EXPLORING DIGITAL LITERACY PRACTICES IN MIDDLE SCHOOL ENGLISH LANGUAGE ARTS CLASSROOMS

A Record of Study

by

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ABSTRACT

The intent of this mixed methods study was to explore what middle school English Language Arts (ELA) teachers believe are the necessary digital literacies required for students and to determine what teacher practices are currently being conducted to support these necessary literacies. To investigate digital literacy practices, three data collection instruments were developed for collecting data – an interview schedule designed for six secondary instructional coaches, a questionnaire that was administered to 122 middle school ELA teachers, and six classroom observations. The data were analyzed through inductive and descriptive approaches. The findings suggest that middle school teachers understand their role in the development of digital literacies and some teachers are working to navigate digital reading and writing practices. However, inconsistent use of digital tools and other barriers prevent the research site from fully supporting digital literacy development. A professional development proposal was developed that outlines suggested topics and learning outcomes.

DEDICATION

For mom, my first teacher and editor

For dad, Texas A&M Class of 1975, in memoriam

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NOMENCLATURE

BOY	Beginning of the Year
CCP	Consume, Critique, and Produce
CCRS	College Career Readiness Standards
ELA	English Language Arts
ELL	English Language Learner
EOY	End of Year
EL	English Learners
ESL	English as a Second Language
ESOL	English for Speakers of Other Languages
ILA	International Literacy Association
ISTE	International Society for Technology in Education
LMS	Learning Management System
MOY	Middle of the Year
NETS·S	National Educational Technology Standards for Students
NCTE	National Council of Teachers of English
STAAR	State of Texas Assessment of Academic Readiness
SRW	Strategic Reading and Writing
TEA	Texas Education Agency
TEKS	Texas Essential Knowledge and Skills
TCTELA	Texas Council of Teachers of English Language Arts
WHACTE	West Houston Area Council of Teachers of English

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CHAPTER I

INTRODUCTION

A recent visit to an English Language Arts (ELA) classroom reminded me of the importance of why we need to redefine reading and writing instruction to include digital literacy tools and practices. As I was conducting a reading conference with a student, I looked up to check in on how the class was doing during independent work time. I noticed two students sitting side by side staring intently at their laptops. From my viewpoint at the guided reading table, it looked as though both students were engaged digital readers. Both students were focused on the screen, clicking around, seeming to know what they were doing. In the past, I might have been satisfied with this scene, but recently I have come to learn that merely reading on a computer does not make someone a proficient digital reader. From a distance, these two students appeared to have similar skills, but when I moved in to take a closer look at their reading habits, I saw big differences in how they interacted with the digital texts and tools.

Watching one student over time, I identify her as a strong reader in this digital age because of how she navigates a variety of texts. While interacting with Achieve 3000, a reading program that provides students with access to informational text at their reading level, I see that she is intentional about deciding when to hit a link and further explore a topic and when to skip a link and just read on. I also see her occasionally underline text or add a note or question using the annotation tools. When she finishes her assignment, she opens MackinVIA – an app provided by the district that houses an extensive library of e-books – on her desktop and clicks a book that she has been reading. A look at her history reveals that she has checked out several titles and completed several books in addition to "favoriting" several titles and authors. Her

favorite list is shared with the class through the app to promote and recommend titles to other readers and suggests that she finds joy and meaning when independently reading. Her list of books also shows that she is reading a variety of genres, from reading a magazine-style book about makeup application to reading the book *Crossover* by Kwame Alexander (2014). After talking with her, she shares that she owns a Kindle fire and uses the public library app to check out books to read at home. She also shares that she prefers to read books on her Kindle rather than on a laptop, but she also likes to look at the books in the traditional classroom library. She shares, "Sometimes I will go look at the covers in the library and then go home to see if the title is available through the library app" (K. Garcia, personal communication, March 8, 2018). She also shares that she keeps notes about her reading using a Google form the teacher has created for tracking independent reading. A quick check of her achievement data shows that although she is reading slightly below grade level, she completes Achieve 3000 activities at an appropriate pace and has passed most of the district snapshots (formative assessments created and distributed by the district to check for understanding and drive instruction). From my vantage point, I determine that she is immersed in a wide variety of traditional and modern reading and writing behaviors.

On the other hand, the second student appeared to imitate many of the behaviors of the first student but was not engaged in robust reading habits. She looks like she knows what she is doing when she reads digitally, but with a closer look, I realize there is no intentionality. She randomly moves around the Internet, playing a crossword puzzle, and then skims an article in Achieve 3000. She clicks on a graphic organizer and annotation tools within Achieve 3000 but chooses not to enter her comments in the connections box or interact with tools within the program. She skips over the writing task and stretch activity and then exits out of the program

without completing the assignment. She then clicks on the MackinVIA app to select a book but never appears to settle on one book. Although I see her book shopping within the app, I determine that she has never checked out a book. Since she has had access to the app for over six months, this is surprising. She does not appear to have a plan for where to go or a clear purpose. She also does not appear to synthesize and think across texts although she clearly enjoys working with the technology. Upon looking at her reading log and achievement data, I see that she rarely finishes a book from the classroom library or by using the other available reading choices, digital and print. Although Renaissance 360 (the universal screener used by the district to track reading progress) and State of Texas Assessment of Academic Readiness (STAAR) reports show that she is reading slightly above grade level, a report from Achieve 3000 reveals that she spends less than five minutes on each activity and scores less than the recommended goal of at least 75 percent on each activity. As an eighth-grade student about to transition to a one-to-one laptop environment in high school, I wonder how these habits will impact her growth as a reader and writer over time.

These two students are different in their approach to reading in the digital age. One has strong reading habits whereas the other disguises her habits as she imitates the actions of her classmates, perhaps because she is bored or unchallenged. These two students are at different points in their reading journey, but both are influenced by the digital tools of the day. Their experiences point to the kinds of questions that teachers and educational leaders across the country are facing: How do we move students who are surface-level readers to adopt deeper reading habits? How do the reading skills and strategies we have taught for years translate into a world and a classroom where technology is as much a part of the culture as paper and pencil?

These questions and more will be explored in this study as I consider the implications of what it takes for students like these two to navigate reading and writing in the digital age.

The Problem of Practice

In the past, "reading" used to mean sitting down with a book and turning pages as a story unfolded. However, the Internet has changed our lives, affecting the way that we produce, publish, and encounter texts, and expanding our content area of English language arts to include digital literacies. Scholars in recent years have documented an increased use of digital reading (Beers & Probst, 2013; Kajder, 2010; Serafini, 2015; Turner & Hicks, 2015). Most of the digital reading that middle school students do is at home on chat lines, blogs, social media, and texting, using digital tools as a form of entertainment (Kajder, 2010). Teachers can help students recognize their expertise in out-of-school digital reading and extend it into the world of school. This is important because some argue that readers do not always read digital texts with the same level of attention they pay to print forms (Turner & Hicks, 2015). Furthermore, considering the capacity and nature of participatory media, students can now engage in information making practices, seeing the Internet as a place for both pushing and pulling content (Tapscott, 2009). For students to be digitally literate, teachers need to show students how to make meaning from different text forms and communication modes. Teachers also need to model "how to use media to learn, inform, investigate, reveal, advocate, and organize" (Rheingold, 2008, p. 109).

Since we know that many of our middle school students come to school with vast experiences in the digital world, it is our responsibility to ensure that we show our students how to use digital tools in meaningful ways to support their overall reading development. What it takes to become a successful reader grows more complex with every generation (Serafini, 2015). Web-based and digital resources require different skills and strategies than the literacy skills and

strategies needed in previous generations. Because of these changes, Serafini (2015) writes that "traditional reading skills used to decode print-based texts should be viewed as necessary, but insufficient" (p. 3). Teachers need to be able to assist students with developing a more extensive array of literacy skills, strategies, and practices for success in web-based and digital environments.

Middle school teachers may not be aware of the general reading habits of their students, including both print and digital. Furthermore, teachers may not know how to support the development of digital reading in their classroom. To ensure that middle school students are provided with the opportunity to develop their digital literacy skills, this study aims to investigate what middle school English Language Arts (ELA) teachers know and believe about digital literacy and what they are doing to support digital literacy development.

The district where this study was conducted has implemented several initiatives to support the digital development of students and teachers. To promote active school engagement, the district has distributed more than 18,000 laptop computers to high school students and teachers in 2014 (Foster, 2014). The technology initiative works to ensure schools, students, and staff have equitable access to technology to support 21st century teaching and learning. This one-to-one initiative enables high school students to engage with a device that permits them to read and write digitally and receive assignments electronically (Foster, 2014). Teachers can use the district master course lessons to help facilitate learning and encourage individual problem-based learning projects.

As a secondary literacy instructional coach serving middle and high school teachers and students within the district, I have noticed the benefits of the technology initiative. I also have observed some of the drawbacks. For example, upon my first observation of a high school ELA

classroom in September of 2015, I noticed that many ninth-grade students were struggling with the laptop. I anticipated some adjustment early in the school year, but I was surprised to see some students struggle with simple tasks such as capitalizing a word to being unable to format an essay or being able to utilize the various annotation tools while reading a digital text. During the fall of 2015, I continued to look closely at how the students and teachers worked with the laptops. Archival data from that semester exposed several common themes. First, teachers were spending a bulk of the instructional time modeling how to navigate digital text. Time was spent on the mechanics of the technology rather than the lesson. In addition, instructional time was used to help problem solve issues with the devices rather than on the intended outcome for the lesson. Sometimes the issue was obtaining access to websites or tools, while sometimes the issue was how to use word processing programs or how to download and save documents. Teachers also spent time modeling how to navigate and annotate digital text. It also appeared that some students were unaware of the various ways to present and share information in collaborative, digital environments. Students and teachers were also sometimes unaware of how to take advantage of the various tools available within digital texts, such as text-to-speech capabilities and vocabulary support. Furthermore, one teacher shared that they were frustrated when they had to pause lessons to teach skills that should have been previously taught (R. Mata, personal communication, November 12, 2015).

Middle school students are expected to record data, utilizing available technology (e.g., word processors) to see the relationships between ideas (Texas Education Agency, 2010). Students should also be able to adapt reading strategies according to the structure of texts and be able to use technology to gather, organize, manage, and analyze information (Texas College and Career Readiness Standards, 2009). I was wondering why some of the students seemed to be

unprepared for the transition to a digital learning environment. These initial informal observations are what propelled the impetus for this study.

I considered that perhaps middle schools could better assist with the development of critical digital literacy skills. Specifically, perhaps middle school ELA teachers could help alleviate this problem. Although middle school ELA teachers have an enormous responsibility of ensuring their students master the state Texas Essential Knowledge and Standards (TEKS), they also play a critical role in the digital literacy development of their students. We cannot assume that students will acquire digital skills on their own simply because they are digital natives. Teachers must understand they play a critical role in developing the reading and writing habits of their students. However, it is important to assess what middle school ELA teachers know about digital literacy and, most importantly, what their perceptions are about its development in the classroom.

Context

The research site of this study is a large, urban school district in the southern United States. It is the largest school district in the state and the seventh largest school district in the nation. The district is divided into five regions and serves approximately 214,000 students of which about 34,000 are designated as middle school students ("Facts and Figures," n.d.). Of the 284 schools in the district, 8 are early childhood centers, 159 are elementary campuses, 38 are middle school campuses, and 38 are high school campuses (ibid). The district also has 41 campuses that are designated as "other" (ibid). Some of these campuses serve middle school students (ibid).

Demographics. The district serves a diverse population that includes about 61.84 percent Hispanic students, 24.02 percent African-American students, 4.05 percent Asian students, and

8.7 percent White students (ibid). Approximately 75 percent of the students in the district are economically disadvantaged (ibid). Over 100 languages are spoken in the district, with 67,393 students, or approximately 31 percent of the population, are designated as English Learners (EL) which illustrates the scope of the district's diversity (ibid). The research site is among the largest employers in its city, with 28,652 full-time and 1,631 part-time employees (ibid). Most personnel are assigned to schools and deliver services directly to students on a day-to-day basis (ibid). Most of the positions are allocated to the 11,909 teachers (ibid).

Accountability Snapshot. Of the 278 rated campuses in 2017, 90 percent, or 251 campuses, met standards (TEA Accountability Data Files, 2016). A total of 27 campuses, or 10 percent, of the campuses did not meet standards and are designated as "Improvement Required" campuses. Table 1.1 shows the percent of all students passing STAAR. The STAAR program includes annual assessments for reading and mathematics (grades 3-8), writing at grades 4 and 7, science at grades 6 and 8, and social studies for grade 8. Column 1 lists the subject while column 2 and 3 lists the district and state results (Texas Assessment Management System, 2017).

Table 1.1

Percent of All Students Passing STAAR, Grades 3-8, 2017

	District	State
Reading/ELA	63	71
Math	69	75
Writing	61	66
Science	66	73
Social Studies	53	62

Table 1.2 displays the percent of all students passing STAAR End-of-Course exams. End-of-course (EOC) assessments are administered for Algebra I, Biology, English I, English II, and United States History. Column 1 lists the EOC subject while column 2 and column 3 lists the state and district results (Texas Assessment Management System, 2017).

Table 1.2

Percent of All Students Passing EOC, 2017

	District	State
Algebra	79	87
Biology	81	88
English I	60	70
English II	62	71
U. S. History	89	93

Intervention plan for underperforming campuses. In the 2017-2018 school year, the district launched a plan to support, strengthen, and serve the underserved and underperforming communities (Webb, 2017). Best practices from successful turnaround initiatives are incorporated into the plan. Six guiding pillars provide the strategic framework for the work within the 32 targeted campuses. The pillars include: leadership excellence, teaching excellence, instructional excellence, school design, social and emotional learning support, and family and community empowerment (ibid). The goal is to ensure that there is an effective team of teachers at every school and that teachers are delivering effective, aligned, and rigorous lessons in every classroom. The plan aims to improve student performance by bolstering school leadership,

teaching and instruction, school design, social supports for students, and relationships with families and communities (ibid).

In total, the plan is expected to impact nearly 2,000 teachers and over 30,000 students and their families. Ten of the campuses included in the plan are known as the "Superintendent's Schools". These are the schools the interim superintendent has committed to transforming to increase student achievement and ensure that the campuses are receiving the support and resources they need. These ten campuses are in danger of being placed under the jurisdiction of state-appointed managers through the Texas Education Agency (TEA) if they do not show improvement this year.

Graduate profile. Since the district serves a vast number of students within an urban setting, the district has an enormous obligation to produce global graduates that can enter a global workforce. With the help of community and business partners, as well as leaders from industry and institutes of higher education, the district has developed a graduate profile (Vander Ark, 2016). The profile contains six characteristics or qualities that the district wants all students to develop and grow during their time in elementary, middle, and high school. One aspect of the graduate profile is linked to digital literacy. The graduate profile indicates that a graduate is a "critical thinker that identifies and dissects issues, seeks multiple opinions, and critically evaluates various solutions" (ibid). Students should also "understand when information is needed and be able to effectively use technology to research" (ibid). The district website goes on the explain that a "focus on literacy" is emphasized to ensure graduates can "compete in a 21st century workplace" (ibid).

District teacher appraisal system. All teachers in the district are appraised in three areas – instruction, professional expectations, and student performance ("Teacher Appraisal," n.d.).

An outline of the Instructional Practice Rubric can be found in Appendix A. A review of the rubric criterion shows that teachers are expected to utilize technology tools for data tracking, collaborative learning, the incorporation of real-world experiences in lessons, and to ensure students are "regularly" using technology in activities to support learning goals (ibid).

Literacy initiatives. In 2014, the district launched a districtwide, balanced approach to elementary school literacy with the goal of having every child reading and writing with fluency at or above grade level (Grier, 2014). While this initiative does not include digital literacy goals, the initiative aims to ensure that students are exposed to phonics and word work, guided reading, independent reading, read alouds, and writing instruction daily (Foster, 2015b). In addition, all elementary school classrooms were provided a classroom library stocked with 320 to 330 books to help teachers uniquely match a student's reading ability to a "just right" book (M. Freeman, personal communication, February 14, 2017). "Just right" books allow students to read books that they can both decode and comprehend since it is at their instructional level (M. Freeman, personal communication, February 14, 2017). Students advance to a higher level in the library as their reading abilities grow.

As the district has worked to improve literacy among its younger students, the district expanded the elementary program to include middle school students in the 2016-2017 school year ("Launching Literacy", n.d.). The middle school literacy initiative includes best practices for read alouds, independent reading, writing, and small group instruction across all core disciplines for students in grades 6-8 (ibid). The goal is for students to be further engaged in their classes while advancing their literacy levels at the same time. Middle school classrooms in the district received classroom materials and classroom libraries to provide more access to literary resources for students as part of the initiative (ibid). To prepare the middle school

teachers to effectively implement these practices and materials into their classrooms, the district provided summer and pre-service training to align strategies, common language, and develop proficiencies. The district continues to provide training for this initiative to ensure that new teachers and leaders are trained, and current teachers and leaders are updated.

