to the Mimio board to answer questions, many of them interacted with the

board and computer program in conjunction with the desktop computer, to input and receive

information being studied. Students also, pointed to important key words and phrases using a

pointer stick, to help their peers understand and identify where the answers to many of the

teacher's or computer-generated questions asked, about the story being read. Many of the

participant did not appear to be 100% of confident with their use of technology while they taught

reading.

Chapter 5: Conclusions and Discussion

Summary of Findings

The purpose of the data collection for the study was to obtain information regarding perceptions, instructional practices, and beliefs related to technology usage in teaching of reading in an elementary school. The study was driven by two questions posed to four elementary teachers who the focus of the case study for the research were. The two-driving research questions used case study interviews, observations, and surveys based on seven emergent themes that provided data in response to the questions. The data provided by the emergent themes was based on reading strategies and approaches used by each of the four research participants who used technology to enhance reading skills of elementary students.

The data findings revealed that teachers believed that technology was a great motivator for children's and reading instruction, however, professional developed in needed. Furthermore, teachers must be trained on how to plan effective lessons in order to implement reading and writing strategies. The role of the teacher in providing reading strategies such as, differentiated instruction, scaffolding, small, and whole group instruction when teaching reading was crucial in lessons observed by the researcher. Teachers used technology to scaffold learning by implementing e-books, reading programs, chrome books, and ipads into the reading lesson, which increased student engagement in the learning process. The research indicated that the teacher's form of instruction, and ability to provide a variety of instructional reading strategies was vital to the learning success of students. Therefore, teachers need professional development training on the use of devices and programs in order to teach students new skills and strategies using technology (McKenna, 2014).

The research further discovered the findings in response to the following question that was posed to participants during the study. What are teachers' beliefs about e-books, computers and tablets in motivating elementary students to engage in more reading at school? Teachers' shared their beliefs stating too many assessments are given to students using a platform such as computers and tablets that they did not understand how to operate. According to the teachers in the study, students were not trained to use the computer prior to being given an assessment on the technology device. A technology-based assessment was not always the best method to determine whether a student mastered a skill noted by teachers in the study. Through the interviews conducted by the researcher it was stated by several teachers that it may be difficult to obtain the definite outcome of the assessment. Reading skills can be determined in forms other than technology. Assessments should not be the only method of assessing student learning. Teachers should use classwork, observations, and other artifacts, such as an alternative to measure student knowledge. The research provided multiple opinions by teachers about reading sessions that help students with reading skills.

Based on the research in the study, many teachers believe that reading instruction lacks excitement, and a variety of challenging teaching tools and resources. E-books/Technology devices, computer programs, tablets, mobile phones, laptops/desk top computers are tools that can be to the lesson planning in order to facilitate instruction. They can also be used to scaffold knowledge using a variety of teaching and learning styles. Differentiation can be engaging because it creates energy that is different from direct instruction. The research indicated the need for more professional development to train teachers in using technology to during teaching instruction. Reading strategies can be used to help students re-tell, predict, ask questions, visualize, make inferences, and make connections using e-books, tablets, reading programs to

increase student reading engagement. Reading programs such as the ones in the chart below (

See Table 5.1) motivate and drive students to complete assignments, based on the research and

participants in this study usage.

Recommended Technology Programs/Devices

Table 5.

Programs	Explanation of the program/app	What Platform or operating system	Cost	Website to retrieve program/app
EPIC	A children's subscription book service that allows children to read chapter books and various other using the online platform. The website offers a digital library for students under 12 years of age. Epic.com, 2020	Epic can be used on any device to read books including a Smart TV. That includes IOS, Android mobile devices, Chromebooks, laptops, and desktops.	Teachers may use this tool for free at school. Parents can purchase a subscription for a child's use at home for a small fee.	www.getepic.com

Google Classroom	Google collaborated with educators to create a classroom streamlined with easy to use tools to help manage student classwork and learning. Using Google classroom allows educators to communicate between student and teacher in a paperless fashion. Teachers can create multiple classes, post assignments, organize individual student work and view as well as grade student work in real time. Students can communicate among peers and the	The Google Classroom app can be installed on an Android or Apple mobile device. The classroom app is not available for Windows mobile devices. The classroom has an app that can be downloaded to a tablet. Using Google Classroom on a Kindle may be a little challenging	There is no cost associated to use Google Classroom if the school district has purchased G suite. However, if they have not purchased licensing it is $4 per month.	www.classroom.google.com

	teacher as learning occurs. Googleclassroom.com, 2020	because you must use a dedicated app. Desktop computers, laptops, and Chromebooks will allow the use of Google Classroom.		
I-READY (Curriculum Associates)	An online program that assesses student learning in the area of reading and builds an individual learning program to help improve student weaknesses in the area of reading and math. Ireadycentral.com, 2020	I-Ready can be accessed using a Chromebook, desk top computer, iPad, Kindle, or Android Tablet. However, you must download the app or use	Teachers may use this program through district purchase of a license. If the district purchase program, students have free unlimited access from home.	www.ireadycentral.com

		Clever to retrieve the app.		
Raz-Kids **(Learning** **A to Z)**	Is used a s a teaching product that provides comprehensive leveled resources for students using an e-book. The e-book can be accessed using a mobile device or online format. Students can listen to themselves read, read at their pace, and record themselves reading. Students can take comprehensive e-quizzes after reading their book(s). Raz-kids.com, 2020	Raz-Kids uses a mobile app where students can read using an iPad, Android, Kindle Fire or tablet. Additionally, Raz Kids works on desktop computers and laptops.	Teachers/districts may purchase a yearly subscription. Students may use Raz-kids at home once a subscription is obtained	www.raz-kids.com