In the 2017-2018 school year, the district expanded the initiative by launching a similar program across high school campuses. All high schools received books and digital classroom libraries and a campus wide license for Achieve 3000, which offers personalized articles for students at their reading and interest level ("Focus on Literacy Expands", n.d.). The focus of the program is independent reading, writing, thinking critically, and student discourse in a one-to-one classroom environment (ibid). During summer training sessions, participants explored and applied the various elements of the initiative, including disciplinary content, literacy best practices, hands-on experience, and instructional technology.

Universal screener. According to the district website, the research site adopted a universal screener tool for reading and math in the 2017-2018 school year to use with all students, K-12 ("Universal Screener," n.d.). The purpose of the screener is to identify students who may be at risk academically in reading and math. Screenings are administered at a minimum of three times per year: beginning of year (BOY), middle of year (MOY), and end of year (EOY). Some campuses, particularly campuses that are designated as a school that needs improvement, elect to administer the screener monthly. Teachers analyze student data to learn what students already know, what they are ready to learn next, and to determine which students may need additional help (ibid).

Technology initiative. To prepare students for a digital world, the district launched a districtwide initiative aimed at transforming teaching and learning (Foster, 2014a). The

comprehensive initiative has three main drivers—technology, a learning management system (LMS), and personalization. While digital literacy was not a key component of the initiative, the goal is to ensure that schools, students, and staff have equitable access to technology. In early 2013, the district announced that every high school student in the district would be provided a laptop for learning at school and at home. The district rolled out this part of the initiative in three phases. At this point in the program, all high school students have a laptop. By providing students with 24-hour access to a digital device, students can become producers and evaluators of knowledge, not just consumers.

Furthermore, the laptops allow students to locate, evaluate, and interpret information, as well as collaborate with others to engage in authentic, real-world tasks. Most importantly, the students will develop the skills they need to participate in today's 21st century world.

To promote the appropriate and productive use of technology, a variety of training opportunities have been provided for high school teachers throughout the three-year implementation plan ("Transforming Teaching and Learning," n.d.). Table 1.3 outlines the Saturday sessions that were provided during the 2017-2018 school year. Column 1 lists the date of the session while column 2 outlines the number of participants who attended the session.

Table 1.3

Technology Saturday Sessions, Teacher Attendance, 2017-2018

Date	Attendance
December 2, 2017	91
January 27, 2018	115
February 24, 2018	77

Table 1.3 Continued

Date	Attendance
March 14, 2018	51

Teachers that attend receive a 50-dollar stipend. In addition, teachers can select from a variety of choice sessions. At the January session, for example, participants were able to select from choice sessions such as “Digital Portfolios”, “Managing a Digital Classroom”, “Tech Playground”, “Promoting Student Voice”, and “LMS Fundamentals” (A. Smith, personal communication, March 8, 2018).

Additional courses are provided via the LMS and OneSource, the central resource and information center for district employees. For example, while some face-to-face courses focus on specific collaboration tools such as OneNote and VoiceThread, other courses focus on helping teachers learn how to implement classroom portfolios such as Wikispaces and Weebly (A. Smith, personal communication, February 12, 2017). Online course options include learning how to flip classroom instruction and how to do project-based learning using personalization tools (A. Smith, personal communication, February 12, 2017).

Moreover, the initiative aims to personalize instruction for students by adopting a Linked Learning approach. Linked Learning is an “educational approach that combines rigorous academics with hands-on learning and the opportunity to apply classroom knowledge to real-world experiences” (“Linked Learning,” n.d.). It is guided by four core components—an academic core, real-world technical skills, work-based learning, and personalized support (ibid). Linked Learning looks a little different across the various levels. In elementary schools, for example, students learn about work and higher education by taking field trips to colleges and

universities. They also participate in college awareness activities and career presentations. Middle school students, on the other hand, start researching possible pathways and high schools. They also can explore personal interests and take field trips to colleges and universities. High school students receive personalized instruction in their chosen pathway and participate in site visits to colleges and universities along with industry and business partners. Career-based courses provide students a head start and provide them with the opportunity to work in the field related to their pathway.

Learning management system. Additionally, as part of the technology initiative, the district launched a K-12 online platform where teachers can collaborate, personalize instruction, and locate district curriculum resources. The district partnered with *itsLearning* to develop a digital learning management system to provide the students and teachers with access to instructional, coursework, and digital textbooks and other digital resources ("HUB Launching Districtwide", 2015). Students can submit homework and assignments, collaborate and communicate with their classmates, and participate in blogs, discussion boards, and add products into their e-Portfolios. District professional development resources and materials are also housed on the district Learning Management System (LMS) and available for campus and district leaders to review and access. All digital resources, such as Achieve 3000, digital textbooks, and digital Scholastic magazine subscriptions, are available within the LMS via single-sign on. Single sign-on allows employees to easily access the variety of resources without having to remember multiple passwords.

Learning.com. Inquiry for Learning.com is the official adopted K-8 technology applications curriculum for the district. This resource provides digital learning tools for 21st century skills and integrating technology into core curriculum. Inquiry projects are aligned to

the district curriculum ("Getting Started with Learning.com", n.d.). Learning.com is available via the LMS through single-sign on. A variety of trainings focused on how to navigate and use the resources are offered directly on campuses or through district-wide training opportunities.

Table 1.4 outlines the sessions that were available for elementary and middle school teachers during the 2017-2018 school year. Each training focused on curriculum resources and how teachers could use them in the classroom to support digital literacy development. Column 1 lists the date the session was offered while column 2 and 3 lists the number of elementary and middle school teachers that attended. Column four lists the total number of teachers that attended the session.

Table 1.4

Learning.Com Sessions, Teacher Attendance, 2017-2018

	Elementary School Teachers	Middle School Teachers	Total
February 21, 2018	2	0	2
March 1, 2018	20	7	27
March 20, 2018	3	3	6
April 4, 2018	15	2	17

Secondary Curriculum and Development Department. The Secondary Curriculum and Development Department is composed of foundational and enrichment curriculum areas including instructional technology, reading/language arts, mathematics, science, social studies, fine arts, and health and physical education. The work of the department supports a focus on instructional planning and data analysis through professional development and Teacher Development Specialist job-embedded coaching. The Officer of Curriculum and Instruction

oversees all the content-area directors along with managers such as the manager of digital resources and curriculum production. Table 1.5 lists the number of Secondary Teacher Development Specialists assigned to each content area.

Table 1.5

Number of Secondary Teacher Development Specialists, 2017-2018

	Team Members
English Language Arts	14
Math	18
Science	9
Social Studies	8
Literacy	8
Fine Arts	6
Health & Physical Education	2
Instructional Technology	7

The literacy team supports literacy across the content areas along with being responsible for writing curriculum for the district secondary intervention course, Strategic Reading and Writing (SRW), English for Speakers of Other Languages (ESOL), and English as a Second Language (ESL). The primary goal of the literacy team is to ensure the district secondary literacy initiatives are supported across the content areas. While the literacy team does not have specific digital literacy goals, the team does support teachers with the high school technology initiative. The district Secondary Teacher Development Specialists use cognitive coaching

techniques (Costa & Garston, 2002) and follow the instructional coaching cycle developed by Jim Knight (2007, 2016).

Purpose of the Study

The district has directed a variety of resources towards literacy and technology. Yet digital literacy is not highlighted in district plans and initiatives other than through the adoption of the Learning.com resource. Students should be prepared to enter a high school one-to-one environment and already be familiar with digital reading and writing. High school teachers should not be spending valuable instructional time teaching their students how to use the devices. Rather, the focus should be on how to use the tools to learn content, collaborate with classmates, develop their reading and writing skills, and curate material to create personal digital portfolios. Middle school teachers play an important role in developing their students to be digitally literate. The purpose of this study is to investigate what middle school ELA teachers already know about digital literacy and what digital literacy practices they already implement in their classrooms. Furthermore, this study aims to explore what digital literacy skills teachers think are important for students to learn in middle school.

Audience. This study is directed to the Secondary Curriculum and Development Department. The information gathered from the study will first be shared with the Research and Accountability Department before being shared with the Secondary Director of Literacy. The Director of Literacy serves as the primary liaison between the departments. The Director of Literacy will then decide whether to send the information gathered from this study to other district leaders, such as the Secondary Director of Instructional Technology, Secondary Director of ELA, and Officer of Curriculum and Instruction.

Qualifications of the researcher. I began my career with the district at an elementary school where I taught 5th grade ESL and science, previously having served as a 6th grade math teacher at a suburban school. I then worked as an administrator at that school serving as an instructional coordinator for multiple years and later as a middle school assistant principal for two years before moving to central office. I earned a Bachelor of Science Degree in Interdisciplinary Studies from the University of Houston and a Master of Education Degree and Instructional Technology specialization from the Houston Baptist University. I then earned a business and principal certification by participating in the Rice Education Entrepreneurship Program (REEP) at Rice University.

I currently am working as a Teacher Development Specialist with the Secondary Curriculum and Development Department. Assigned to the literacy team, I serve as a coach at various middle and high schools. I also provide district-wide professional development for teachers and leaders along with writing curriculum and district assessments for the ESOL and ESL courses. I serve on the board of the West Houston Area Council of Teachers of English (WHACTE) and am actively involved in multiple professional organizations, such as the Texas Council of Teachers of English (TCTELA) and National Council of Teachers of English (NCTE). Through leadership positions and classroom experiences, I have gained effective communication, collaboration, public relations and interpersonal skills. I am also a key stakeholder invested in improving literacy within the district and building capacity among teachers and leaders.

Ideal scenario. Ideally, all middle school students are provided with the opportunity to learn in modern classroom environments that both engage and support deep thinking. Middle school ELA classrooms should be organized to support a Reader's and Writer's workshop,

meaning all students can select books of their choice for independent reading and participate in books clubs and meaningful reading response activities (Allington, 2002; Allington & Gabriel, 2012; Atwell, 2015; Miller, 2009; Wallis, 2012). A copy of the suggested middle school literacy block is included in Appendix B. Students should also participate in classroom discussions that are relevant to their interests and responsive to real-world situations. Teachers should model the writing process using the Consume, Critique, and Produce (CCP) method (O'Flahavan, 2012), the Notice, Name, and Effect method (Johnston, 2012), and Must Have, Might Have, and Won't Have method (Wood Ray, 2006). These methods ensure that students are using mentor texts in the classroom to gain an idea of the characteristics of a specific genre. Teachers should support students by conducting reading and writing conferences and provide small group instruction as needed (Calkins, 2000; Serravallo, 2010; Tovani, 2000; Tovani, 2004). Furthermore, teachers and students should work together to navigate continuous change and what it means to read, write, view, listen, and communicate in the 21st century. This is not happening consistently within the district, and district reading achievement data demonstrates that many of our students are reading below grade level and are not growing as readers and writers (Texas Education Agency, 2017).

The real. Continuous discussion with the members of the secondary literacy team revolve around the fact that some teachers are engaged in practices that have unintended, but profound consequences. The members of the literacy team have documented that text-prep workbooks and worksheets are used in lieu of authentic classroom libraries and digital resources. Students appear to be disengaged and unmotivated. Some students have little opportunity to share their thinking or participate in structured conversations that support their thinking and learning. Teachers need to learn one of the most difficult lessons of modern teaching practice –

relinquishing control. Information no longer lives within the teacher or even within the school. It lives everywhere, which means learning can happen everywhere. Furthermore, our notion of reading and writing in terms of literacy must expand to accommodate new kinds of interactions and forms. Having access to digital tools and texts does not mean that middle school students are automatically thoughtful, adept readers. Teachers must be able to support students to become critical readers in a digital age. We must engage our students in classroom practices that engage students in reading and thinking with both print and digital texts, thus encouraging reading instruction that reaches all learners.

Research Questions

To study digital literacy concepts and practices of middle school teachers, four research questions need to be considered:

1. What classroom digital literacy practices are middle school teachers implementing?
2. What role do teachers feel they serve in a student's digital literacy development?
3. Do teachers think that electronic devices support students with their reading development?
4. Do teachers think that electronic devices help encourage students to be more interested in reading?

Significance of the Study

This study will help inform district and campus leaders about current middle school ELA teacher beliefs and practices regarding digital literacy. Likewise, the results of the study could help form future professional development and curriculum plans. An initial professional development proposal has been developed and will be shared with various stakeholders. This study is potentially important as it provides an active approach to the foundation of middle

school teacher development. The methods of this study could be expanded to include other content areas for additional insight and information.

Organization of the Study

This record of study is divided into five major areas of focus. Chapter I comprises the introduction, a statement of the problem, the purpose for the study, research questions, and significance of the study. Chapter II presents a review of literature relevant to digital literacy. Chapter III outlines the methodology and procedure of the research along with a description of the data collection instruments and participants. Chapter IV presents the results of the study based on the research questions. Chapter V highlights conclusions and recommendations.

CHAPTER II

LITERATURE REVIEW

This section includes a review of the current and relevant findings in the literature related to digital literacy. The literature review section begins with a discussion of the conceptual framework. In addition, the definition of digital literacy will be discussed along with an overview of digital reading and writing practices and the role that teachers play in their development. This chapter will conclude with a discussion on the standards that are related to digital literacy along with concluding remarks.

Conceptual Framework

More than three decades ago, Rosenblatt (1978) encouraged English teachers to think of the process of reading as an interaction between a reader and a text. Her transactional theory of reading suggested that we, as readers, have a distinct role in the process of meaning making. While Rosenblatt's approach remains relevant, in addition to the reader, text, and poem, today we must also consider the device. What opportunities do smartphones, tablets, e-readers, and computers afford readers? How has the introduction of digital texts changed the nature of reading? With this changing landscape, embedded are the old questions of who and what we read, as well as new questions of where and how we read.

Moreover, to guide my understanding of the knowledge that teachers must apply while integrating digital technology into instruction, the technological pedagogical content knowledge (TPACK) framework is employed as part of the conceptual framework for this study (Mishra & Koehler, 2006). The TPACK framework highlights the important connection between and among a teacher's pedagogical knowledge and content knowledge but also emphasizes the

importance of technological knowledge (ibid). The authors of the framework, Mishra and Koehler, advocate that the primary focus of research on educational technology should be on how the technology is used and the types of knowledge that teachers must have as they integrate digital technology into their instruction (ibid). The TPACK framework "emphasizes the connections, interaction, affordances, and constraints between and among content, pedagogy, and technology" (Mishra & Koehler, 2006, p. 1025). Employing the TPACK framework in this study allows an exploration of which types of knowledge guide the use of technology within middle school ELA classrooms.

Defining Digital Literacy

We hear the word literacy everywhere in education. Webster's dictionary defines literacy as "the ability to read and write" (2001, p. 640). In today's society, the ability to read information and to write to communicate is essential. However, with our daily lives moving more and more into a digital world, the word *literacy* must evolve along with our ideas about being literate in a world of constant and easily accessed information. Alcock, Fisher, Hargadon, Jacobs, Sheskey, and Tolisano (2014) write that "our digital world is not fully explored; it is constantly changing and growing, expanding, and being reinvented" (p. 8). Therefore, we need to rethink our understanding of what it means to be literate, because a person who is literate by the standards of the 20th century may be illiterate in the culture of the 21st century (Alcock et al., 2014). People now need to be biliterate or be able to adapt to both reading and writing traditionally and digitally. Leu and Forzani (2012) write that "literacy means many different things to many different people" (p. 75). However, we can all acknowledge that "profound changes to literacy lie ahead" (ibid).

As more and more people gain access to the digital world with computers, smartphones, and other devices, and explosion of online content has occurred. Basic literacy skills now include network literacy, global literacy, information literacy, media literacy, and digital citizenship (Alcock et al., 2014). Teachers must consider that students often have extracurricular literacy skills that are not made evident in the classroom unless teachers make special efforts to include them (Kajder, 2010). Students have literate lives outside of school (Bomer, 2011). For example, they may keep in touch with family and friends via social media or participate in sports, music, or fashion blogs. They read online restaurant menus and Yelp reviews before trying out a new restaurant or research a product online before making a big purchase. Furthermore, students may have spiritual lives that include reading the Bible, the Koran, or the Torah online and following religious leaders via Twitter. These ever-evolving new literacy practices open new territory in the English classroom and require teachers to "re-see" what it means to read and write and engage our students with approaches that foster critical thinking, questioning, decision-making, and independent learning (Kajder, 2010). It is increasingly evident that traditional definitions of reading, writing, and best practices are insufficient in the 21st century (Bass II & Sibberson, 2015)

Reading and writing are at the core of digital literacy. However, given the changing nature of technology, digital literacy encompasses a broader range of skills – everything from reading an e-book on a device to curating digital content. While many define digital literacy as the ability to access and understand information through different means (Silver, 2009), most scholars and practitioners use a definition that includes a wider variety of aims, goals, and intentions, including the ability to use the power of information and communication to appropriate forms of personal, social, and political action (Allyn & Burns, 2018; Bomer, 2011;

Hobbs, 2010; Kajder, 2010; Serafini, 2015; Turner & Hicks, 2015, 2017). Consequently, the definition is shifting to include the ability to function in a world that requires the use of technology (Leu, Coiro, Castek, & Henry, 2013). Heitin (2016) writes that the term is "so broad that some experts even stay away from it, preferring to speak more specifically about particular skills at the intersection of technology and literacy" (p. 5). Other terms such as multiple literacies, multimodality, twenty-first-century literacies, out-of-school literacy, and new literacies have emerged in research (Leu et al., 2013).