Read Theory	Is an educational resource (program) for K-12 grade users that can be used in the classroom or home to help build on reading, writing, and critical thinking skills. The online comprehension program assigns students assessments that are measured by their individual skill level. Data is generated from the results. Readtheory.org, 2020	Read Theory uses an app from the Android or Apple store. The program can also be used on a desktop, laptop, Chrome book, and mobile device.	Teachers can set up student accounts for free. Students are able to use the program at home, school, and on mobile devices for free. The program is completely free for all users.	www.readtheory.org
Read Works	Provides online reading passages and lessons for all grade levels K-12. The program's mission	Can be assess through the online website using any device. There	The program may be used by teachers for free. Parents may use Read works from	www.readworks.org

	aims to bring current research in the area of literacy to the learning environment. Read Works.org, 2020	is no app to use the program.	student accounts set up through the classroom teacher.	
Seesaw	This app can be used by teachers to discover creativity amongst their students. This platform allows students to take pictures, draw, record videos and create an online portfolio. Once the portfolio is complete, teachers and students may share with parents via the internet. Seesaw.com, 2020	Can be used on any device including Chromebooks, computers, iOS and Android devices. Kindles will support the app as well.	Seesaw offers basic usage to teachers, parents, and students. Seesaw plus can be obtained through a membership.	www.seesaw.me

Teachers must change their believes when teaching reading sessions to create an encouraging environment for students' must also acknowledge students' desires to read when they plan reading sessions. Teaching tactics can help educators develop enjoyable reading sessions for students. The research revealed that teachers need resources to assist them with incorporating technology into teaching and lesson planning. Scaffolding using online quizzes, multimedia tutorials, web links, and online tutorials are a few of the resources that would be beneficial. More professional development sessions to help teachers improve basic teaching techniques, such as lesson designs to target all types of learners and strategies that allow students to self-direct their learning. Based on my observations and interviews conducted with participants, I believe teachers could further benefit from establishing relationships with teacher leaders. I believe teacher leaders would be an asset to other teachers and staff by providing training, guidance, and modeling of effective teaching strategies. Additionally, on-line tutorials/webinars that provide differentiated instruction techniques, and scaffolding strategies would also be beneficial to teachers when teaching reading. Perhaps implementing these suggestions will allow teachers to teach reading in a confident and prepared manner. Successful planning, training, and resources are needed in my opinion, so that students' experiences in reading are positive and achievement gaps in reading can be closed for all**.**

Recommendations for Practice

The evidence reveals that teachers believes and needs for professional development impact the use of e-books, computers, and tablets during reading instruction. Teachers must also provide effective lessons in all subject areas if students are to improve in reading. Reading must be done in all subject areas with teachers using effective lesson templates for effective teaching (Schmoker, 2018, p. 92).

Being aware of teachers' beliefs of whether e-books, computers, reading programs, and tablets motivate students with their reading skills can be beneficial for teacher planning. Implementing positive strategies, and tools are key to assisting students with reading instruction. If participants have negative views on whether students are motivated to read with the use of various technological tools, this could affect the lesson planning, and facilitation of reading instruction. Research suggests educators often implement technology into the classroom without knowing whether results will yield positive or negative results,(Spence & Smullen 2014). Participants in this study shared both positive and negative views on whether specific technology tools and resources encourage students to read more. Teachers should examine additional components used to motivate students with reading. Research indicates students who find success with reading in a digital environment may need a boost with traditional reading methods because students do not identify reading on digital formats as "real" reading, McKenna (2014). Therefore, teachers must be aware of the pros and cons that may develop when implementing technology as a tool to motivate students to read, McKenna (2014).

While e-books in education are becoming more popular because they reduce the use of paper, thus reducing waste, and they are practical because they reduce the load of carrying books, there is no evidence they increase achievement (Connell et al.,2012). Digital devices, and interest in e-books read from computer screens are still increasing in the education arena even though there is no evidence that they enhance reading skills of young children. Although children enjoy using computers and various technology, the research does not support the belief that they enhance reading skills or increase achievement. Schools are using computer-based games, and instructional programs to try to raise the achievement of gap students now more than ever (Schmoker, 2018). Yet the highest achieving countries do not use technology as a tool to

enhance achievement. Studies show that in education systems that are achieving at high levels, technology has no role in their success (Goodwin, 2012; Ripley, 2013; Walker in Stoltzfus, 2017). According to Schmoker (2018) in Bauerlein (2009, p. 109) it was stated that the cofounder of Sun Microsystems indicated that U. S. schools "are spending their time on crap" instead of truly educating our students (p.93). Schmoker (2018, p.93) has indicated that in the highly effective schools he has observed, none of them credit instructional technology with having played a significant role in their success. According to Schmoker (2018, p.94) Steve Jobs (in Carmody, 2012) said no amount of technology can make a dent in solving the achievement problems in education until teachers master and implement practices. Schools need to focus on providing teachers with effective ways to master and deliver content and curriculum instruction (Schmoker, 2018, p.94).

Teacher Leadership Recommendations

Based on the study findings, it is recommended that Teacher Leaders work with elementary teachers to determine effective use for technology and reading instruction. I have provided a list (see Table 5.1 of recommended technological devices that Teacher Leaders may use with teachers. Teacher Leaders receive course work in their programs to in technology and instruction. It is recommended that school administrators utilize these experts in helping elementary teachers and become instructional coaches with reading and technology. Areas that may be of central focus to teacher leadership during instructional coaching may include using technology as an assessment tool, technology as a motivational tool for learning and helping teachers implement technology in their lesson planning.

In addition, Teacher Leaders can be the ones who can provide professional development for teachers and technology. Teacher Leaders can attend workshop regarding current technology and the classroom and share with their colleagues and administrators. Teacher Leaders may also host professional learning communities with teachers as well as facilitate parent and teacher workshops were technology instructions can be shared with families and teachers. Finally, teacher leaders should establish relationships with other teachers and colleagues to offer coaching, training, and support for those who seek modeling of lessons and other pertinent guidance with facilitating effective reading lessons.

Recommendations for Teachers and Administration

Teachers should be given more training on how to effectively use technology when planning lessons. In addition, inviting educational guests from the community and other professionals with specialized technology training to provide professional development for teachers would be beneficial. Allotting time for teachers to participate in professional development related to improving teaching strategies such as scaffolding and using technological programs and devices to enhance student learning would be beneficial. Lastly, an increased budget for teachers to subscribe to reading programs would be useful to improve reading strategies using technology and provide for the purchase of additional technology resources. I-pads, Nooks, Kindles, and e-books should be available for students as options or additions to print books for students to use in the classroom with the teacher. Teachers should have options available to them when planning their lessons while incorporating technology to improve literacy skills and increase student motivation for reading.

THE USE OF E-BOOKS, COMPUTERS, AND TABLETS

Limitations of the study

The study was a case study and utilized only teachers. Since the participant pool was small, the research cautions the generalization of this study but encourages additional research in this area with a larger pool of participants. The study did not review students' views of technology and reading instruction or the impact the use of technology had on reading scores. There are areas that could be used for future research.

Recommendations for Future Research

The research to support the use of e-books, computers, and tablets to enhance reading skills of elementary students is limited. More research studies involving technology use in schools such be conducted because eBooks, computers, and tablets are not going away. I believe that technology is here to stay, therefore researchers should work with educators to determine how e-books, computers, tablets, and programs can be used to enhance reading for students.

References

Adina, S., Korat O., & Fellah, R. (2012). Promoting vocabulary, phonological awareness and

concept about print among children at risk for learning disability: Can e-books help?

Reading and Writing, 25, (1), 45-69.

Amster-Burton, M. (2007, October). *Kids meals that feed curiosity.*

 Retrieved March 4, 2018 from

http://www.seriousseats.com/required_eating/2007/10/kids-meals-that-feed-

curiosity.html

Anderson-Inman, L., & Horney, M. A. (2007). Supported e-Text: Assistive technology through

text transformations. *Reading Research Quarterly, 42,* 153-160.

Anderson, C. A., & Bushman, B. J., (2001). Effects of violent video games in aggressive

behavior, aggressive cognition, aggressive affect, psychological arousal, and prosocial

behavior: A meta-analytic review. Psychological science-journals. 12 (5), 353-359

Anonymous, (2017). How to encourage good reading habits. Oxford Learning

Area, M. (1), & Pessoa, T. (2). (n.d.). From solid to liquid: New literacies to the cultural

changes of web 2.0. Comunicar, 19(38), 13–20. https://doi.org/10.3916/C38-2012-02-01

Atlas ti 7. Windows English. Atlas.ti. 8 (2012, 2019) (https://atlasti.com/wp-content/uploads

Arzubiaga, A., Rueda, R., & Monzo, L. (2002). Family Matters Related to the Reading

    Engagement of Latino Children. Journal of Latinos & Education, 1(4), 231.

    https://doi.org/10.1207/S1532771XJLE0104_3

Baker, L., & Wigfield, A. (1999). Dimensions of children's motivation for reading and their

    relations to reading activity achievement. *Reading Research Quarterly, 34,* 452-477

Bannister, S., (2010). Integrating the iPod Touch in K-12 education: Visions and vices.

    *Computers in the Schools, 27(2), 121-*131.   http://dx.doi.org/10.1080/

    07380561003801590.

Bauerlein, M. (2009). The dumbest generation: How the digital age stupefies young Americans

    and jeopardizes our future. New York: Jeremy P. Tarcher/Penguin.

Berge, Zane & Collins, Mauri. (1995). Computer-mediated Communication and the Online

    Classroom in Distance Learning. Computer-mediated Communication

    Magazine/Volume 2, Number 4/April 1, 1995/page 6.

 Black, Paul & Wiliam, Dylan in the March 1998 issue of the journal `Assessment and

    Classroom Learning Assessment in Education: Principles, Policy & Practice.' Influence

    Volume 5, Issue 1

Blake, Barbara. and Pope, T. (2008, 2017) Developmental Psychology: Incorporating Piaget's

    and Vygotsky's Theories in Classrooms. Journal of Cross-Disciplinary Perspectives in

    Education, Vol. 1, No. 1(May 2008) 59-67

Bierman, J., Ortega, L., & Rupp-Serrano, K. (2010). E-book usage in pure and applied sciences.

Science & Technology Libraries, 29 (1), 69-91.

Birkerts, Sven. (2006). The Gutenberg Elegies: The Fate of Reading in an Electronic

Age. New York: Faber and Faber.

Bonk, C. J. (2003) Navigating the myths and monsoons of online learning strategies and

technologies, paper presented at the *e- education Without Borders Conference,* Abu

Dhabi, United Arab Emirates, February.

Bonk, C. J., & Cunningham, D. J. (1998). Searching for learner-centered, constructivist,

and sociocultural components of collaborative educational learning tools. In C. J.

Bowman, Margo & Treiman, Rebecca (2004). Stepping Stones to Reading.

Theory into Practice, 43:4, 295-303,   DOI: 10.1207/s15430421tip4304 8

Cheung, Allen, C. K. & Slavin, Robert E., (2013). The effectiveness of educational technology

applications for enhancing mathematics achievement in k-12 classrooms: A meta-

analysis. Educational Research Review, 9 (2013) 88-113. journal homepage:

www.elsevier.com/locate/EDUREV.

Ciampa, Katia. (2012). Electronic Storybooks: A Constructivist Approach to Improving Reading

Motivation in Grade 1 Students. *Canadian Journal of Education, 35, (4),* 92-106.