Paul Gee (2012) offers this definition of digital literacy: "Premium digital literacy is the ability to use specialist/technical language connected to digital tools" (p. 419). Similarly, Turculet and Tulbure (2015) write that "digital literacy is the ability to understand and use information in multiple formats from a wide range of sources when presented in a digital device" (p. 348). Bomer (2011), on the other hand, refers to these practices as new literacies. Bomer (2011) writes that "new literacies are practices – ways with texts – ways of doing reading and composing" (p. 243). Other authors discuss how the definition of digital literacy has evolved (Connors & Sullivan, 2012; Leu & Forzani, 2012) while Kajder (2010) discusses how she has had to "unpack" the definition of digital literacy because of the new kinds of learning that is taking place in 21st century classrooms (p. 7). Chase and Laufenberg (2011) suggest that digital literacy should be considered a genre, or "a format and tool to be found within the domain of standard literacy, rather than a concept standing at odds" (p. 535).

The American Library Association's digital literacy task force offers this definition: "Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills" (Martin, A., & Roberts, K., 2015, p. 19). Furthermore, International Literacy Association (ILA,

2012) and the National Council of Teachers of English (NCTE, 2013) published position statements on new and 21st century literacies that provide a helpful heuristic for this work. NCTE defines 21st century literacies as the ability for teachers and students to:

- develop proficiency and fluency with the tools of technology;
- build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;
- design and share information for global communities to meet a variety of purposes;
- manage, analyze, and synthesize multiple streams of simultaneous information;
- create, critique, analyze, and evaluate multimedia texts; and
- attend to the ethical responsibilities required by these complex environments.

Price-Dennis, Holmes, and Smith (2015) write that this definition "anchors possibilities for infusing a print-based literacy curriculum with elements of new literacies" (p. 197). ILA's definition complements this definition by outlining the following expectations for 21st century adolescents to:

- read a variety of texts including, but not limited to, traditional print text and digital (multimodal) text;
- author words and images in fixed domains as well as multimodal settings;
- talk about a variety of texts with others, including teachers, peers, members of their own communities, and the larger world population; and
- interact with text in discipline-specific ways within and across all subjects inclusive of, but not limited to, electives, career and technical education, and visual and performing arts.

In addition, ILA summarizes what 21st century students deserve by outlining the following:

- Adolescents deserve content area teachers who provide instruction in the multiple literacy strategies needed to meet the demands of the specific discipline.
- Adolescents deserve a culture of literacy in their schools with a systematic and comprehensive programmatic approach to increasing literacy achievement for all.
- Adolescents deserve access to and instruction with multimodal, multiple texts.
- Adolescents deserve differentiated literacy instruction specific to their individual needs.
- Adolescents deserve opportunities to participate in oral communication when they engage in literacy activities.
- Adolescents deserve opportunities to use literacy in the pursuit of civic engagement.
- Adolescents deserve assessments that highlight their strengths and challenges.
- Adolescents deserve access to a wide variety of print and nonprint materials.

NCTE and ILA agree that teachers are obligated to create learning environments that both engage and support deep thinking through new kinds of interactions and forms. Just as basic literacy is comprised of different levels of sophistication around reading and writing, digital literacies follow a similar path of increasingly sophisticated purposes, capacities, and competencies we do not yet fully know.

The definition of digital literacy certainly has evolved from media or computer literacy. While some associate digital literacy as being able to use tools to read and write using technology tools, now many understand that the term encompasses an entire "constellation of new learning", such as being an active and responsible participant in the digital world (Guernsey & Levine, 2015, p. 36). In short, we have an abundance of literacies. As Leu, Kinzer, Coiro, & Cammack (2004) share, "Their most important characteristic is that they change regularly; as

new technologies for information and communication continually appear; still newer literacies emerge." (p. 1571). New literacies, new technologies, and new ways of reading and writing are invitations to rethink and reimagine our work as middle school ELA teachers.

Digital Reading

Paying attention to how teens read is not a new phenomenon. While some have focused on strategy-based approaches for comprehension (Beers, 2003; Harvey & Goudvis, 2007; Keene & Zimmerman, 2007; Tovani, 2000, 2004) others have focused on renewed attention to content area literacy (Daniels & Steinke, 2011; Fisher, Brozo, Frey, & Ivey, 2010; Lent, 2016; McConachie & Petrosky, 2010; Shanahan & Shanahan, 2008) and immersive and interactive models of reading instruction such as literature circles and the reading workshop (Atwell, 2007; Daniels, 2002). In the digital age, reading is no longer simply decoding printed text. Instead, it is a complex process that entails a variety of social practices used for making sense of the complex and multimodal texts encountered in today's world. This includes making sense of visual images, graphic elements, and hypertextual connections (Guernsey & Levine, 2015). Beers and Probst (2013) write that digitally delivered texts allow students to "quickly highlight, extract, annotate, and then share our thoughts about what we're reading with others" (p. 13). "Digital paper", as Guernsey and Levine (2015) describe it, "can talk" and "display video, animations, and interactive diagrams" (p. 83). Text and pictures can be edited by someone that is far away from the reader. Moreover, reading on an Internet-connected device provides students with the opportunity to access information or fact-check sources (Beers & Probst, 2013).

Tuner and Hicks (2015) write that "the broad research on adolescent literacy has demonstrated a desperate need for English and content area teachers to do even more" (p. 2).

Nowhere is rereading, attentive reading, or close reading, the interaction between a reader and a text, more important than in the various digital contexts in which adolescents read daily, in part because readers do not always read texts with the same level of attention they pay to print forms (Beers & Probst, 2013, 2017; Kajder, 2010; Turner & Hicks, 2015).

Everything has changed with the introduction of digital technologies, the personal computer, and the Internet. Specific examples of this change include clicking on a word for its definition, highlighting a quote or passage and posting it to a social network, or downloading an eBook. Furthermore, since STAAR now offers online versions of the test, readers must also be familiar with annotating digitally and utilizing other embedded tools and accessibility features ("Educator Guide," 2018). Students need to be prepared to navigate online features such as sticky notes, digital pencils, text-to-speech options, pop up's, and rollovers during online testing (ibid).

All these actions have changed the work we have to do as readers to comprehend texts. For centuries, what has constituted a book has changed little. Now books and texts can be read on a variety of digital devices, including eReaders, smartphones, and laptop computers. Digital reading allows us to more easily make reader-to-reader connections and text-to-other reader connections (Beers & Probst, 2013). Digitally delivered texts allow us to quickly highlight, annotate, and then share our thoughts with others about our reading (Allyn & Burns, 2018).

In contrast to print-based texts, which have a set reading path, linear structures, and fixed typography, digital texts have certain characteristics. Dalton and Proctor (2008) proposed that digital texts can be categorized as:

- linear text in digital form (e.g. on an eReader);
- nonlinear text with hyperlinks (e.g. a web page);

- texts with integrated media (e.g. enhanced digital books); and
- text with response options (socially interactive features).

In general, basic digital texts look like print-based versions, allowing readers to turn pages as they do with printed books and store them in their digital libraries. On the other hand, enhanced digital texts feature interactive features, including images, video clips, and links (Dalton & Proctor, 2008). They require new skills to access and navigate them (Serafini, 2015).

Since digital texts have changed our reading practices, there have been a variety of studies that have explored digital reading tools. For example, in the article "E-Books and Audiobooks: Extending the Digital Reading Experience", Larson (2015) discusses how she observed a group of 6th grade students as they worked with e-readers that were preloaded with audio books. During a series of lessons, the students "began with a grand conversation about the book, followed by a minilesson over a reading strategy or a technology-related topic" (p. 171). Students were then given time to continue reading or listening to the assigned chapter in class or at home. Eighty-one percent of the students reported they preferred reading e-books over print books, probably due to the various built-in digital supports (p. 172). An interview with the classroom teacher revealed that the teacher acknowledged an increase in motivation and interest in reading. The classroom teacher reported:

> Their focus on reading has definitely improved, and they spend more time reading now...I think a lot of the motivation is the fact that it's just 'cooler' to them than a regular book. With all the technology they use in their everyday lives, it is just more normal for them to use an electronic device to read. (p. 174)

Larson (2015) shared data that demonstrated how the students took advantage of the various e-book tools. For instance, 100 percent of the students used the audio support and bookmarking

tool while 88 percent of the students utilized the dictionary feature (p. 172). While only a few students accessed the tools to help adjust screen settings and reading rate, they shared that these features greatly assisted with their reading stamina and comprehension (ibid). The students also demonstrated an increase in engagement and "adapted quickly to their digital devices and developed new literacies by customizing their reading experiences" (p. 176). The extra features available via the Kindle allowed the students to engage in individualized reading experiences (Larson, 2015). Prior e-book studies suggest that effective use of tools can support comprehension by helping them navigate and gain access to the text (Larson 2010, 2013; Moyer, 2011).

In another study, "Examining the Effects of School-Provided E-Readers on Middle School Students' Reading Ability", the researcher explored whether institutionally provided e-readers would increase reading ability of students (Brown, 2016). Nook tablets were issued to sixth-grade students on a one-to-one basis. All assigned reading for the Language Arts class was accomplished using the device. Results of previous sixth-grade students who did not use institutionally issued e-readers in the classroom were compared with the results of the students who did use readers. Students were given the Lexile and Comprehensive Testing Program (CTP4) standardized tests at the beginning and end of the school year to measure growth in reading (p. 406). Although the results of the study were mixed, Brown found that an "average change in test scores was greater with students using e-readers" and the results "provided strong evidence that suggest reading scores would not decline as a result of students use of e-readers" (p. 408). Furthermore, Brown suggested that as e-readers become more affordable in the future, there may be a "greater return on investment" by switching to e-readers (p. 409).

In addition to considering various studies that have been conducted about digital reading, we must consider that digital resources have the potential to maximize access to text that students can and want to read and provide students with more choice. Mulligan and Landrigan (2018) suggest that "digital reading may be an entry point for engaging students in reading" (p. 150). The more variety in the classroom library, the more possible it will be to meet the purposes, interests, and levels of difficulty appropriate for individual students (Bomer, 2011; Miller, 2014). Effective teachers understand the importance of adolescent choice and ownership, as well as the importance of helping teens develop a sense of their own reading lives (Atwell, 2007; Gallagher, 2009; Guthrie, 2008; Kittle, 2013; Miller, 2009; Tatum, 2013). For adolescents, literacy is shaped by popular culture, family influences, and relationships with their peers (Ivey & Johnston, 2013; Moje, 2007). Their texts include logos, music, magazines, websites, popular and classical literature as well as social media. Engagement is a central force in adolescent literacy learning (Gallagher, 2009; Kittle, 2013; Miller, 2009). Our 21st century ELA classrooms require dynamic instruction and teachers who provide access to and instruction with multimodal texts (Alcock et al., 2014; Kajder, 2019; Mulligan & Landrigan, 2018). If we include digital reading options for our students, it demonstrates our commitment to providing them with choice (Bass II & Sibberson, 2015).

Furthermore, digital reading resources provide a broader range of text complexity (Mulligan & Landrigan, 2018). Several educators suggest that students do not read in terms of Lexile levels (Atwell, 2014; Beers & Probst, 2013, 2017; Gallagher, 2009; Miller, 2009, 2014; Turner & Hicks, 2015). Teachers must consider that we cannot measure multimodal texts in the same ways that we measure print-based texts (Turner & Hicks, 2015). Since digital reading is seldom linear, the choices a reader makes may require knowledge beyond those needed to

comprehend print texts (ibid). This requires students to be able to navigate the qualitative dimensions of a digital text, such as links to additional content and embedded multimedia, and quantitative demands, or Lexile level (ibid).

Readers in the 21st century also need to be able to navigate digital genres in all forms. For example, social media platforms feature concise messages and require a special set of reading skills. According to Allyn and Burns (2018), students can "analyze a deceptively simple tweet for author's purpose, bias, and text-to-world connections with the same level of effort as a close read of a passage from a piece of classic literature" (p. 25). We expect students to be alert for bias and evaluate information in print-based articles and books; therefore, we also should demonstrate how they can identify what organization is providing information on a particular website (Allyn & Burns, 2018). Questions teachers might think aloud to students might be, "Who is in charge of this website?" and "Do they have a bias or strong opinion on this topic?" (p. 47). The ability to think aloud and demonstrate how to think critically about a text is a crucial skill a middle school ELA teacher needs to model in their classroom.

It is evident that knowledge, skills, and new literacies that are needed to engage and support adolescent readers. Being a reader in the digital age is complex and challenging. It is about changing the way we think about interacting with ideas and content. It is also about giving students opportunities to use digital literacy tools as part of their daily routines.

Print vs. Digital Reading

Teens are reading a wide variety of texts including traditional print text and digital text (Burke, 2013; International Reading Association, 2012, Moje, Overby, Tysvaer, & Morris, 2008). Reading in the 21st century should not be viewed as an either/or, but instead a both/and,

and students need to read traditional print texts as well as digital texts (Turner & Hicks, 2015; Beers & Probst, 2017; Kajder, 2010).

Numerous studies examine the ways in which readers interact with text on screen. For example, a recent study examined how a thoughtfully constructed digital annotation technique affected comprehension or the ability to "read deeply" among a group of fifth graders (Chen & Chen, 2014). This study, using a quasi-experimental design, compared the reading attitudes, reading comprehension, and use of reading strategy in context, among two groups of students (ibid). One group used a collaborative reading annotation system with a reading annotation and interactive discussion scaffold (CRAS-RAIDS) for collaborative writing while the other group used traditional paper-based reading annotation methods (ibid). Using data gathered from pre-test and post-test scores obtained from the Progress in International Reading Literacy Study (PIRLS) reading comprehension test, the digital experimental group significantly outperformed the paper-based annotation group in the areas of direct and explicit comprehension, inferential comprehension performance, and the use of reading strategies (ibid). Chen and Chen (2014) also noted that the "experimental group showed positive interest and high learning satisfaction" (p. 67). This study is an example of how middle school ELA teachers can facilitate high-level comprehension and strategic reading in a collaborative digital reading environment.

In addition, a systematic literature review was undertaken by Singer and Alexander (2017) to examine the role that print and digital mediums play in text comprehension. The results suggest that the medium plays an influential role under certain text or task conditions or for certain readers (ibid). Singer and Alexander (2017) state:

> No matter how complex the question of reading across mediums may be, teachers and students must understand how and when to employ a digital reading device. It is fair to say

> that reading digitally is part of living and learning in the 21st century. Nonetheless, there is unquestionably a place for print in schools and in the lives of students outside of school. For those invested in understanding and promoting student learning, therefore, there is little gained from setting up a false dichotomy between reading and digital reading. Consequently, we must arm ourselves with empirical evidence of when, where, and for whom greater benefits are accrued from reading in print, digitally, or in combination. (pp. 1034-1035)

They argue that one medium should not be regarded as routinely better for comprehension. Rather, "both mediums appear to have a place in literacy" (Singer & Alexander, 2017, p. 1035).

However, Allyn and Burns (2018) caution that "narrative-reading experiences on electronic devices may complicate a student's sense of immersion in the text" (p. 34). They suggest for teachers to consider the benefits of digital texts against the "perennial value of the printed page" (p. 34). While readers in the digital age need strategies for attending to multimodal text, digital technologies afford students with many benefits such as portability, built-in dictionaries, and customizable settings to adjust color, font, and text size (Allyn & Burns, 2018). Readers can also archive discussions and create digital portfolios to document their literacy development (Serafini, 2015). Yet, we also must consider that some studies demonstrate that comprehension is significantly better when students read printed texts such as books or articles (Walker, 2017). Dr. Patricia Alexander, an educational psychologist interviewed by Walker (2017), shares that speed is a factor to consider. Since students often read faster digitally because "speed gives them the illusion of faster processing" and the perception that they are "somehow better or smarter", this can result in a deficit of learning (ibid). The "disruptive effect" of scrolling and moving your eyes over the page causes students to lose continuity and

impacts their comprehension of digital text (ibid). Alexander suggests that digital readers do better when they slow down and for teachers to explicitly model how readers should get in the habit of stopping when they read digitally to self-reflect and summarize (ibid). The "tendency to scroll" can sometimes prohibit students from fully comprehending content (Martin, 2017).

Furthermore, Bass II and Sibberson (2015) suggest that students often have already developed a "stance toward literacy and attitudes about the role technology can play in their lives" by the time they reach high school (p. 11). Therefore, it is essential that elementary and middle school teachers "set the stage for students' future success as digital readers" by adopting a strong stance on how to read digital text, regardless of medium (p. 11). The processes and tools must be a part of the work that teachers and students do on a regular basis (ibid).