Ciampa, Katia (2012). I CAN READ; The effects of an online reading program on grade 1

students' engagement and comprehension strategy use. *27 JRTE. Vol. 45no., pp.27-59*

Clements, Douglas H., & Samara, Julie, (2003). Strip Mining for Gold; Research and Policy in

Educational Technology-A Response to "Fool's Gold." *Educational Review. v. 11*

Cohen, V. L. & Cowen, J. E. (2011). Literacy for Children in an information age: Teaching

reading, writing, and thinking. Belmont, CA: *Wadsworth Cengage Learning*.

Cohen, M., Hadley, M. &b Frank, M. (2010). *Young children, app & ipad.* New York: Michael

Cohen Group. Retrieved from http://mcgrc.com/publications/publications/

Cole, M. J., Gwizdka, J., Liu, C., Bierig, R., Belkin, N. J., & Zhang, X. (2011). Task and user

effects on reading patterns in information search. *Interacting with Computers, 23* (4),

346-362.

Coleman-Martin, M., Heller, K., Cihak, D., & Irvine, K., (2005). Using Computer Assisted

Instruction and the Nonverbal Reading Approach to Teach Word Identification. *Focus

on Autism and other Developmental Difficulties 20, (2); pg. 80.*

Conradi. Kristen (2014). Tapping technology's potential to motivate readers. The Phi Delta

Kappan, 96(3), 54.

Connell, Bayliss, & Farmer (2012). Effects of e-book readers and tablet computers on reading

comprehension. Jan 2012. *International Journal of Instructional Media. 39 (2): 131-140*

Cope, Bill, (2001). New Ways with Words: Print and E-text Convergence. In Bill Cope and

Diana Kalantziz (Eds.), *Print and Electronic Text Convergence* (pp. 1-15), C-2-C Series.

Altona: Common Ground Publishing

Copper, L. Z. (2005). Developmentally appropriate digital environments for young children.

Library Trends, 54, 286-302.

Cordes, Coleen, & Miller, Edward. (2000). Fool's Gold: A critical look at computers in

childhood. College Park, MD: *Alliance for Childhood*.

Corio, J., & Dobler, E. 2007). Exploring the online reading comprehension strategies used by

sixth-grade skilled readers to search for and locate information on the internet.

Reading Research Quarterly, 42 (2), 214-257.

Creswell, J. W. (2007). Qualitative inquiry and research design: Choosing among five

traditions. Thousand Oaks: Sage Publications

Creswell. (2009). Research Design: Qualitative, quantitative and mixed methods approaches.

Canadian Journal of University Continuing Education. Vol.35, no.2 p. 163

Creswell, J.W. (2013) Qualitative inquiry and research design. Boston, MA: Sage

Creswell, J.W. (2014) Research Design: Qualitative, Quantitative, and Mixed Methods

Approaches. SAGE Publications.

Couse & Chen, (2010). A Tablet Computer for Young Children? Exploring Its Viability for

Early Childhood Education. Journal of Research on Technology in Education.

Copyright 2010, ISTE (International Society for Technology in Education). Vol. 43, No.

1, pp. 75-98. www.iste.org.   University of New Hampshire.

D' Agostino, J., Rodgers, E., Sinead, H., & Brownfield,K., (2016). The Ohio State

University, Columbus, OH, USA. *Journal of Early Childhood Literacy.* 2016 Vol. 16(4)

522-548 copyright The Author(s) 2015. Reprints and permissions: agepub.co.uk/journals

Permissions.nav. DOI: 10.1177/1468798415616853. ecl.sagepub.com

Daniels, Harry, (2001). Vygotsky and Pedagogy. Routledge Falmer. London.

Dede, C (2010). Ubiquitous mobile technologies and the transformation of schooling.

de Jong, M. T., & Bus, A. G. (2003). How well- suited are electronic books to

supporting literacy? Journal of Early Childhood Literacy, 3, 147-164.

Duke, N. K., & Pearson, D. (2002). Effective practices for developing reading comprehension.

In A.E. Farstrup & S.J. Samuels (Eds.), *What research has to say about reading*

instruction (3rd ed., pp. 205-242). Newark, DE: International Reading Association.

Drori, O., Korat O., & Shamir, A. (2009). Reading electronic and printed books with and

without adult instruction: Effects on emergent reading. *Springer Science & Business*

Media 23.8 913-930.

Dunbar, H., & Murat, A. (2012). Tablets vs. Paper: The Effect on Learners' Reading

Performance. International Electronic Journal of Elementary Education 4 (3), 441-450.

Dunn, M. (2014). Let's use an iPad App; Struggling Writers use of digital are media for making

    small story plans. *The online Journal of Counseling and Education. Vol. 3, Issue 2, p.131*

Eisentein, Elizabeth L. (2011). *Divine Art, Infernal Machine: The Reception of Printing in the*

    West from First Impressions to the Sense of an Ending. Philadelphia: University

    of Pennsylvania Press.

Facer, K., & Kent, N. (2009). Different Worlds? A Comparison Young People's Some and

    School ICT Use. Journal of Computer Assisted Learning. Volume 20, Number 6,

    December 2004 (Publisher: Wiley).

Falcone, (2012). Step away from the podium! A lesson plan for pear learning. In B.

    Sietz(Ed.Proceedings of the number 38th National Lex Conference (library orientation

    series no. 43. Annarbor, MI: pierian press.

Fogarty, R. (1999). Architects of the intellect. *Educational Leadership, 57(3),* 76-78.

Garrish, Matt (2011), *What is EPUB3?* Sebastopol: O'Reilly Media.

Flowerday, T., Schraw, G., & Stevens, J. (2004). The role of choice and interest in reader

    engagement. *The Journal of Experimental Education, 72(2), 93-114*.

Garrison, D. & Anderson, T. (2003). *E-learning in the 21st century* (London, Routledge Falmer).