Digital Writing

DeVoss, Eidman-Aadahl, and Hicks (2010) state that "students are doing an immense amount of writing – they're blogging; they're text messaging; they're emailing; they're updating their status messages, profile information, and live feeds on social networks and other sites" (p. 19). But, many students often do not consider these activities as writing. Rather, it is something they do out of school (ibid). The Pew Internet and American Life Projects' work on adolescent writers echoes the findings of DeVoss, Eidman-Aadahl, and Hicks. They found that 93 percent of teens write for pleasure and 85 percent believe that good writing is important to their success outside of the classroom (Lenhart & Madden, 2005). Furthermore, they found that although 85 percent of adolescents aged 12-17 engage in some form of digital communication, only 60 percent of those same adolescents think of this work as "writing" (ibid). Therefore, it is important for schools to bring those out-of-school literacies in the classroom.

Reed and Hicks (2016) suggest for teachers to adopt an inquiry-based approach to writing instruction. An inquiry-based approach to writing requires that students be taught explicitly through "models of quality writing, feedback on their own writing, and opportunities to explore various genres, audiences, and purposes for writing" (Reed & Hicks, 2016, p. xxiv). For teachers to foster work with digital writing, tools must be integrated purposefully, rather than incidentally (ibid). Since twenty-first century students have a variety of digital media available, students can use old and new literacies to develop finished products such as inquiry-based research essays or media projects (Sylvester & Greenidge, 2009).

One way to engage students in digital writing is to have them write digital stories. Digital stories are described as "a multimedia text consisting of still images complemented by a narrated soundtrack to tell a story or present a documentary" (Sylvester & Greenidge, 2009, p. 284). They allow students to take a linear series of events and turn them into a multidimensional experience. Digital storytelling allows students to author a rich variety of texts (Yuan & Bakian-Aaker, 2015). Because of the multimedia nature of digital stories, students are able to combine images and music while also adding their own voice into a composition (DeVoss, et al., 2010).

Furthermore, digital cameras and more accessible software have lowered technical barriers to creating products. Marco Torres, a social studies teacher at San Fernando High School in San Fernando, California shares that he has students research special-interest groups and then create a multimedia story about them ("Tech tales," 2002). He shares that the impact of digital storytelling is that the students internalize information and help them understand that their projects have an impact outside the classroom (ibid). For example, one student's project was seen by a human rights organization in Paris and also by Steve Jobs, the late Chief Executive Officer (CEO) of Apple (ibid). This ensures that students understand that their voices are heard,

acknowledged, and important. There are many online options for digital storytelling such as Storybird, Tellagami, and VoiceThread.

Another example of mixing old and new literacies would be for students to write a blog post. If we want our students to produce a blog post, we need them to engage them in the practices bloggers use such as including subheadings to organize information in posts or including links to take the reader to more information about a topic (Allyn & Burns, 2018). Turner and Hicks (2017) caution, however, that it is "not enough to have students do what they would normally do on paper and publish it online" (p. 54). Teachers need to teach students how to craft an argument using media in strategic ways. A teacher may also need to conduct mini-lessons on how to write concise paragraphs that include hyperlinks and multimedia. Furthermore, teachers may need to explicitly model how to respond to comments left on blog posts and well as how to provide comments to other bloggers writing about a similar topic (Reed & Hicks, 2016; Turner & Hicks, 2017; Allyn & Burns, 2018).

Blogging also allows students to utilize 21st century skills such as collaboration and communication. Myers (2014) conducted a study to understand the impact of incorporating digital reader response into a middle school literature class. Through interviews and the use of artifacts, Myers found that blogging during class "led to increased student confidence, multiple interpretation of text, and students taking a critical stance" (p. 59). After establishing classroom routines for this "new practice", Myers invited students to post responses to questions (p. 61). Over time, Myers noticed that "digital conversations fell on a continuum ranging from supportive to argumentative as the students either agreed or disagreed with each other" (p. 62). Three categories emerged from qualitative data collected from the study – increased student confidence, multiple interpretations of text, and taking a critical stance. Overall, Myers found

that the digital conversations "helped foster a community of learners" and helped students develop "ownership of what they read" by making personal connections (p. 63). These are the type of outcomes this study aims to further explore.

Moreover, digital writing often involves "experimentation and risk-taking" since it is "so often meant to be shared" (Heitin, 2016, p. 6). For example, Smythe and Neufeld (2010) conducted a study that involved a podcast project in a middle school classroom with English language learners (ELLs). The students in the study were expected to write a story, turn it into an illustrated book, revise drafts repeatedly and then record it to share with primary students (ibid). Then, through "social interactions", the students continually practiced their listening, speaking, reading, and writing skills while navigating the digital tools (p. 492). This project demonstrates the type of "pedagogic and transformative possibilities" that digital writing projects afford (p. 495).

Digital writing also often requires students to gather information from text resources to design graphics that provide a visual representation of data. Allyn and Burns (2018) suggest for teachers to have students create infographics. Infographics show information in graphic form and provide a "snapshot that helps a reader comprehend numerical data" (Allyn & Burns, 2018, p. 31). An infographic can be tweaked to place emphasis on a certain set of conclusions and be used in conversations about bias. Furthermore, Tuner and Hicks (2017) suggest that students can argue using the elements of graphic design by thinking about color, shape, text arrangement, and layout. Visual representations can be equally important as teaching students how to craft digital arguments (Turner & Hicks, 2017). By understanding the elements of graphic design, students may be able to articulate their point of view and purpose more clearly through their writing (ibid).

Another study conducted by Lubke and Dabney explored the benefits of reading with digital pencils (2017). Using Noteability, an app for note-taking, the students applied text codes to a short story using digital pencils. They found that overlapping practices afforded the students with the opportunity to select and use apps that worked best for them as readers and writers. This study is an example of how new writing literacies help students make connections within and across contexts and people.

The Role of the Teacher

Teachers are charged with educating students for their future. As definitions of literacy continue to expand, teachers need time to experiment with different ways of using and adapting digital tools in their classrooms (Sweeny, 2010). Miller, Sharp, Minnich, and Sokolowski (2017) write that "our society depends on these 21st century skills and mindsets for our survival" (p. 17). We want our students to be engaged learners who actively participate in a digital, interconnected world. Never has this been more important than in a world where anyone can publish their writing online. Larson (2015) writes that "new literacies perspectives recognize that literacy is persistently evolving and challenge teachers to transform reading instruction in response to emerging technologies and new possibilities for communication and collaboration within the literacy classroom" (p. 169). Teachers can help make the transition to this new era comfortable and exciting for learners by providing opportunities for students to digitally read and write critically, deeply, closely, and socially.

DeVoss et al. (2010) write that this "does not mean teachers must entirely change what they know and do in their classrooms" (p. 14). Teachers should not abandon the best practices of traditional reading. Preparing students for the real world means ensuring that they get to experience all kinds of texts (Allyn & Burns, 2018; Beers & Probst, 2013: Kajder, 2010;

Guernsey & Levine, 2015; Mulligan & Landrigan, 2018; Turner & Hicks, 2015; Serafini, 2015). Rather, teachers should "explore how their strengths transfer to different tools and emerging genres" (ibid). The better we understand how to support students as they interact with web-based, digital, and multimodal resources to make their ideas visible and available, the better teachers will be positioned to develop digital learners. The goal should not be for teachers to teach students how to point and click, but to critically think about how digital tools impact our learning and support collaborative inquiry.

State Standards & Expectations

An examination of the state standards shows how the state is working to incorporate components of digital literacy instruction. A review of the current middle school English & Language Arts Texas Essential Knowledge and Skills Statements (TEKS) shows that students are expected to "analyze various digital media venues for levels of formality and informality" (6th grade) and "assess the correct level of formality and tone for successful participation in various digital media" (7th & 8th grade). Furthermore, a review of the recently adopted TEKS (2017) that are to be implemented in the 2019-2020 school year, shows that students are expected to "use print or digital resources to determine the meaning, syllabication, pronunciation, word origin, and part of speech" (6th grade) and "analyze characteristics of multimodal and digital texts" (6th, 7th, & 8th grade). With the state expectations for students to use digital resources and multimodal texts in the classroom, teachers must ensure that they are incorporating these texts into their instruction. Additionally, since some students are expected to take the online version of STAAR, teachers also must find ways to model how to navigate digital tools and accessibility features and ensure students have the opportunity to work with them on a continuing basis.

The middle school technology curriculum has six strands based on the National Educational Technology Standards for Students (NETS•S) and performance indicators developed by the International Society for Technology in Education (ISTE) – creativity and innovation; communication and collaboration; research and information fluency; critical thinking, problem solving, and decision making; digital citizenship; and technology operations and concepts. ISTE formed these standards in 2016 after surveying the education landscape and seeing a need for the standards to reflect the present and the future (Stoeckl, 2016). They also saw a need to ensure students understand being a global citizen is no longer optional (ibid). Technology has many advantages, but also many pitfalls such as being a distraction during learning and hindering students from effectively communicating verbally (ibid). Students need to understand these drawbacks and understand how the digital world works "behind the scenes" in order to be responsible digital citizens (ibid).

In addition, the College and Career Readiness Standards (CCRS) ask for students to "use search engines, databases, and other digital electronic tools effectively to locate information" (p. 29). The standards also state that students use technology to "gather information, organize, manage, and analyze information, communicate and display findings, and use technology appropriately" (p 65). Cross-disciplinary standards require students to be able to transfer knowledge and apply it across the curriculum "using technology" (p. 30). Standards represent the goals for what students should learn. Since there is a growing consensus that students need to be prepared for a 21st century world, the CCRS outlines how students can be successful in a world of incredible connectivity and complexity (Texas College and Career Readiness Standards, 2009).

Conclusion

In this era of digital reading and writing we must now consider a shift to account for the changes in how we read and write and how we teach reading and writing to adolescents. Larson (2013) writes that "contemporary literacy acquisition is most effective when learners have the ability to constantly adapt to an evolving society" (p. 169). Without a doubt, 21st century classrooms need to embrace the variety of tools, strategies, and skills that are available beyond traditional print-based and pencil-and-paper tasks.

Overall, the literature demonstrates that traditional literacy practices have been combined with elements of technology to form digital literacies. Additionally, the literature reveals that teachers' roles are changing and they have a responsibility to ensure that they are embedding digital literacy practices within lessons to provide students with the opportunity to engage with digital reading and writing experiences. The purpose of this study is to establish what teachers believe are the necessary digital literacies required for middle school students and to find out what teaching practices support these necessary literacies. The next chapter will discuss the methodology for this study followed by the results.

CHAPTER III

METHODOLOGY

Through triangulation, this mixed methods study seeks to discover what teachers believe are the necessary digital literacies required for middle school students and to find out what teacher practices are currently being conducted to support these necessary literacies. Based on the findings, a professional development proposal outline is then developed.

Statement Regarding Human Subjects and the Institutional Review Board (IRB)

A preliminary review of the methods for collecting information from human subjects determined that the methods proposed for this study did not meet the federal definition of "human subjects research with generalizable results." As the proposed information gathering methods are within the general scope of activities and responsibilities associated with my current position, I was not required to seek human subjects approval. Please see Appendix C, which is a copy of the email communication regarding the IRB's decision about the study.

Permission to Conduct Research

To conduct research within the district, I was required to submit an outline of my study, a copy of my university proposal, and sign an "Acknowledgement of and Agreement with Criteria for Approving Studies" form. After turning in my paperwork in early April 2017, I met with the district manager of Research and Accountability to discuss the specifics of the study. I then was approved to conduct research on May 19, 2017 with the specification that the data will only be reported in statistical summaries that preclude the identification of the district or any school participating in the study. A copy of my approval letter was omitted to protect the identity of the research site.

Research Questions

To study digital literacy concepts and practices of middle school teachers, four research questions are explored:

1. What classroom digital literacy practices are middle school teachers implementing?
2. What role do teachers feel they serve in a student's digital literacy development?
3. Do teachers think that electronic devices support students with their reading development?
4. Do teachers think that electronic devices help encourage students to be more interested in reading?

Methods

To investigate the research questions stated above, three data collection instruments were developed. The first instrument was a semi-structured interview designed for six secondary instructional coaches. The second instrument was a questionnaire that was administered to a sample of 122 middle school ELA teachers. The third instrument was an observation protocol for classroom practices in six middle school ELA classrooms.

Each instrument is described below with an outline of the participants, development process, and method of data analysis. The chapter concludes with a positionality statement and timeline of data collection activities.

Instructional Coach Interviews

Participants. The instructional coach interview involved six coaches from the district's secondary ELA, literacy, and instructional technology teams. Instructional coaches were invited to participate in person. All the coaches that were approached accepted the invitation to

participate. Two coaches from each team were interviewed in June 2017, which included five females and one male.

Development. The instructional coach interview was designed to address the first research question, "What classroom digital literacy practices are middle school teachers implementing?" and to inform the development of the classroom observation instrument. The main purpose of the interviews was to collect a "numerical aggregation of information from many persons" by conducting semi-structured interviews using open-ended questions (Strake, 2010, p. 95). The interview questions were aligned with the research goals, to understand what digital literacy practices were being observed in secondary classrooms across the district. Each interview took about 30 minutes. The interview questions can be found in Appendix D.

Data analysis. The interviews were recorded using a digital recording device and transcribed using a transcription service via Rev.com. I then read all the transcripts and made notes about my first impressions. I then reread all the transcripts carefully, line by line. Next, I labeled words and phrases I found important and interesting, specifically focusing on items that I found relevant to the study. I then numbered the interviews and created a spreadsheet to enter the codes. The codes were then printed and cut into strips. I then spent significant time grouping and sorting the strips to seek out tentative emerging codes through inductive analysis (Hutchison & Woodward, 2014; Ivy & Johnston, 2013; Strauss & Corbin, 1998; Thomas; 2006). The process required continual refinement and was repeated several times to simulate the process of a peer check.

An initial rubric was then assembled to summarize the information. After the initial coding was complete, the frequency of each code was counted and relationships between categories were considered. The initial rubric and summary can be found in Appendix E. I then

revisited the research questions and removed irrelevant and redundant information, again repeating the process several times to simulate the process of a peer check. A finalized rubric and summary can be found in Appendix F. In the next chapter, the results are presented through descriptive analysis (Ivey & Johnston, 2013).

Teacher Questionnaire

Participants. The teacher questionnaire involved middle school ELA teachers within the district. For reasons of convenience, teachers were invited to complete the questionnaire during a 3-day summer professional development institute for ELA teachers. Out of 160 teachers that attended the institute, 122 accepted the invitation to complete the questionnaire. Teachers were asked to specify the grade levels they taught the previous school year, with some teachers selecting multiple grades. Table 3.1 displays what grade levels were represented in the sample. Column 1 lists the grade level while column 2 displays the numbers of participants in that grade level.

Table 3.1

Teacher Participants by Grade Level

Grade Level	Number of Participants
6th Grade	59
7th Grade	58
8th Grade	48

Teachers were not asked to note their assigned campus on their questionnaire to keep their anonymity and encourage participation. Attendance records from the professional development indicate that over 42 middle schools were represented. Most of the teachers were

from traditional 6-8 middle school campuses, but a few were from campuses that are defined as "other" by the district.

Development. A questionnaire was developed to address the second, third, and fourth research questions, "What role do teachers feel they serve in a student's digital literacy development?"; "Do teachers think that electronic devices support students with their reading development?", and "Do teachers think that electronic devices help encourage students to be more interested in reading?"

The process of developing the questionnaire involved continually revisiting the research questions and referencing information from the instructional coach interviews, previous studies (Coulter, 2001; Hobbs & Tuzel, 2017; Wang, S., Hsu, H., Campbell, T., Coster, D. C., & Longhurst, M., 2014), and a questionnaire shared by Turner and Hicks (2015, pp. 156-160). The questionnaire consists of several sections. The first two questions require the participants to answer demographic questions regarding their teaching and grade assignment. The participants are then asked to complete a checklist that asks for them to indicate items that they have their students read digitally during class. Next, the participants are asked to respond to the question, "How do you usually have your students complete their classwork most of the time?" by responding to a 4-item Likert scale of "usually on paper", "usually on electronic device", "a mixture", or "I don't know". Participants are then asked to respond to two questions regarding electronic devices using a 4-item Likert scale of "more likely", "less likely", "makes no difference", and "I don't know". To gain a better idea of how often teachers use specific digital tools in their classroom, the next section asks for the participants to respond to the question, "How often do your students work with the following digital literacy tools in the classroom?" Nineteen tools are listed along with a 5-item Likert scale of "never", "rarely", "sometimes",

"most of the time", and "always". Moreover, participants are asked to respond to the question, "How important is it for your students to be familiar with the following digital tools?" using the same list of digital tools from the previous question and a 5-item Likert scale of "not important", "slightly important", "moderately important", "important", and "very important". Then, participants are asked to respond to six statements about digital literacy using a 5-item Likert scale of "strongly disagree", "disagree", "undecided", "agree", and "strongly agree". Participants were then asked to respond to the question, "Do you think the nature of reading is changing because of 21st century technologies?" by responding "yes", "no", or "I am not sure". Lastly, participants are asked to respond to the open-ended question, "What are some ways middle school ELA teachers can best support the meaningful use and development of digital literacies?" A copy of the questionnaire can be found in Appendix G.

To check for feasibility and clarity, the questionnaire was piloted with the ELA teachers at one middle school campus in late May 2017. This was a team of teachers that I supported and coached for one year. Teachers were invited to complete the questionnaire at the end of a department meeting. Eight teachers participated in the pilot. All teachers completed the questionnaire using pencil and paper in less than 10 minutes and shared that they understood the questions and found the layout easy to navigate. Teachers were interested in the study and wanted to know more about the topic I was exploring.

After finalizing the teacher questionnaire, I reached out to the Secondary Director of ELA to seek permission to distribute the survey at an upcoming 3-day summer institute being conducted for middle school ELA teachers. The institute was offered twice in the summer, June 19-21, 2017 and July 10-12, 2017. The purpose of this training was to provide teachers with follow up training from the previous summer to continue the work of the district literacy

initiative. Teachers were not required to attend, but highly encouraged. Daily stipends were provided along with follow up support and job-embedded coaching. The Secondary Director of ELA approved the survey and gave permission that it be distributed at the end of the first day of the institute.

To incentivize participation, I elected to purchase gift cards to be awarded at each institute. Each room was set-up to accommodate approximately 24 participants. Before the institute, I met with each facilitator to provide them a box that contained copies of the questionnaire, instructions, a copy of the district approval letter, gift card entry slips, and a bag to place the gift card slips. A copy of the facilitation guide is available in Appendix H. I elected to distribute a paper copy of the questionnaire rather than an electronic version because teachers typically do not bring laptops or devices to district trainings.

After the facilitators read aloud the instructions, teachers were invited to complete the questionnaire. If they elected to participate in the survey, their name was added to a drawing for a 25-dollar Amazon gift card. Two gifts cards were awarded at the June institute while three gift cards were awarded at the July institute, with one card provided for each room of participants. A colleague collected the boxes from each room and then passed them along to me. I received 122 responses.

Data analysis. I created an electronic version of the questionnaire using Qualtrics, a software provided by the university. I then entered each teacher questionnaire into the program, paying careful attention to spot-check for accuracy. If the teacher left questions blank, I did not enter anything.

I then ran several reports using the software, such as a raw score spreadsheet to efficiently filter and work with the data. To better understand and analyze my data, I worked

with a statistics teacher at a magnet high school within the district. We met several times to explore and discuss the data and determine the most appropriate way to address the research questions.

First, bar graphs and charts were created for the initial questions. Then, segmented bar graphs were created to help visualize the relationship between how important teachers thought various tools were versus if they used the tool in their classroom. Spearman's correlation was then calculated to examine the association between teacher rankings for the questions "How important is it for your students to be familiar with the following digital tools?" and "How often do your students work with the following digital literacy tools in your classroom?" Additionally, tables were created to show the distribution of teacher use in the classroom versus teacher opinion on the tool.

The open-ended question on the teacher questionnaire was analyzed to seek out emerging codes through inductive analysis (Hutchison & Woodward, 2014; Ivy & Johnston, 2013; Strauss & Corbin, 1998; Thomas, 2006). I reviewed each response carefully, line by line. I then printed out each comment and sorted them based on emerging themes. The process required continual refinement and was repeated several times to simulate the process of a peer check. After the initial coding was complete, the frequency of each code was counted and relationships between categories were considered. A finalized rubric and summary can be found in Appendix I. Results were summarized and presented through descriptive analysis (Ivey & Johnston, 2013).

Classroom Observations

Participants. Three schools were involved in the classroom observations, with six ELA 8th-grade classrooms being observed. These classrooms were initially selected out of convenience due to having a personal relationship with the principals at each campus.

Classrooms were then recommended by secondary instructional coaches as being classrooms that were engaged in authentic literacy practices, both traditional and digital. The campuses were similar, all having a high percentage of economically disadvantaged students and English Language Learners. All participating campuses have a rating of "met standard" in the 2016-2017 school year and are located in the same region of the district. Principals and teachers were approached to participate in the observation of teaching practices beforehand. Permissions were granted, and classrooms observations were scheduled at time that worked best for each campus.

Development. The decision to observe digital literacy practices in classroom settings allows a comprehensive analysis of the first research question, "What classroom digital literacy practices are middle school teachers implementing?" Strake (2010) acknowledges that many researchers use information that can be seen directly to relate data to the research question. A classroom observation form was developed to address the research question through thick description to support a detailed account of what was observed in each classroom. The classroom observation form has three sections. The first section had an area to capture information such as the date, time, and location of the observation. The second section has a checklist that is aligned to the district middle school literacy initiative while the third section has space for notes to be captured. Copies of the observations can be found in Appendix J.

Data analysis. After visiting the classrooms, I reviewed my notes and then read all the observations carefully, line by line. After rereading the observations, I then labeled words and phrases I found important and interesting, specifically focusing on items that I found relevant to the study. I then numbered the observations and created a spreadsheet to enter my codes. Again, the codes were printed and cut into strips. I then spent significant time grouping and sorting the strips seeking out tentative emerging codes through inductive analysis (Hutchison &

Woodward, 2014; Ivy & Johnston, 2013; Strauss & Corbin, 1998; Thomas, 2006). The process required continual refinement and was repeated several times to simulate the process of a peer check.

After the initial coding was complete, the frequency of each code was counted and relationships between categories were considered. An initial rubric was then assembled to summarize the information. The initial rubric and summary can be found in Appendix K. I then revisited the research questions and removed irrelevant and redundant information, again revisiting the information repeatedly to simulate the process of a peer check. A finalized rubric and summary can be found in Appendix L. Results are presented in the next chapter through descriptive analysis (Ivey & Johnston, 2013).

Positionality Statement

As a secondary literacy instructional coach, I am committed to ensuring that all teachers are engaged in practices that support a balanced approach to literacy, both print-based and digital. I believe that all students should have access to a wide selection of books, both print and digital, in order to read books of their choice and foster a joyful and meaningful reading life. Students deserve to have teachers that support their independent reading through conferring and intervention, as needed. Dialogic classrooms should be set up to promote the respectful exchange of multiple viewpoints to prepare students to be responsible citizens in a democratic society. I also believe that students require teachers who model themselves as readers and writers in all content areas, making their thinking visible as they read and write in traditional and digital methods. However, as a former teacher and campus administrator, I understand the numerous demands placed on classroom teachers, particularly with the pressure of high-stakes testing within an urban school environment. I acknowledge that while I find digital literacy

development to be essential for middle school students, others may not view it as important as other issues within education. I acknowledge that my various experiences as an educator and my personal beliefs about teaching and learning has an impact on the analysis of data for this study.

Timeline of Data Collection Activities

Figure 3.1 includes a timeline of data collection methods. Column one indicates the date of collection, column two the method utilized, and column 3 the validation.

Figure 3.1

Timeline of Data Collection Activities

Date of Collection	Method	Validation
4/10/17	Submitted school district research application	After obtaining IRB approval, I completed the school district application to gain district approval.
5/15/17	Met with the district manager of Research and Accountability to discuss research application	I received an email invitation and followed up with requested information via email.
5/19/17	Obtained approval from the school district to conduct research	I received a letter via email and UPS mail from the Research and Accountability manager granting permission to conduct research.
5/22/17	Conduct pilot test of teacher questionnaire	The teachers completed the questionnaire and provided feedback.
6/5/17	Conduct instructional coach interview	I recorded and transcribed the interview.

Figure 3.1 Continued

Date of Collection	Method	Validation
6/7/17	Conduct instructional coach interview	I recorded and transcribed the interview.
6/12/17	Conduct instructional coach interview	I recorded and transcribed the interview.
6/19/17	Conduct instructional coach interview	I recorded and transcribed the interview.
6/26/17	Conduct instructional coach interview	I recorded and transcribed the interview.
6/29/17	Conduct instructional coach interview	I recorded and transcribed the interview.
June 19, 2017	Distribute and collect teacher questionnaires	I entered each questionnaire into Qualtrics for analysis.
July 10, 2017	Distribute and collect teacher questionnaires	I entered each questionnaire into Qualtrics for analysis.
12/9/17	Conduct classroom observations	I used notes to transcribe into classroom observation form.
2/12/18	Begin working with statistics teacher to analyze teacher questionnaire data	I collected meeting notes and used email to communicate questions and set up appointments.
March 2018	Coded and summarized interview data and classroom observation data	I created a spreadsheet and summarized the data.
4/27/18	I reached out to the district manager of Research and Accountability regarding question about conditions	I received an immediate response.

CHAPTER IV

RESULTS

The purpose of this study is to discover what teachers believe are the necessary digital literacies for middle school students and to find out what teacher practices are currently being conducted to support the necessary literacies. The research questions explored were:

1. What classroom digital literacy practices are middle school teachers implementing?
2. What role do teachers feel they serve in a student's digital literacy development?
3. Do teachers think that electronic devices support students with their reading development?
4. Do teachers think that electronic devices help encourage students to be more interested in reading?

Research Question 1

To determine what digital literacy practices middle school teachers are implementing, data was explored using three data collection instruments – instructional coach interviews, a teacher questionnaire, and classroom observations. The results are discussed below.

Instructional Coach Interviews

Instructional coaches were asked to respond to questions that helped determine what digital literacy practices are taking place in classrooms across the district. The results are presented with the frequency of times it was reported along with examples from the interview data.

Digital citizenship (n = 6). Three out of the six coaches discussed how teachers were incorporating lessons on digital citizenship within their instruction. One coach shared that

students struggle with understanding how to be responsible digital citizens while another expressed the need for students to understand what a digital footprint looks like in the future. Furthermore, one coach shared how she has noticed an increased attention on including opportunities for students to make global connections within the classroom.

Leveled text resources (n = 6). Two coaches shared how they noticed teachers using a variety of digital resources to provide students with differentiated text. The use of I-Station, iLit, Achieve 3000, and NewsELA was noted. This "access to leveled text" provides teachers with the tools to facilitate differentiated instruction.

Benefits (n = 9). Four out of six coaches touched on the benefits of digital literacy and how teachers play a part in its development. For example, a coach shared that we want all our students and teachers to have access to a wide variety of tools, but we also want them to "recognize the benefits and fully embrace the advantages that digital tools afford students" (N. Bell, personal communication, June 29, 2017). Furthermore, the coaches touched on the texts that are available to teachers and how these texts help bring content and ideas into the classroom that otherwise would be inaccessible.

Digital portfolios (n = 9). Two instructional coaches discussed the use of digital portfolios in secondary classrooms. One coach indicated that many students enjoy developing and personalizing digital portfolios while another coach shared that they allow students to "show the best of yourself to the world" (J. Allen, personal communication, June 19, 2017). One coach shared that many colleges are now looking at digital portfolios as part of the admissions process; this allows students to see how they connect to real-world applications (J. Allen, personal communication, June 19, 2017). In one example, the coach shared that a student included videos of himself fixing a car to build a digital portfolio about his mechanical skills (N. Bell, personal

communication, June 29, 2017). The student then turned around to build a second digital portfolio for the family car business. This illustrates how students are navigating the 21st century in meaningful and authentic ways.

Social media (n = 16). Two instructional coaches discussed social media at length. Both coaches stressed the importance of teachers modeling and demonstrating how to carefully consider information before posting it to sites such as Facebook, Instagram, Twitter, or Facebook. Since "everybody can have an opinion" and it is "easy to be duped digitally", it is important for teachers to show students to "vet content" and determine what "lens" social media posts are coming from (S. Montgomery, personal communication, June 7, 2017; N. Bell, personal communication, June 29, 2017). Both coaches discussed what lessons they had seen in classrooms and what resources they noticed the teachers using.

Isolated skills (n = 16). Four out of six coaches discussed how devices help our students read and write across the content areas, but many isolated skills must be addressed by secondary teachers. While we want our students to "graduate knowing how to do spell check", "how to word process a document", "how to find the space bar", how to "keyboard", and "how to use a caps lock", we also want them to move beyond "just the basics" to be better equipped to compete in a global society (D. Simpson, personal communication, June 5, 2017; S. Montgomery, personal communication, June 7, 2017).

Research skills (n = 36). All coaches, except for one, discussed how they have seen teachers address digital research skills in the classroom. Most indicated that this is an area that needs considerable attention as many students "need to know how to search for things online" and "students are very literal when they search for things" (N. Bell, personal communication, June 29, 2017). Often students research topics by going to Google and Wikipedia and this

requires the teachers to model how to “question the validity of sources”, “vet content”, and discuss how to “look at more than one source” (N. Bell, personal communication, June 29, 2018). Sometimes it is matter of explicitly teaching the students to be alert, such as “knowing that the website *The Onion* is satyr”, or by using active questioning strategies to evaluate sources (D. Simpson, personal communication, June 5, 2017).

Barriers and concerns. During the interviews, a variety of topics emerged that went beyond the intended outcome of learning what digital literacy practices teachers were implementing in classrooms. Although not tied to the research questions, the instructional coaches shared a variety of barriers that prevent teachers from implementing authentic digital literacy practices. Since these barriers are related to the research topic, they will be discussed in the next chapter.

Teacher Questionnaire

A variety of questions were included on the teacher questionnaire to address the research question, “What classroom digital literacy practices are middle school teachers implementing?’ First, teachers were provided a list of texts and asked to check off items that they have students read digitally during class.

Table 4.1 lists the results of this question, ordered numerically greatest to least. Column 1 lists the text while column 1 and 2 lists the percent and count of teacher who selected the text.

Table 4.1

Digital Texts Used in Middle School ELA Classrooms

	Percent	Count
News articles	16.63	68

Table 4.1 Continued

	Percent	Count
Any type of fiction, classic or contemporary	13.20	54
Any type of nonfiction, classic or contemporary	12.96	53
Music and lyrics	11.74	48
Poetry, plays, or other expressive works	9.29	38
Essays	6.85	28
Text messages, tweets, or other short digital posts	6.36	26
Letters, messages, notes from other people	5.87	24
Journals	5.62	23
No response	4.89	20
Blogs	4.40	18
Other	2.20	9

News articles appear to be the most frequently used digital text in middle school classrooms, with fiction and nonfiction texts coming in second and third. Music and lyrics are utilized in about 12 percent of the classrooms while short digital posts are explored in about 6 percent of the classrooms. While blogs appear to be the least explored digital text, it appears that around 6 percent of teachers are exploring digital letters and journals.

Next, teachers were asked to respond to the question, “How do you usually have your students complete their classwork most of the time?” The questionnaire asked for teachers to respond in the form of a four-item Likert-scale with choice responses of “usually on paper”, “usually on an electronic device”, “a mixture”, and “I don’t know”. Table 4.2 displays the

results. Column 1 lists the choice response while column 2 and 3 lists the percent and count of teachers who responded to each.

Table 4.2

Teacher Questionnaire, Classwork

	Percent	Count
Usually on paper	64.46	78
Usually on an electronic device	1.65	2
A mixture	33.88	41
Total	100	121

Most teachers, 78 percent, selected that they have their students complete their classwork on paper. Two percent of teachers indicated that they have students complete their classwork on an electronic device. Forty-one percent of the teachers selected that they have their students complete their classwork on paper and an electronic device.

Teachers were then asked look at a list of tools and respond to the question, "How often do your students work with the following digital tool in your classroom?" The questionnaire asked for students to respond in the form of a five-item Likert-scale with choice responses of "never", "rarely", "sometimes", "most of the time", and "always". Table 4.3 displays the results. Column 1 lists the tools along with a brief description as needed while the remainder of the columns represent the choice responses.

Table 4.3

Use of Digital Tools in the Classroom

	Never	Rarely	Sometimes	Most of the time	Always
Word processing	31	35	32	16	6
	(25.83%)	(29.17%)	(26.67%)	(13.33%)	(5.00%)
Internet	14	19	53	27	8
	(11.57%)	(15.70%)	(43.80%)	(22.31%)	(6.61%)
Computer basics	27	28	40	18	6
	(22.69%)	(23.53%)	(33.61%)	(15.13%)	(5.04%)
E-mail	48	27	35	5	2
	(41.03%)	(23.08%)	(29.91%)	(4.27%)	(1.71%)
Spreadsheets	62	37	16	4	1
	(51.67%)	(30.83%)	(13.33%)	(3.33%)	(0.83%)
Graphics/design	60	31	23	5	2
	(49.59%)	(25.62%)	(19.01%)	(4.13%)	(1.65%)
Scanners	83	28	6	0	0
	(70.94%)	(23.93%)	(5.13%)	(0.00%)	(0.00%)
Publishing programs	68	28	17	6	0
	(57.14%)	(23.53%)	(14.29%)	(5.04%)	(0.00%)
Presentation software	30	25	50	14	2
	(24.79%)	(20.66%)	(41.32%)	(11.57%)	(1.65%)

Table 4.3 Continued

	Never	Rarely	Sometimes	Most of the time	Always
Digital pen	88	23	5	3	0
	(73.95%)	(19.33%)	(4.20%)	(2.52%)	(0.00%)
Podcasts	85	25	6	3	0
	(71.43%)	(21.01%)	(5.04%)	(2.52%)	(0.00%)
Google docs	50	25	32	10	2
	(42.02%)	(21.01%)	(26.89%)	(8.40%)	(1.68%)
One Note	83	21	10	2	1
	(70.94%)	(17.95%)	(8.55%)	(1.71%)	(0.85%)
Video editing software	85	22	8	2	0
	(72.65%)	(18.80%)	(6.84%)	(1.71%)	(0.00%)
Digital cameras	69	16	28	6	1
	(57.50%)	(13.33%)	(23.33%)	5.00%)	(0.83%)
Blogs	65	33	16	5	0
	(54.62%)	(27.73%)	(13.45%)	(4.20%)	(0.00%)
Cell phones/smart phones	13	19	53	21	13
	(10.92%)	(15.97%)	(44.54%)	(17.65%)	(10.92%)
iPads/iPad minis/tablets/e-Reader/Kindle	33	21	40	16	9
	(27.73%)	(17.65%)	(33.61%)	(13.45%)	(7.56%)
District LMS	35	27	30	20	8
	(29.17%)	(22.50%)	(25.00%)	(16.67%)	(6.67%)

To better understand the data, Table 4.4 below illustrates digital tools that the teachers indicated that they sometimes use, ranked greatest to least. Column 1 lists the tool while column 2 and 3 lists the percent and count.