Georgia Department of Education website, (2017, 2018, & 2019). The Georgia Standards of

    Excellence. 2017-2018 school year

Georgia Milestone Assessment System (GMAS). 2018 Georgia Department of Education

Goodfellow, Joy, (2004). Documenting professional practice through the use of a professional

portfolio. An International Research Journal. Vol. 24, 2004-Issue 1

Goodwin, Bryan, (2012). Research says new teachers face three common challenges.

Educational Leadership. Vol. 69. Issue 8, pp. 84-85.

Google (2018). Dictionary www.google.com

Grant, J., (2004). Are Electronic Books Effective in Teaching Young Children Reading and

Comprehension? International Journal of Instructional Media, 31 (3), 303-308.

Greschik, K., Kruppa, Y., Marti, D., & Donner, P. (2011).   Reading in 2110-reading behavior

and reading devices: A case study. *The Electronic Library 29 (3),* 288-302

Grimshaw, S., Dungworth, N., McKnight, C., & Morris, A. (2007). Electronic books:

Children's reading and comprehension. *British Journal of Educational Technology, 38*

(4), 583-599.

Hess, FM (1999). Reinventing public education Vol 18 Issue 1. Journal of Policy Analysis and

Management banner. Wiley online library

Higgins, N., & Hess, L. (2000). Using Electronic Books to Promote Vocabulary

Development. Journal of Research on Computing in Education (4) 425-430.

Haungland, S. W. (1999). What role should technology play in young children's

learning. *Young Children, 54, 26-30.* References-Scientific research Publishing.

Holton, Judith (2010). The Coding Process and Its Challenges. *Grounded Theory Review*.

February 1. vol. 9. DOI:10.4135/9781848607941.n13

Huang, K-L., Chen, K-H., & Ho, C-H. (2014). Promoting in-depth reading experience and

acceptance: design and assessment of Tablet reading interfaces. *Behavior &*

Information Technology, 33, (6), 606-618,

http://dxdoi.org/10.1080/0144929X.2012.759625

Huang Liang, Su & Chen, (2012). Gender Differences in the Reading of E-Books: Investigating

Children's Attitudes, Reading Behaviors and Outcomes. ResearchGate Publication 26110

Huitt, W. G. (2000). The information processing approach. *Educational Psychology Interactive*.

Valdosta, GA: Valdosta State University. Retrieved from

http://chiron.valdosta.edu/whuitt/col/cogsy/infoproc.html

JIA- Rong Wen, Chuang, Ming Kuang, & Kuo, Sheng-Huang (2012). The Learning

Effectiveness of Integrating E-Books Into Elementary School Science and

Technology Classes. International Journal of Humanities and Arts Computing,

6.1-2 (2012): 224-235 Edinburgh University Press. DOI:10.3366/ijhac.2012.0051

Jones, Stephanie M., Suzanne M. Bouffard, & Richard Weissbourd. (2013). Educators' social

and emotional skills vital to learning. The Phi Delta Kappan, 94(8), 62.

Jochems, W., Van Merrinboer, J. & Koper, R. (2003). *Integrated E-Learning implications for*

pedagogy, technology and organization (London, Routedge Falmer).

Johnson, D., (1996). "We're helping them to be good teachers:" Using electronic

dialoguing to connect theory and practice in preservice education.

Journal of Computing in Childhood Education (7) 1-2, 3-11.

Jones, M. L. (2004). Application of systematic review methods to qualitative research:

practical issues-*Journal of Advanced Nursing-Wiley Online Library.* October 7, 2004.

Jones, T., & Brown, C., (2011). Reading Engagement: A Comparison Between E-Books

and Traditional Print Books In an Elementary Classroom. *Instructional Journal*

of Instruction, 4(2), 5-22.

Kerwalla L., & Crook, C., (2002).   Children's Computer Use at Home and at School:

Content and continuity. British Educational Research Journal 28 (6): 751-771.

 December 2002.

Kim, D., Kim, D-J., & Whang, W-H. (2013). Cognitive Synergy in Multimedia Learning.

International Education Studies, 6 (4), 76-84.

Korat, O., & Or, T. (2010). How new technology influences parent—child interaction: The case

of ebookreading.FirstLanguage,30(2),139154.https://doi.org/10.1177/0142723709359242

Korat, O., & Shamir, A. (2004). Do Hebrew electronic books differ from Dutch

electronic books? A replication of a Dutch content analysis. *Journal of Computer*

Assisted Learning, 20, 257-268.

Korat, O., & Shamir, A., (2012). Direct and Indirect Teaching: Using E-Books For Supporting

Vocabulary, Word Reading, and Story Comprehension For Young Children.

Journal of Educational Computing Research, Vol. 46 (2), 135-152.

Kress, G. (2003). *Literacy in the new media age.* New York, NY: Routledge.

Labbo, L., & Kuhn, M. (2000). Weaving Chains of affect and cognition: A young child's

understanding of CD-ROM talking books. *Journal of Literacy Research, 32* (2), 187-210.

Labbo, L.D., & Reinking, D. (1999). Negotiating the multiple realities of technology in literacy

research and instruction. *Reading Research Quarterly, 34,* 478-492.

Lankshear, C., & Knobel, M. (2003). New literacies: Changing knowledge and classroom

learning. Philadelphia, PA: Open University.

Laurillard, D. (2002). *Rethinking university teaching* (London, Routledge).

Lefever-Davis, S., & Pearman, C. (2005). Early readers and electronic texts: CD-ROM

storybook features that influence reading behaviors. *The Reading Teacher 58* (5) 446

Leu (Eds.), *Handbook of research on new literacies* (pp. 297-324). Mahwah, NJ: Lawrence

Erlbaum.

Leu, D. J. (2000). Integrating Literacy and Technology in the Curriculum-International Literacy

Association. pp. 49.? Literacyworldwide.org

Leu, D.J. (2000). Literacy and technology: Deictic consequences for literacy education in an

information age. In M. L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds).,

Handbook of reading research (Vol. 3, pp. 743-770). Mahwah, NJ: Lawrence Erlbaum

Associates.

Levy, R. (2009). You have to understand words…but not read them: Young children becoming

readers in a digital age. *Journal of Research in Reading,* 21 (1), 75-91.

Lewins, A., Taylor & Gibbs, (2005). What is qualitative data analysis? School of Human &

Health Sciences, University of Huddersfield. United Kingdom.

Liang, Tsung-Ho, & Haung, Yueh-Min, (2013). An Investigation of Reading Rate Patterns and

Retrieval Outcomes of Elementary School Students with E-Books. *Educational*

Technology & Society, 17 (1), 218-230.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Newbury Park, CA: Sage

Publications

Marzano,Walters & McNulty, (2005). School Leadership that Works; from research to results.

ASCD-McREL. P.3-170

Mason, L., (1998). Fieldwork education: Collaborative group learning in community settings.

Australian Occupational Therapy Journal-Wiley Online Library.

https://doi.org/10.1111/j.1440-1630. 1998.rb00793.x cited by :13.

Maynard, S., & Cheyne, E. (2005). Can electronic textbooks help children to learn? The

Electronic Library 23 (1) 103-115

McAnulty, D., Gertner, R., & Cotton, L. (2012). Use of iPad in training of graduate psychology

students in assessment and therapy skills. Retrieved March 3, 2018 from

www.acu.edu/technology/mobilelearning/research/ipad-studies.html

McManis, L.D., & Gunnewig, S. B. (2012). Finding the education in educational technology

with early learners. *Young Children, 67,* 14-24.

Measures of Academic Progress (MAP). https://www.hcpss.org, mapfaq.

Merchant, G. (2015). Keep Taking the tablets: iPads, story apps and early literacy. *Australian*

Journal of Language and Literacy, Vol. 38, No. 1 Retrieved from

http://eds.b.ebscohost.com.proxy.kennesaw.edu/eds/pdfviewer/pdfviewer?vid=3&sid=d8_
01d4e4-267a-4d09-9c17-6478ce335eb2%40sessionmgr102&hid=127

Michael C. McKenna. (2014). Literacy instruction in the brave new world of technology. The

Phi Delta Kappan, 96(3), 8

Miller, C.C., & Bosman, J. (2011). E-books outsell print books at Amazon. *The New York*

*Times.*Retrievedfromhttp://www.nytimes.com/2011/05/20/technology/20amazon.html?*21*

Murray, O., & Olcese, N. (2011). Teaching and Learning with Ipads, Ready or Not?

TechTrends,. November, vol. 55, Issue 6, pp 42-48. DO1. 10:1007/s11528-011-0540-6

Myers,M., Paiz, J., Angeli,E.,Wagner, J., Lawrick, E., Moore, K., Anderson,

M....Keck,R.(2019,December 20). General format. Purdue Online Writing Lab.

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_g

uide/general_format.html

NAEP, Nations Report Card (2020).

https://www.nationsreportcard.gov/reading/states/scores/?grade=4

National Council for Curriculum and Assessment (2007). Assessment in the Primary School

Curriculum: Guidance for Schools. Dublin: NCCA.

National Literacy and Numeracy Strategy, Literacy and Numeracy for Learning and Life (2011).

Neumann, M. & Neumann, D. (2013, 2014). Touch Screen Tablets and Emergent Literacy.

Early Childhood Educational Journal Vol. 42. Issue 4, p. 231, 9p.; Springer Lagrange:

Retrievedfromhttp://eds.a.ebscohost.com.proxy.kennesaw.edu/eds/pdfviewer/pdfviewer?

vid=1&sid=08537d87-5b81-474e-ad15-9c1c3ae890be%40sessionmgr4007&hid=4113

Nicholas, D., Rowlands, I., & Jamali, M. (2010). E-textbook use, information seeking

behaviour and its and its impact: Case study business and management-Semantic Scholar.

J. Information Sciences. DOI:10.1177/0165551510363660.

Nodelman, Perry. (1998). *Words About Pictures: The Narrative Art of Children's Picture

Books.* Athens: University of Georgia Press.

Northrop, L., & Killen, E., (2013). A Framework for Using iPads To Build Early Literacy Skills.

The Reading Teacher Vol. 66 Issue 7 pp. 531-537 DOI:10.1002/TRTR.115

O'Brien, Stewart, & Beach, (2009) Proficient reading in school: Traditional paradigms and new textual ladscapes. In L. Christenbury, Bomer, & P. Smagorinsky (Eds), *Handbook of adolescent literacy research (pp. 80-97).* New York, NY: Guilford.

Oliveria, Camacho, & Tarragona, (2013). Proceedings of the International Association for Development of the Information Society (IADIS). *International Conference on Mobile Learning*. Lisbon, Portugal, March 14-16.

Palys. T. (2008). Purposive sampling. In L.M. Given (Ed.) The Sage Encyclopedia of Qualitative Research Methods. (Vol.2). Sage: Los Angeles, pp. 697-8.

Pearman, Cathy J. (2008). Independent reading of CD-ROM Storybooks: Measuring Comprehensive with Oral Retellings-*The Reading Teacher*-Wiley Online Library.

Pearson & Gallagher, (1983). A Framework for using Ipads to build early literacy skills. *The Reading Teacher* Vol. 66 Issue 7

Pena, C., (2010). Electronic Books: Fostering Emergent Literacy in Early Childhood Education. International Journal of Instructional Media, 37 (3), 291-300.

Polit, D. F., & Beck, C. T. (2008). Nursing research: generating and assessing evidence for nursing practice (Tenth edition.). Wolters Kluwer Health.