Table 4.4

Digital Tools Sometime Used, Ranked Greatest to Least

	Percent	Count
Internet	44.54	53
Cell phones/smart phones	44.54	53
Presentation software	41.32	50
Computer basics	33.61	40
iPads/iPad minis/tablets/e-Reader/Kindle	33.61	40
E-mail	29.91	35
Word processing	26.89	32
Google docs	26.67	32
District LMS	25.00	30
Digital cameras	23.33	28
Graphics/design	19.01	23
Publishing programs	14.29	17
Spreadsheets	13.45	16
Blogs	13.33	16
One Note	8.55	10

Table 4.4 Continued

	Percent	Count
Video editing software	6.84	8
Scanners	5.13	6
Podcasts	5.04	6
Digital pen	4.20	5

Around 44 percent of the teachers sometimes use the Internet and cell phones during instruction while about 34 percent have students work with computer basics and the district LMS resource. About 19 percent of the teachers sometimes use graphic and design software while about 13 percent sometimes use spreadsheets and blogs. It appears that less than 10 percent of the teachers sometimes use tools such as One Note, video editing software, scanners, podcasts, and digital pens.

If we look closely at the tools that teachers always use, we see differences. Table 4.5 below illustrates digital tools that the teachers indicated that they always use. The data is ordered greatest to least. Column 1 lists the tool while column 2 and 3 lists the percent and count.

Table 4.5

Digital Tools Always Used, Ranked Greatest to Least

	Percent	Count
Cell phones/smart phones	10.92	13
iPads/iPad minis/tablets/e-Reader/Kindle	7.56	9

Table 4.5 Continued

	Percent	Count
Internet	6.61	8
District LMS	6.67	8
Word processing	5.00	6
Computer basics	5.04	6
E-mail	1.71	2
Graphics/design	1.65	2
Presentation software	1.65	2
Google docs	1.68	2
Spreadsheets	0.83	1
One Note	0.85	1
Digital cameras	0.83	1
Scanners	0.00	0
Publishing programs	0.00	0
Digital pen	0.00	0
Podcasts	0.00	0
Video editing software	0.00	0
Blogs	0.00	0

Cell phones are always used by about 11 percent of the teachers while iPad devices are always used by 9 percent of the teachers. Scanners, publishing programs, digital pens, podcasts, video editing software, and blogs are not always used by any of the teachers.

Moreover, if we look closely at the tools that teachers never use, we discover additional results. Table 4.6 below illustrates digital tools that the teachers indicated that they never use. The data is presented greatest to least. Column 1 lists the tool while column 2 and 3 lists the percent and count.

Table 4.6

Digital Tools Never Used, Ranked Greatest to Least

	Percent	Count
Digital pen	73.95	88
Podcasts	71.43	85
Video editing software	72.65	85
Scanners	70.94	83
One Note	70.94	83
Digital cameras	57.50	69
Publishing programs	57.14	68
Blogs	54.62	65
Spreadsheets	51.67	62
Graphics/design	49.59	60
Google docs	42.02	50
E-mail	41.03	48

Table 4.6 Continued

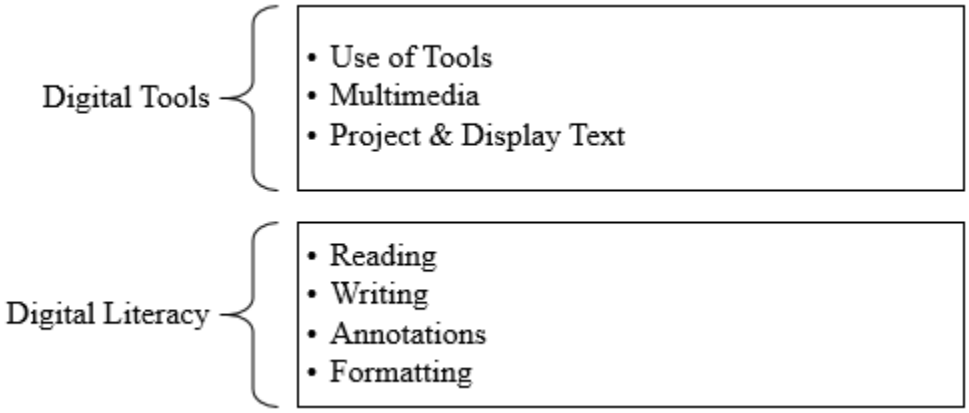
	Percent	Count
District LMS	29.17	35
iPads/iPad minis/tablets/e-Reader/Kindle	27.73	33
Word processing	25.83	31
Presentation software	24.79	30
Computer basics	22.69	27
Internet	11.57	14
Cell phones/smart phones	10.92	13

It appears that over 70 percent of the teachers never use One Note, scanners, video editing software, podcasts, or digital pens. Furthermore, over fifty percent never use tools such as spreadsheets, blogs, publishing programs, or digital cameras. It also is important to note that almost 30 percent never use the district LMS, the main source of content delivery in district high school classrooms.

Classroom Observations

Classrooms were also observed to address the first research question. The results are presented with the frequency of times it was reported along with examples. Two categories will be presented – digital tools and digital literacy. Figure 4.1 displays the categories and subcategories that will be discussed.

Figure 4.1 Classroom Observation Categories



Digital Tools Observed in the Classroom

All the classrooms were observed using digital tools. A discussion follows that discusses how teachers and student were observed using tools, how multimedia was involved, and how teachers projected and displayed texts for students.

Multimedia (n = 6). In two of the six classrooms, teachers were using videos, such as commercials, to discuss persuasive techniques. One teacher turned on the closed captioning function while the other paused the video to model thinking and invite the students to share their thinking.

Use of tools (n = 8). Several tools were observed in the classrooms. While some of the classrooms were using tools to manage the classroom, some were using tools to facilitate and document learning. One teacher took pictures of the students while they conducted a Gallery Walk and then posted them to a school Twitter account.

Project and display text (n = 11). Teachers in five of the six classrooms used tools to project and display text for whole group instruction. Most of the teacher used a Smart Board while one teacher used a document camera. Then, in one classroom, a teacher projected and displayed text using a laptop with a small group for the purposes of reteaching.

Digital Literacy Practices Observed in the Classroom

Four out of six classroom were involved in digital literacy practices. A discussion follows that discusses how the teachers and students were observed reading, writing, annotating, and formatting digitally.

Reading (n = 3). Students were observed reading digitally in two classrooms. One classroom had students use laptops to read articles using the Achieve 3000 program. Students were assigned an article by the teacher and the system used their reading achievement data to provide them with the article at their individual reading level. Another teacher had students reading articles that were assigned and uploaded to a class website. Each student downloaded their assigned article to their laptop before reading and annotating.

Formatting (n = 4). Two out of six classrooms were observed formatting; or manipulating; text. In one class, a teacher modeled how to scroll down a page and adjust a content box by zooming in to make the text size larger. In the other class, students were observed downloading articles and saving them to their folder. This allowed them to edit and format the document. Students were observed asking the teacher for assistance with formatting.

Writing (n = 8). In three of the six classrooms, students were observed digitally writing. In one classroom, a small group of students were seen reading independently and making notes in a digital dialectical journal. In another class, students were seen reading a digital text and writing comments and questions using comment boxes. Furthermore, one teacher was observed

using a digital pen to write sentence stems on the Smart Board and model how to start a paragraph. The same teacher invited students to respond to a writing prompt on the class discussion board and respond to a classmate. All students were then observed typing a paragraph onto the class discussion board and then reading and responding to the posts written by their peers.

Annotations (n = 8). Students and teachers were observed digitally annotating documents in three out of six classrooms. In one classroom, students were observed using digital highlighters and comment boxes. Students in another classroom were also observed using digital highlighting and underlining tools. Teachers and students were observed marking text using other annotation tools such as text boxes and text codes (i.e., checkmarks, stars, exclamation mark, hashtags, and asterisks).

In general, research question one was addressed through the instructional coach interviews, teacher questionnaire, and classroom observations. The data collected from the various instruments indicate that teachers are using a variety of digital tools, although inconsistently. The next chapter will explore this question further and offer additional insights and recommendations. Below you will find a discussion regarding research question two.

Research Question 2

To determine what role teachers feel they serve in a student's digital literacy development, data was explored using the teacher questionnaire data. Teachers were first asked to respond to the question, "How important it is for your students to be familiar with the following tool?" The questionnaire asked for students to respond in the form of a five-item Likert-scale with choice responses of "not important", "slightly important", "moderately

important", "important", and "very important". Table 4.7 displays the results. Column 1 lists the tools while the remainder of the columns represent the choice responses.

Table 4.7

Teacher Questionnaire, Importance of Digital Tools

	Not important	Slightly important	Moderately important	Important	Very important
Word processing	4	8	11	41	56
	(3.33%)	(6.67%)	(9.17%)	(34.17%)	(46.67%)
Internet	4	1	4	46	66
	(3.31%)	(0.83%)	(3.31%)	(38.02%)	(54.55%)
Computer basics	5	3	3	46	64
	(4.13%)	(2.48%)	(2.48%)	(38.02%)	(52.89%)
E-mail	8	5	17	45	45
	(6.67%)	(4.17%)	(14.17%)	(37.50%)	(37.50%)
Spreadsheets	19	11	27	38	25
	(15.83%)	(9.17%)	(22.50%)	(31.67%)	(20.83%)
Graphics/design	16	18	31	34	20
	(13.45%)	(15.13%)	(26.05%)	(28.57%)	(16.81%)
Scanners	19	27	27	31	16
	(15.83%)	(22.50%)	(22.50%)	(25.83%)	(13.33%)
Publishing programs	20	24	25	33	16
	(16.95%)	(20.34%)	(21.19%)	(27.97%)	(13.56%)

Table 4.7 Continued

	Not important	Slightly important	Moderately important	Important	Very important
Presentation software	5	9	15	40	50
	(4.20%)	(7.56%)	(12.61%)	(33.61%)	(42.02%)
Digital pen	32	22	27	28	10
	(26.89%)	(18.49%)	(22.69%)	(23.53%)	(8.40%)
Podcasts	26	26	25	32	10
	(21.85%)	(21.85%)	(21.01%)	(26.89%)	(8.40%)
Google docs	11	12	24	43	30
	(9.17%)	(10.00%)	(20.00%)	(35.83%)	(25.00%)
One Note	27	27	22	28	13
	(23.08%)	(23.08%)	(18.80%)	(23.93%)	(11.11%)
Video editing software	26	32	21	30	9
	(22.03%)	(27.12%)	(17.80%)	(25.42%)	(7.63%)
Digital cameras	19	21	33	31	16
	(15.97%)	(17.50%)	(27.50%)	(25.83%)	(13.33%)
Blogs	19	27	27	35	11
	(15.97%)	(22.69%)	(22.69%)	(29.41%)	(9.24%)
Cell phones/smart phones	7	6	17	43	46
	(5.88%)	(5.04%)	(14.29%)	(36.13%)	(38.66%)
iPads/iPad minis/tablets/e-Reader/Kindle	7	7	18	46	41
	(5.88%)	(5.88%)	(15.13%)	(38.66%)	(34.45%)

Table 4.7 Continued

	Not important	Slightly important	Moderately important	Important	Very important
District LMS	11	9	19	44	37
	(9.17%)	(7.50%)	(15.83%)	(36.67%)	(30.83%)

To better understand the data, Table 4.8 below illustrates digital tools that the teachers indicated as important, ranked greatest to least. Column 1 lists the tool while column 2 and 3 lists the percent and count.

Table 4.8

Digital Tools Rated as Important by Teachers, Ranked Greatest to Least

	Percent	Count
Internet	38.02	46
Computer basics	38.02	46
iPads/iPad minis/tablets/e-Reader/Kindle	38.66	46
E-mail	37.50	45
District LMS	36.67	44
Google docs	35.83	43
Cell phones/smart phones	36.13	43
Word processing	34.17	41
Presentation software	33.61	40
Spreadsheets	31.67	38

Table 4.8 Continued

	Percent	Count
Blogs	29.41	35
Graphics/design	28.57	34
Publishing programs	27.97	33
Podcasts	26.89	32
Scanners	25.83	31
Digital cameras	25.83	31
Video editing software	25.42	30
Digital pen	23.53	28
One Note	23.93	28

This table demonstrates that almost 40 percent of the teachers rated the Internet, computer basics, iPads, email, and the district LMS as important. Furthermore, cell phones, word processing, and presentation software were selected by about 30 percent of the teachers as important. The remainder of the tools were rated as important by 23 to 30 percent of the teachers.

Additionally, when we look at what teachers rated as very important, we discover further results. Table 4.9 below illustrates digital tools that the teachers indicated as very important. The data is presented greatest to least. Column 1 lists the tool while column 2 and 3 lists the percent and count.

Table 4.9

Digital Tools Rated as Very Important by Teachers, Ranked Greatest to Least

	Percent	Count
Internet	54.55	66
Computer basics	52.89	64
Word processing	46.67	56
Presentation software	42.02	50
Cell phones/smart phones	38.66	46
E-mail	37.50	45
iPads/iPad minis/tablets/e-Reader/Kindle	34.45	41
District LMS	30.83	37
Google docs	25.00	30
Spreadsheets	20.83	25
Graphics/design	16.81	20
Scanners	13.33	16
Publishing programs	13.56	16
Digital cameras	13.33	16
One Note	11.11	13
Blogs	9.24	11
Digital pen	8.40	10
Podcasts	8.40	10

Table 4.9 Continued

	Percent	Count
Video editing software	7.63	9

The data indicates that over 50 percent of the teachers believe that the Internet and computer basics are very important. Furthermore, between 30 to 40 percent of the teachers ranked word processing, presentation software, cell phones, email, and iPads, and the district LMS as very important. Over 25 percent teachers indicated that Google docs are very important while 20 percent of the teachers think spreadsheets are very important.

Furthermore, Spearman's correlation was calculated to examine the association between teacher rankings for the questions "How important is it for your students to be familiar with the following digital tools?" and "How often do your students work with the following digital literacy tools in your classroom?" for each of the digital tools below, ordered by strongest to weakest correlation. Table 4.10 presents the findings below.

Table 4.10

Correlation between Opinion about Importance and Use in Classroom

Digital Tool	Result
Cell Phones/smart phones	.40142 (P-value < .0001)
District LMS	.36246 (P-value < .0001)
Graphics/design	.36093 (P-value < .0001)
Google docs	.35011 (P-value = .0001)
Publishing programs	.32931 (P-value = .0003)

Table 4.10 Continued

Digital Tool	Result
Spreadsheets	.32886 (P-value = .0002)
Blogs	.32261 (P-value = .0003)
Digital cameras	.31724 (P-value = .0004)
iPads/iPad minis/tablets/e-Reader/Kindle	.31382 (P-value = .0005)
One Note	.30077 (P-value = .0011)
Digital pen	.26783 (P-value = .0034)
Word processing	.26778 (P-value = .0031)
E-mail	.26055 (P-value = .0046)
Video editing software	.24895 (P-value = .007)
Computer basics	.19689 (P-value = .0319)
Internet	.18615 (P-value = .0409)
Presentation software	.16900 (P-value = .0662)
Podcasts	.16629 (P-value = .0707)
Scanners	.15077 (P-value = .1047)

We can see from the table that the correlation between teachers' opinions about a digital tool's importance and their use of it in class was significantly different from 0 (at a .05 significance level) for all the digital tools except for presentation software, podcasts, and scanners. For the tools that did have a significant correlation, that correlation was weak. The

strongest correlations between teacher opinion and use of digital tools were for cell phones/smart phones, the LMS, and graphics/design. These three tools will be highlighted below.

Cell Phones/smart phones. Since cell phones appeared to be a tool that resulted in thought-provoking results, we will we will further examine the relationship between teachers' opinions about the importance of student familiarity with cell phones/smart phones and student use of cell phones/smart phones in these teachers' classes.