Professional Development Service for Teachers (PDST), 2014. The Reading Process. A Guide To the Teaching and Learning of Reading. Department of Education and Skills. www.pdst.ie Dublin

Quan-Haase, A. & Martin, K. (2011). Seeking Knowledge: An Exploratory Study of the Role of Social Networks in the Adoption of Ebooks by Historians. *Proceedings of the American Society for Information Science and Technology, 48,* 1-10. (DOI: 10.1002/meet`2011.14504801128).

Ravitch, Sharon & Riggan, Matthew, (2012). Reason & Rigor: How Conceptual Frameworks Guide Research. SAGE Publications.

Ravitch, Sharon & Riggan, Matthew, (2016). How Conceptual Frameworks Guide Research. SAGE Publications, Jan 4, 2016. *Social Science.*

Rideout, V. J. (2011). Zero to Eight: Children's media use in America (p. 48). San Francisco, CA: Common Sense Media.

Ripley, A. (2013). *The smartest kids in the world.* New York: Simon & Schuster.

Rose, E. (2011). The phenomenology of on-screen reading: University students' lived experience of digitized text. *British Journal of Educational Technology, 42(3)*, 515-526.

Roskos, K., Brueck, J., & Widman, S. (2009). Investigating analytic tools for e-book design in early literacy learning. Journal of Interactive Online Learning, 8 (3), 218-240.

Roskos, K., Bustein,K., & You, B. (2012). A Typology for Observing Children's Engagement with eBooks at Preschool. Journal of Interactive Online Learning, 11 (2) 47-66

Saldana, (2009). An Introduction to Codes and Coding.

Education for Information, 22 (2), 63-75

Salmon, G. (2000). Computer mediated conferencing for management learning at Open

University. Management learning 31 (4), 491--502

Salmon, L., (2013). Factors that Affect Emergent Literacy Development When Engaging with

Electronic Books. *Early Childhood Educ J* (2014) 42:85-92. DOI 10.1007/s10643-013-

0589-2. Published online: 16 April 2013.

Salmeron, L. & Garcia, V., (2011). Reading skills and children's navigation strategies in

hypertext. Computers in Human Behavior, 27 (3), 1143-1151.

Sargeant, S. (2015). What is an ebook? What is a Book app? And Why Should We Care? An

Analysis of Cotemporary Digital Picture Books. *Children's Literature in Education*

(2015) 46:454-466 DOI 10.1007/s10583-015-9243-5

Schmoker,M. (2018). FOCOUS; Elevating the essentials to radically improve student learning.

2nd Edition, P.92-94,130

Schugar, Schugar, & Penny, (2012). A Nook or a Book? Comparing college students' reading

comprehension levels, critical reading and study skills. *International Journal of*

technology in teaching & learning, 7(2), 174-192.

Schugar, H., J, & Smith, C. (2013). Teaching with Interactive Picture E-Books in

Grades K-6. *The Reading Teacher,* Vol. 66 Issue 8. Pp.

615.624DOI:10.1002/TRTR.1168

Selwyn, N. (2010), Looking beyond learning: notes towards the critical study of educational

    technology. Journal of Computer Assisted Learning, 26: 65-73. doi:10.1111/j.1365-

    2729.2009.00338.x

Shamir, A., Korat, O., & Barbi, N. (2008). The effects of CD-ROM storybook reading on low

    SES kindergarteners' emergent literacy as a function of learning context. *Computers &*

    Education, 51, 354-367.

Shifflet, R., Toledo, C., & Matton, C., (2012). Touch tablet surprises: A preschool teacher's

    story. Young Children, 67, 36-41.

Singh, O'Donoghue, & Betts, (2002). A UK study into the potential effects of virtual education:

    does online learning spell an end for on campus learning? *Behaviour & Information*

    Technology 21 (3), 223-229

Smith, C. R. (2001). Click and turn the page: An exploration of multiple storybook literacy.

    Reading Research Quarterly, 36(2), 152-183.

 Snow, C. E., Burns, S. & Griffin, P. (1998). *Preventing reading difficulties in young*

    children. Washington, DC: National Academy Press.

Snow, C. E., Lawrence J. F., White, C. (2009). Generating knowledge of academic language

    among urban middle school students. *Journal of Research on Educational*

    *Effectiveness,*2:325-344. Copyright Taylor & Francis Group, LLC. ISSN:

1934-5739 online. DOI 10.1080/19345740903167042

Stake. (1995). EDRS 9000 Research Seminar: Conceptual Frameworks & Research Design

Handouts. Abellan, I., Retrieved at www.kennesaw.d2lbrightspace.com

Stake, Robert, (2010). Qualitative research: Studying How Things Work. *Guilford Press.*

Stoltzfus, K. (2017). Joyful Schools: What one U.S. educator learned from teaching in Finland.

Education Week Teacher. Retrieved from

https://blogs.edweek.org/teachers/teaching_now/2017/04/joyful_schools_what_one_us_e

ducator_learnes_from_teaching_in_Finland.html

Street, Bryan (1995). Social literacies: critical approaches to literacy in development,

ethnography, and education. London, UK: Longman.

Swaminathan, S., & Wright, J. L. (2003). Education technology in the early and primary years.

In J. P. Isenberg & M. R. Jalongo (Eds.), Major trends and issues in early childhood

education: Challenges, controversies, and insights (2nd ed., pp. 136–149). New York:

Teachers College Press.

SUN, J., Flores, J. & Tanguma, J. (2012). E-textbooks and Students' Learning Experiences.

4609.2011.00329x).Swaminathan & Wright, (2003).

Stolzfus, K. (2017). Joyful Schools: What on U.S. educator learned from teaching in Finland.

Education Week Teacher

Swaminathan, S., & Wright, J. L. (2003). Education technology in the early and primary years.