Table 4.11 shows the distribution of student use of cell phones and/or smart phones in class contingent on teacher opinion about the importance of student familiarity with cell phones and/or smart phones.

Table 4.11

Distribution of Student Use vs. Teacher Opinion, Cell phones/smart phones

	Not important	Slightly important	Moderately important	Important	Very important	Total
Never	4 (57.14%)	0 (0%)	1 (5.88%)	7 (16.28%)	1 (2.17%)	13
Rarely	1 (14.29%)	3 (50%)	5 (29.41%)	6 (13.95%)	4 (8.7%)	19
Sometimes	2 (28.57%)	3 (50%)	9 (52.94%)	18 (41.86%)	21 (45.65%)	53
Most of the time	0 (0%)	0 (0%)	1 (5.88%)	9 (20.93%)	11 (23.91%)	21
Always	0 (0%)	0 (0%)	1 (5.88%)	3 (6.98%)	9 (19.57%)	13
Total	7 (100%)	6 (100%)	17 (100%)	43 (100%)	46 (100%)	119

When we examine the relationship we notice that, in general, the more important a teacher said it was for students to be familiar with cell phones and/or smart phones, the more

often they said they used it in their classroom. We are unable to do a Chi-Square Test for an association because many of the expected counts are below 5, but we know that the Spearman's Correlation of .40142 was significantly different from 0 so it seems reasonable that this general trend could be applied to other teachers like the ones surveyed.

Of those who said it is "not important" for students to be familiar with cell phones and smart phones, 57.14 percent never use it in class, 14.29 percent rarely use it in class, 28.57 percent sometimes use it in class, 0 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is "slightly important" for students to be familiar with cell phones and smart phones, 0 percent never use it in class, 50 percent rarely use it in class, 50 percent sometimes use it in class, 0 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is "moderately important" for students to be familiar with cell phones and smart phones, 5.88 percent never use it in class, 29.41 percent rarely use it in class, 52.94 percent sometimes use it in class, 5.88 percent most of the time use in class, and 5.88 percent always use it in class. Of the people who said it is "important" for students to be familiar with cell phones and smart phones, 16.28 percent never use it in class, 13.95 percent rarely use it in class, 41.86 percent sometimes use it in class, 20.93 percent most of the time use in class, and 6.98 percent always use it in class. Of the people who said it is "very important" for students to be familiar with cell phones and smart phones, 2.17 percent never use it in class, 8.7 percent rarely use it in class, 45.65 percent sometimes use it in class, 23.91 percent most of the time use in class, and 19.57 percent always use it in class.

District LMS. Since the district LMS is a tool that all teachers are strongly encouraged to use, we will further examine the relationship between teachers' opinions about the importance of student familiarity with the LMS and student use of the LMS in these teachers' classes.

Table 4.12 shows the distribution of student use of the LMS in class contingent on teacher opinion about the importance of student familiarity with the "LMS."

Table 4.12

Distribution of Student Use vs. Teacher Opinion, District LMS

	Not Important	Slightly Important	Moderately Important	Important	Very Important	Total
Never	6 (54.55%)	3 (33.33%)	6 (31.58%)	16 (36.36%)	4 (10.81%)	35
Rarely	3 (27.27%)	5 (55.56%)	5 (26.32%)	7 (15.91%)	7 (18.92%)	27
Sometimes	1 (9.09%)	1 (11.11%)	5 (26.32%)	10 (22.73%)	13 (35.14%)	30
Most of the time	1 (9.09%)	0 (0%)	3 (15.79%)	10 (22.73%)	6 (16.22%)	20
Always	0 (0%)	0 (0%)	0 (0%)	1 (2.27%)	7 (18.92%)	8
Total	11 (100%)	9 (100%)	19 (100%)	44 (100%)	37 (100%)	120

The table shows the distribution of student use of the LMS in class contingent on teacher opinion about the importance of student familiarity with the "LMS." When we examine the relationship we notice that, in general, the more important a teacher said it was for students to be familiar with the LMS, the more often they said they used it in their classroom. We are unable to do a Chi-Square Test for an association because many of the expected counts are below 5, but we know that the Spearman's Correlation of .36246 was significantly different from 0 so it seems reasonable that this general trend could be applied to other teachers like the ones surveyed. Of the people who said it is "not important" for students to be familiar with the LMS,54.55 percent never use it in class, 27.27 percent rarely use it in class, 9.09 percent sometimes use it in

class, 9.09 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is "slightly important" for students to be familiar with the LMS, 33.33 percent never use it in class, 55.56 percent rarely use it in class, 11.11 percent sometimes use it in class, 0 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is "moderately important" for students to be familiar with the LMS, 31.58 percent never use it in class, 26.32 percent rarely use it in class, 26.32 percent sometimes use it in class, 15.79 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is "important" for students to be familiar with the LMS, 36.36 percent never use it in class, 15.91 percent rarely use it in class, 22.73 percent sometimes use it in class, 22.73 percent most of the time use in class, and 2.27 percent always use it in class. Of the people who said it is "very important" for students to be familiar with the LMS, 10.81 percent never use it in class, 18.92 percent rarely use it in class, 35.14 percent sometimes use it in class, 16.22 percent most of the time use in class, and 18.92 percent always use it in class.

Digital graphics/design. Digital graphics/designs appeared to be a tool that also resulted in noteworthy results, hence, we will we will further examine the relationship between teachers' opinions about the importance of student familiarity with digital graphics/designs and student use of digital graphics/designs in these teachers' classes.

Table 4.13 shows the distribution of student use of digital graphics and/or design in class contingent on teacher opinion about the importance of student familiarity with digital graphics and/or design.

Table 4.13

Distribution of Student Use vs. Teacher Opinion, Digital graphics and/or design

	Not Important	Slightly Important	Moderately Important	Important	Very Important	Total
Never	13 (81.25%)	11 (61.11%)	19 (61.29%)	11 (32.35%)	6 (30%)	60
Rarely	1 (6.25%)	6 (33.33%)	7 (22.58%)	11 (32.35%)	6 (30%)	31
Sometimes	0 (0%)	1 (5.56%)	5 (16.13%)	10 (29.41%)	5 (25%)	21
Most of the time	2 (12.5%)	0 (0%)	0 (0%)	1 (2.94%)	2 (10%)	5
Always	0 (0%)	0 (0%)	0 (0%)	1 (2.94%)	1 (5%)	2
Total	16 (100%)	18 (100%)	31 (100%)	34 (100%)	20 (100%)	119

When we examine the relationship we notice that, in general, the more important a teacher said it was for students to be familiar with digital graphics and/or design, the more often they said they used it in their classroom. We are unable to do a Chi-Square Test for an association because many of the expected counts are below 5, but we know that the Spearman's Correlation of .36093 was significantly different from 0 so it seems reasonable that this general trend could be applied to other teachers like the ones surveyed.

Of the people who said it is "not important" for students to be familiar with digital graphics and/or design, 81.25 percent never use it in class, 6.25 percent rarely use it in class, 0 percent sometimes use it in class, 12.5 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is "slightly important" for students to be familiar with digital graphics and/or design, 61.11 percent never use it in class, 33.33 percent rarely use it

in class, 5.56 percent sometimes use it in class, 0 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is “moderately important” for students to be familiar with digital graphics and/or design, 61.29 percent never use it in class, 22.58 percent rarely use it in class, 16.13 percent sometimes use it in class, 0 percent most of the time use in class, and 0 percent always use it in class. Of the people who said it is “important” for students to be familiar with digital graphics and/or design, 32.35 percent never use it in class, 32.35 percent rarely use it in class, 29.41 percent sometimes use it in class, 2.94 percent most of the time use in class, and 2.94 percent always use it in class. Of the people who said it is “very important” for students to be familiar with digital graphics and/or design, 30 percent never use it in class, 30 percent rarely use it in class, 25 percent sometimes use it in class, 10 percent most of the time use in class, and 5 percent always use it in class.

Additional tools will be highlighted in the next chapter. Below you will find two additional questions that were explored to address research question two. Teachers were asked to respond to the question, “Do you think the nature of reading is changing because of 21st century technologies?” Teachers were asked to respond to the question by answering yes, no, or I am not sure. Table 4.14 displays the results of the questions. Column 1 lists the response while column 2 and 3 lists the percent and count of teachers who selected the response.

Table 4.14

Teacher Questionnaire, Teacher Response to Nature of Reading Question

	Percent	Count
Yes	90.91	110
No	2.48	3

Table 4.14 Continued

	Percent	Count
I am not sure.	6.61	8

Over 90 percent of the teachers understand that the nature of reading is changing because of 21st century technologies. About 3 percent of the teachers do not think the nature of reading is changing because of 21st century technologies while about 7 percent are not sure. Also, teachers were asked to respond to statements in the form of a five-item Likert-scale with choice responses of never, rarely, sometimes, most of the time, and always. Table 4.15 displays the results. Column 1 lists the statement while the remaining columns display the results.

Table 4.15

Teacher Questionnaire, Teacher Responses to Digital Literacy Statements

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I have a responsibility to equip my middle school students with the digital literacy skills they need.	3 (2.48%)	5 (4.13%)	18 (14.88%)	63 (52.07%)	32 (26.45%)
I have received support from the district in developing my own digital literacy skills to take back to my classroom.	12 (10.00%)	45 (37.50%)	25 (20.83%)	28 (23.33%)	10 (8.33%)
I would like training in developing my digital literacy skills.	2 (1.65%)	6 (4.96%)	5 4.13%)	72 (59.50%)	36 (29.75%)
I know what digital literacy skills my students need to be successful in a high school one-to-one device environment.	7 (5.79%)	24 (19.83%)	26 (21.49%)	46 (38.02%)	18 (14.88%)

Table 4.15 Continued

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I know what digital literacy skills my students need to be college and/or career ready.	1 (0.83%)	1 (0.83%)	3 (2.48%)	48 (39.67%)	68 (56.20%)
It is important to develop students' digital literacy skills.	1 (0.83%)	1 (0.83%)	3 (2.48%)	48 (39.67%)	68 (56.20%)

About 79 percent of the teachers agree or strongly agree that they have a responsibility to equip middle school students with the digital literacy skills that they need. Moreover, about 96 percent of the teachers believe that it is important to develop students' digital literacy skills. Ninety-six percent of teachers agree or strongly agree that they know what digital literacy skills students need to be college and/or career ready. It is important to note that the data demonstrates that teachers are interested in received more training with 89 percent of the teachers indicated that they would like more training. This will be discussed in the next chapter.

Open-Ended Question

Lastly, teachers were asked to respond to the open-ended question, "What are some ways middle school ELA teachers could best support the meaningful use and development of digital literacies?" Out of 122 collected questionnaires, 98 teachers elected to respond to the open-ended question. Some of the responses were coded with multiple codes. The following categories emerged – teacher actions, access to resources, professional development, district

LMS, and teacher concerns. The results are presented with the frequency of times it was reported along with examples from the teacher responses.

Teacher actions (n = 53). Most of the teachers responded directly to the question by sharing how they could best support the meaningful use and development of digital literacies. The teachers expressed the need to incorporate more opportunities for students to use digital tools. One teacher shared that "we need to use digital technologies to meet the reading and writing TEKS" while another teacher stated that there is a need to add more "choice" and "opportunities for students to engage with digital assignments". Another teacher provided specific examples of tools they would like to increase in their classroom such as Google docs, Glogster, email writing, and multimedia projects. Additionally, teachers expressed the need to model digital reading and writing and ensure that students are also reading digital books during independent reading time. A few teachers expressed the need to expose middle students to certain tasks, such as turning in assignments via the district LMS, to expose them to what they would experience in the one-to-one environment in high school.

Access to resources (n = 36). Many of the teachers expressed the need for resources in middle school. One teacher wrote, "In order for middle school ELA teachers to support digital literacy development, they must have readily accessible digital resources". Another teacher explained by stating, "The biggest challenge I've faced in incorporating digital literacy in my classroom is not having consistently available equipment and equitable access to one-on-one technology in my classroom". Likewise, one teacher shared, "We can't prepare our students without the tools we need" while another teacher stated, "We need to get students involved with reading and analyzing digital text, but we need the resources to do so".

Professional development (n = 14). Teachers expressed the desire for training related to digital literacy and technology integration. One teacher shared, "We must be up-to-date about technology" while another one wrote that teachers need "more technology classes specifically geared for middle school". Another teacher asked, "How can we expect students to be successful with the digital resources if we can't be successful ourselves?"

District LMS (n = 6). Several teachers mentioned the district LMS as a place to include "embedded" lessons and connections to technology. One teacher wrote that the LMS needs "technology lessons written within the master courses".

Teacher concerns (n = 5). A few teachers shared concerns. One teacher expressed reluctance to implement digital literacy lessons within the classroom because "I don't believe it is the first thing I should try and support as a middle school ELA teacher". Another stated that the district LMS is "ineffective and inefficient" and stated that students are "too easily distracted" to focus on lessons that involve technology. In addition, a teacher discussed the problems that arise in the classroom when students are on laptops. For example, the teacher shared that "kids want to roam the Internet", engage in the "deliberate destruction of equipment", and "copy from the Internet".

In general, research question two was addressed through the teacher questionnaire. The next chapter will explore this question further to offer insights and recommendations. Below you will find a discussion regarding research question three and four.

Research Question 3

To determine whether teachers think that electronic devices support students with their reading development, a question was included on the teacher questionnaire. Teachers were asked to respond to the question, "Do you think electronic devices make students more or less

likely to read better overall?" The questionnaires asked for teachers to respond in the form of a 4-item Likert-scale with choice responses of "more likely", "less likely", "makes no difference", and "I don't know". Table 4.16 displays the results below. Column 1 lists the choice responses while column 2 and 3 lists the percent and count of teachers who responded to each.

Table 4.16

Teacher Questionnaire Results to Address Research Question 3

	Percent	Count
More likely	52.89	64
Less Likely	16.53	20
Makes no difference	10.74	13
I don't know	19.83	24
Total	100	121

Research Question 4

To determine whether teachers think electronic devices help encourage students to be more interested in reading, a question was included on the teacher questionnaire. Teachers were asked to respond to the question, "Do you think using electronic devices make students likely to be interested in what they read?" The questionnaire asked for teachers to respond in the form a 4-item Likert-scale with choice responses of "more likely", "less likely", "makes no difference", and "I don't know".

Table 4.17 displays the results below. Column 1 lists the choice responses while column 2 and 3 lists the percent and count of teachers who responded to each.

Table 4.17

Teacher Questionnaire Results to Address Research Question 4

	Percent	Count
More likely	70.25	85
Less Likely	4.96	6
Makes no difference	14.05	17
I don't know	10.74	13
Total	100	121

Summary

In this chapter we explored the four research questions to discover what teachers believe are the necessary digital literacies for middle school students and to find out what teacher practices are currently being conducted to support the necessary literacies. The next chapter will discuss conclusions and recommendations.

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter will summarize the record of study and explain the researcher's findings. The chapter will conclude by sharing implications and recommendations for further study. In addition, final reflection notes will be shared to illustrate what lessons were learned during the study and how the researcher plans to move forward.

Summary

The purpose of this study was to discover what middle school ELA teachers believe are the necessary digital literacies required for middle school students and to find out what teacher practices are currently being conducted to support theses necessary literacies. The following research question were explored:

1. What classroom digital literacy practices are middle school teachers implementing?
2. What role do teachers feel they serve in a student's digital literacy development?
3. Do teachers think that electronic devices support students with their reading development?
4. Do teachers think that electronic devices help encourage students to be more interested in reading?

Three data collection instruments were developed to address the research questions – an interview schedule designed for secondary instructional coaches, a teacher questionnaire for middle school ELA teachers, and an observation schedule to observe classroom practices in middle school ELA classrooms. The previous chapter outlines the results of the study.

Conclusions

First and foremost, the data suggests that teachers understand that they play a critical role in the development of digital literacies with over 96 percent of the teachers reporting that they believe it is important to develop students' digital literacy skills. Also, about 79 percent of the teachers agree or strongly agree that they have a responsibility to equip middle school students with the digital literacy skills that they need. Furthermore, it is interesting to know that teachers understand that electronic devices assist with student engagement. With over 70 percent of the teachers reporting that electronic devices are more likely to help students to be interested in what they read, this is encouraging. In addition, since over 90 percent of the teachers reported that they understand the nature of reading in changing because of 21st century technologies, we can infer that teachers understand reading instruction needs to be adjusted to account for these new literacies.

The highlight of this study was visiting middle school ELA classrooms and seeing the work that was happening with teachers and students, not only with digital literacy, but in regard to the district middle school literacy initiative. Although this study did not intend to study literacy practices and routines within middle school ELA classrooms, it appeared that teachers are engaged in the practices that are recommended through the district curriculum and literacy initiatives – facilitation of modeled thinking, read aloud/think alouds, small group instruction, independent reading where students are reading books of their choice, classroom discussion, peer collaboration, modeled writing, and the use of the district curriculum. Plus, all the observed classrooms were welcoming, inclusive, objective and student-centered, and maximizing instructional time. Although we must consider that these classrooms were deemed "model" classrooms by principals and instructional coaches, it is exciting to see these practices taking

place within middle school ELA classrooms. The hope is that these model teachers are collaborating with other teachers on the campus to ensure that all students are receiving the benefit of effective Tier I instruction.