In J. P. Isenberg & M. R. Jalongo (Eds.), Major trends and issues in early childhood

education: Challenges, controversies, and insights (2nd ed., pp. 136–149). New York:

Teachers College Press.

U.S. Department of Education, (2001). *No Child Left Behind.* Retrieved from

http://www.2.ed.gov/nclb/landing.html

Tahnk, J. (2011). Digital milestones: Raising a tech-savvy kid. Parenting.com, November (pp.

78-84).

Tancock, S. & Segedy, J. (2004). A Comparison of Young Children's Technology-

Enhanced and Traditional Responses to Texts: An Action Research Project.

Journal of Research in Childhood Education 19, (1) pp. 58

Tuttle, K. N. (2000). Academic Advising. New Directions for Higher Education, 2000(111), 15.

https://doi.org/10.1002/he.11102

U.S. Department of Education. (2017).   www.usdoe.com

Vernadakis, Avgerinos, Tsiskari, & Zachopoulou, (2005). The use of computer assisted

instruction in preschool education: Making teaching meaningful. *Early Childhood*

Education Journal, 33 (2), 99-104.

Vygotsky, L.S. (1978). Mind in Society: The development of higher psychological processes

(M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds. & Trans). Cambridge,

MA: Harvard University Press.

Walker, T. (2014). The testing obsession and the disappearing curriculum. *NEA Today.*

Retrieved from http: //neatoday.org/2014/09/02the-testing-obsession-and-

thedisappearing-curriculum-2/

Weller, M. (2002). *Delivering learning on the net* (London, Kogan Page). pp.44

Westera, M. (2004) On strategies of educational innovation: between substitution and

transformation, *Higher Education*, 47 (4), 501-517.

Wigfield, A., Guthrie, J. T., Perencevich, K. C., Taboada, A., Klauda, S. L., McRae, A., &

Barbosa, P. (2008). Role of Reading Engagement in Mediating Effects of Reading

Comprehension Instruction on Reading Outcomes. Psychology in the Schools, 45(5),

432–445. https://doi.org/10.1002/pits.20307

Whitehurst and Lonigan, (1998). Child Development and emergent literacy. Department of

Psychology. Stony Brook 117942500, USA.gwhite@ccmail.sunyab.edu

Wilhelm, J.D. (2001). Strategic Reading: Guiding Students to Lifelong Literacy, 6-12.,

ERIC. Cited by 236. Related articles. Non-Journal. Publication Date 2001. Pages: 254,

Abstractor: N/A. ISBN-0-86709-561-X.

Woody, W. D., Daniel, D. B., & Baker, C. A. (2010). E-books or textbooks: Students prefer

textbooks. *Computers & Educatiion,*55(3), 945-948.

Wright, S., Fugett, A., & Caputo, F. (2013). Using E-readers and Internet Resources to Support

Comprehension. Journal of Educational Technology & Society, 16 (1), 367-379.

Wyatt, Joe. (1985) teaching with Technology…Miles to Go, *Peabody Journal of Education* Vol.

    62 No. 2 Retrieved from www.Kennesaw.edu

Wyatt, M. (2016). "Are they becoming more reflective and/or efficacious?" A conceptual model

    mapping how teachers' self-efficacy beliefs might grow. *Education Review 68 (1),*

    137.

Yazan, B. (2015). Three Approaches to Case Study Methods in Education: Yin, Merriam, and

    Stake. Qualitative Report, 20(2), 134–152.

Yokata, Junko & Teale, William H. (2014). Picture Books and the Digital World: Educators

    Making Informed Choices. *The Reading Teacher, 67*(8), 577-585.

Zambarbieri, D., & Carniglia, E. (2012). Eye movement analysis of reading from computer

    displays, eReaders and printed books. Ophthalmic & Physiological Optics : The Journal

    of the British College of Ophthalmic Opticians (Optometrists), 32(5), 390–396.

    https://doi.org/10.1111/j.1475-1313.2012.00930.x

Ziming, L. (2005) Reading behavior in the digital environment: Changes in the reading behavior

    over the past ten years: *Journal of Documentation 61.6 :*700-712.

Zucker, T.A., Moody, A.K., & McKenna, M.C. (2009). The effects of electronic books on pre-

    kindergarten-to-grade 5 students' literacy and language outcomes: a research synthesis.

    Journal of Educational Computing Research, 40 (1(, 47-87. Doi:10.2190/EC.40.1c

THE USE OF E-BOOKS, COMPUTERS, AND TABLETS

Appendix A Qualitative Interview Questions

What reading research-based strategies did you use with students and did you use-books, computers, or tablets for implementation?

Were there any successes using e-books, computers, and tablets with reading lessons?

Was implementation of new reading strategies advocated, facilitated, and supported by administrators and teachers?

Were there any problems using computers, tablets, or e-books into the lessons with students?

Were adequate resources needed made available for you as the teacher to assist with implementation of technology?

What was the outcome on the lesson you used implementing e-books, computers, or tablets?

Did the outcome impact the classroom climate and daily procedures (lesson plans)?

What was the impact on students' test scores?

Did it affect student performance or achievement in reading?

Are students more confident and motivated as learners?

Are students' reading deficiencies decreasing, increasing, or about the same?

Are student reading levels improving?

Are students' basic- proficiency levels increasing to higher measurements on the MAP

(Reading)?

Appendix B Themes/ Coding

Six initial Themes from Interview Data   Related Research Questions

Subthemes from interview data

Scaffolding   Small Group Instruction was applied by the teacher   RQ 1

Teaching Methods

Guided reading was used an example of differentiation instruction

Motivation   Bulletin boards track stamina   RQ3

Developing Reading

E-books and Technological Devices   RQ1

RQ3

Students use tablets in small groups

EPIC reading using a Chromebook to read

I-READY- Reading Program