Moreover, when you see that students working with digital texts that are differentiated by their reading level, you realize the immense power that these tools provide our classrooms. Seeing students working with authentic text and making entries into dialectical journals was probably the most exciting practice to see in action. It was also exciting to hear about how teachers were having students create and curate digital portfolios.

However, it appears that students may not be engaged in digital reading and writing consistently. When 64 percent of teachers elect to have assignments completed exclusively on paper, you wonder how digital literacy integration is occurring within middle school classrooms throughout the district. Since we can generalize the results of this study in this setting, we can reflect on the impact of this data. When we consider that there are 33,357 middle school students ("Facts and Figures," n.d.) within the district, that is approximately 21,348 students who are completing assignments exclusively on paper. This may not be in alignment with the goals of the district, considering there have been such substantial investments implemented through the district literacy and technology initiatives and the fact that the district aims to produce global graduates who are prepared for college and/or career.

Furthermore, as the most popular digital text, online news articles, are only used by 17 percent of the teachers, it is a cause for concern as to whether the students are going to develop important digital literacy skills in classrooms where teachers do not use them. The opportunity for students to read digital books may be limited after 45 percent of the teachers reported that they never or rarely use iPads, iPad minis, e-Readers, or Kindles. This accounts for over 15,000

students in the district. This is concerning when the district has made a substantial investment in digital books and entered into a partnership with the public library.

Most concerning is the use of the district LMS. Over 51 percent of the teachers reported that they never or rarely use the district LMS. This is difficult to consider when we know that the students will enter a high-school environment that is highly connected to the district LMS.

Other concerns came out during the study. Although not tied to the research questions, it is important to reflect on the concerns to understand the implications. Data revealed that there are still some areas of the district that experience issues with WIFI, power, and access. Ten comments were recorded for power issues, such as not having the cords to hook up Smart Boards, while there were 20 comments regarding WIFI access. One coach expressed that it is "hard to get liftoff" when the WIFI is not working and there are not enough outlets to charge computers.

Additionally, leadership concerns were raised. Teachers appear to be frustrated when administrators do not encourage the use of technology and do not provide them with the tools they need. One teacher reported that there was a fear of "getting caught using it" while another teacher was told to "stop" using devices because they are "inauthentic". Teachers and coaches recommended that administrators receive training on the "value of technology" and "how to use the LMS". Coaches also expressed that technology was never discussed in campus meetings or campus professional development sessions. This lack of inclusion "sends a message" according to one instructional coach (N. Bell, personal communication, June 29, 2017).

However, it appears that middle school ELA teachers are eager to learn more about this topic. This was first learned during the pilot of the teacher questionnaire. The group of teachers that participated in the pilot wanted to know more about the study and digital literacy practices.

This was encouraging. Also, when almost 90 percent of the teacher agree or strongly agree that they want training on digital literacy, there is clearly interest on the topic. One teacher shared that they would like to be "trained more on options on how to incorporate digital text in the classroom" while another shared that "training for the teachers would definitely help". Teachers also expressed a desire for the district LMS to embed digital literacy practices within the curriculum. One teacher stated that they plan to "start using the LMS lessons" in order to feel more "comfortable" with digital assignments and tasks.

But, overwhelmingly, the teachers expressed the desire for digital tools. One teacher states, "In order for middle school ELA teachers to support digital literacy, they must have readily available digital resources". Another one shares, "Without the proper technology, the ideas cannot be implemented". Simply put by a teacher – "We can't prepare our students without the tools needed".

Implications

The implications of this record of study show that the district may need to develop a plan specifically for the integration of digital literacy within middle school classrooms. Frankly, there may already be a plan in place. But, if so, the plan is not readily available for key stakeholders and has not been shared with the individuals who develop professional development sessions for middle school teachers.

A professional development proposal has been outlined for consideration. The proposed outline can be found in Appendix M. With approval, the professional development can be delivered via district Saturday professional development conferences, early dismissal days, or at individual secondary campuses that have expressed an interest in developing digital literacy.

Furthermore, the data demonstrates that the district may want to look closely at resources. The district has made an enormous effort to provide students with the opportunity to engage with digital tools, but are these tools available to all students or to some students? And, most importantly, how does the district ensure that there are refurbishment and support plans in place to address issues with access and equipment?

A quick look at the district Twitter page reveals that there is a lot excitement about technology and available trainings. It is really encouraging to see that the district has hosted a series of feedback forums that are specifically for the high school technology initiative – clearly great opportunities to obtain feedback from teachers and leaders, rework plans, and work out kinks. But, when these efforts might be more inclusive for middle school teachers remains to be seen.

Limitations of the Study

I have identified several limitations that I believe are significant to this study. Due to the size and scope of the district and my limited access to campuses, this study only includes six ELA classroom observations. Three middle schools out of a possible 38 were visited. Moreover, the classrooms that were observed were classrooms that were considered "model" classrooms by principals and instructional coaches. This means that I was seeing classroom teachers that were identified as being engaged in digital literacy practices by their campus principal and assigned instructional coach.

Additionally, this study received 122 teacher questionnaire responses from a district that has 11,909 teachers, of which about 510 are middle school ELA teachers ("Facts and Figures," n.d.). Although teacher questionnaires were gathered from each region of the district, this number demonstrates that the results may not adequately represent a district of this size.

Furthermore, during the fall of 2017, a natural disaster impacted the area significantly and caused the district to close for several weeks. Some campuses were closed for two weeks while others were closed for four weeks. This caused the data collection timeline to be adjusted. Instructional time was greatly impacted, therefore observed classroom teachers were implementing an accelerated curriculum and were working with an increased sense of urgency.

Recommendations for Further Study

The literature suggests for students be provided the opportunity to engage in new literacies to be prepared for 21st century. Students should be provided the opportunity to develop their digital literacy skills before moving into a digital one-to-one high school environment. This record of study supports this idea, but there is much to be done to ensure that students and teachers are supported. Recommendations for further study related to this topic are as follows:

- Looking closely at what specific digital literacy skills secondary students need
- Looking closely at digital literacy practices across the content areas
- Looking closely at leadership beliefs and practices and how they relate to digital literacy development
- Looking closely at teacher practices and calibrating them using the Technology Integration Matrix (TIM) framework
- Looking closely at redefining the reading workshop to support readers in a digital age (Bass II & Sibberson, 2015; Kajder, 2010: Mulligan & Landrigan, 2018; Serafini, 2015).

Lessons Learned

In retrospect, this record of study would have benefitted from doing the following things differently:

- Included a section on the teacher questionnaire regarding what digital tools they have available in their classroom
- Looking closely at the middle school ELA/ESL curriculum to see what digital literacy lessons are currently embedded
- Looking closely at the Learning.com curriculum resource and analyze district usage reports and training attendance over time
- Observing high school ELA classrooms to see what digital literacy practices are currently being developed to compare to what is taking place in the middle school classrooms
- Adjust the observation instrument to better address the research questions
- Focus on one digital practice or medium rather than the broad topic of digital literacy

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APPENDIX A

DISTRICT INSTRUCTIONAL PRACTICE CRITERIA

Planning (PL)

- PL-1 – Differentiates student learning goals
- PL-2 – Collects, tracks, and uses student data to drive instruction
- PL-3 – Designs effective lesson plans, units, and assessments

Instruction (I)

- I-1 – Facilitates organized, student-centered, objective-driven lessons
- I-2 – Checks for student understanding and responds to student misunderstanding
- I-3 – Differentiates instruction for student needs by employing a variety of instructional strategies
- I-4 – Engages students in work that develops higher-level thinking skills
- I-5 – Maximizes instructional time
- I-6 – Communicates content and concepts to students
- I-7 – Promotes high academic expectations for students
- I-8 – Students actively participating in lesson activities

APPENDIX B

SUGGESTED MIDDLE SCHOOL ELA BLOCK (TIER I INSTRUCTION)

Daily Components of Literacy	Instructional Format	Instructional Minutes	Instructional Practices
Reading Workshop			
Mini-lesson • Teacher provides explicit, direct instruction, modeling, and opportunities for guided practice, *including* o Read aloud/think aloud to support reading instruction and content-area integration o Opportunities for students to "turn and talk" about their thinking	Whole Group	10-15 Minutes	Teacher provides effective, research-based reading instruction using: • academic vocabulary embedded in authentic texts • TEKS and Figure 19 based comprehension strategies and skills • anchor charts constructed during the lesson, graphic organizers, and Literacy Notebooks • think alouds that model effective reading Teacher selects various genres to: • build vocabulary and background knowledge • model fluent reading • model strategies for comprehension and analysis • facilitate discussion (Turn and Talk) • facilitates real-world connections
Student Application: Independent and Small-Group Practice Students: • Independent and collaborative reading – While the teacher works with small groups or confers with students, remaining students read self-selected and/or assigned independent or collaborative texts	Independent/ Collaborative Practice	30 Minutes	Students apply routines and strategies for independent and collaborative practice. Structures include: • Independent reading – Students read a self-selected, book club, or a teacher-assigned text • Book club meetings – Students meet and discuss a text, focusing on comprehension and analysis of author's craft • Computer assisted practice – Students practice and apply comprehension and analysis using self-directed technology (e.g. Vocabulary.com and/or Achieve 3000) • Independent and collaborative inquiry – Students research a topic, question, or problem to learn and acquire new knowledge or solutions about the world around them

Teacher: • Small-group instruction – The teacher pulls groups of students based upon needs as defined by assessment data, class work, and knowledge of the students over time to offer targeted, intensive support • Conferences – The teacher confers with students during workshop 1 on 1 to provide personalized support and monitoring • Facilitation of inquiry groups/individual inquiry – The teacher monitors and supports inquiry, guiding, and facilitating further research	Small Group (approximately three rotations, 10 -20 minutes each)		The teacher facilitates: • collaborative and independent reading • application of reading comprehension strategies and skills • discussion of events and characters in a text, author's craft, or personal experiences related to the text • engagement in critical thinking and reflection as students read, discuss, and respond to texts • construction of meaning with other readers
Closure • Teacher designs opportunities to check for student understanding.	Whole Group	5 Minutes	Teacher facilitates checks for understanding to inform subsequent instruction using: • exit slips • reflections (content, collaboration and self) • open-ended questions • reader-responses

Writing Workshop			
Mini-Lesson • Teacher provides explicit, direct instruction, modeling, and opportunities for guided practice • Teacher engages students in interactive and collaborative writing instruction focused on genre and the writing process (pre-writing, drafting, revising, editing, publishing)	Whole Group	10 - 15 Minutes	Teacher provides effective research-based writing instruction using: • analysis of mentor texts • rubrics • embedded grammar and spelling instruction • anchor charts, graphic organizers, and Literacy Notebooks • think alouds
Student Application: Independent and Small-Group Practice Students: • Independent and collaborative writing - While the teacher works with small groups, remaining students write on self-selected or teacher-assigned topics Teacher: • Small-group instruction - The teacher pulls groups of students based upon needs as defined by assessment data, class work and knowledge of the students over time to offer targeted, intensive support • Conferences - The teacher confers with students during workshop one-on-one to provide personalized support and monitoring • Facilitation of inquiry groups/individual inquiry – The teacher monitors and supports inquiry, guiding and facilitating further research	Independent/ Collaborative Practice Small Group (approximately three rotations, 10 -20 minutes each)	30 Minutes	Students apply routines and strategies for independent and collaborative practice. Structures include: • Independent writing – Students write independently on self-selected or teacher-directed topics/genres • Writing groups – In collaborative groups, students proceed through the writing process, sharing problems and solutions • Peer work/review – In pairs, students share writing tasks and products for in-the-moment feedback and revision • Publishing and Feedback – Using a variety of structures, students share, provide feedback, revise and publish their work The teacher facilitates: • collaborative and independent writing • discussion of author's craft • critiques • authentic publishing (ebooks, blogs, wikis, websites, student-developed books or magazines)
Closure Teacher designs opportunities to check for student understanding.	Whole Group	5 Minutes	Teacher facilitates checks for understanding to inform subsequent instruction using: • exit slips • reflections (content, collaboration and self)

APPENDIX C

EMAIL COMMUNICATION REGARDING IRB EXEMPTION

TEXAS A&M UNIVERSITY

Sarah Baker <sbaker9@tamu.edu>

IRB

1 message

Zohreh Eslami <zrasekh@tamu.edu> Sun, May 22, 2016 at 9:53 AM
To: Delia Cruz-Fernandez <demacruz@tamu.edu>, Sarah Baker <sbaker9@tamu.edu>, Angie Knight <angieknight@tamu.edu>, NICOLE MARINES <nmarines@springisd.org>
Cc: Monica Neshyba <maestratx@gmail.com>, "Dr. Radhika Viruru" <viruru@tamu.edu>

Dear All,

This is to share the good news that IRB exemption for ROS is issued for all of you. This means that your studies, as reviewed by the IRB office, does not need IRB approval since the findings only apply to your setting and it is not 'genrelizable'.

Let me or Dr. Neshyba (ccd on this email) know if you have any questions.
Best,

ZE

APPENDIX D

INSTRUCTIONAL COACH INTERVIEW QUESTIONS

1. Think about your time as a secondary instructional coach last year. Approximately how much time did you spend in middle school classrooms?
2. Approximately how much time did you spend in high school classrooms?
3. What general teaching practices have you noticed in middle school classrooms?
4. What general teaching practices have you noticed in high school classrooms?
5. What types of text did you notice students reading in middle school classrooms?
6. What types of text did you notice students reading in high school classrooms?
7. From your observations of classrooms, how did teachers support the development of digital literacy?
8. When thinking about the teachers and their role in ensuring our graduates are digitally literate, what are our areas of strength in the district?
9. What are our areas of growth in the district?
10. Think about the transition from middle school to a high school in this district. What are the essential skills that students need to be successful in a one-to-one device environment?

APPENDIX E

INITIAL INSTRUCTIONAL COACH INTERVIEW CODING RUBRIC

Category	Comment Code	Comment Codes						Code Total	Category Total
		ELA1	ELA	LIT1	LIT2	TECH1	TECH2		
ELA Classroom Practice									33
	Modeling and Demonstration	2	0	3	1	0	0	6	
	Authentic Texts	5	2	3	4	1	1	16	
	Independent Reading	1	3	3	0	0	0	7	
	Writing	0	1	0	0	0	0	1	
	Traditional Practices	1	0	2	0	0	0	3	
Digital Literacy									98
	Digital Portfolios	0	0	0	0	7	2	9	
	Social Media	0	5	0	0	0	11	16	
	Research Skills	7	1	0	4	3	21	36	
	Digital Citizenship	1	1	0	0	0	4	6	
	Benefits	3	0	2	0	1	3	9	
	Isolated Skills	9	3	0	1	3	0	16	
	Leveled Text Resources	7	2	4	0	0	0	6	
Areas of Concern									146
	Instructional Concerns	12	40	10	23	11	8	104	

	Leadership Concerns	0	0	0	3	16	1	20	
	Cautions	2	1	2	1	2	5	13	
	Print vs. Digital	1	3	4	0	0	1	9	
Areas of Strength									54
	Instructional Strengths	13	3	2	9	7	16	50	
	Leadership Strengths	0	0	0	1	1	2	4	
District									28
	Master Courses	0	2	5	1	3	0	11	
	Initiatives and Resources	1	2	0	0	1	3	7	
	Textbook	1	5	0	0	1	3	10	
Infrastructure									30
	Power Issues	7	0	0	3	0	0	10	
	WIFI Access	6	5	0	3	0	6	20	
Recommendations									53
	Desired Student Behaviors	7	6	2	4	1	2	22	
	Suggestions	1	13	0	2	9	2	27	
	Long-Term Goals	1	0	0	1	0	2	4	
Teachers									56
	Desired Teacher Behaviors	4	2	5	4	2	6	23	

	Understanding	5	1	0	0	0	4	10	
	Training	9	3	1	2	6	2	23	

APPENDIX F

FINALIZED INSTRUCTIONAL COACH INTERVIEW CODING RUBRIC

Category	Comment Code	Comment Codes						Code Total	Category Total
		ELA1	ELA	LIT1	LIT2	TECH1	TECH2		
Digital Literacy									98
	Digital Portfolios	0	0	0	0	7	2	9	
	Social Media	0	5	0	0	0	11	16	
	Research Skills	7	1	0	4	3	21	36	
	Digital Citizenship	1	1	0	0	0	4	6	
	Benefits	3	0	2	0	1	3	9	
	Isolated Skills	9	3	0	1	3	0	16	
	Leveled Text Resources	7	2	4	0	0	0	6	

APPENDIX G

TEACHER QUESTIONNAIRE

What courses did you teach this past school year? _____

What grade level do you teach this past school year (circle all that apply)? 6th 7th 8th

Please check any of the items that you have your students read **digitally** during your class:

- ☐ News articles
- ☐ Journals
- ☐ Essays
- ☐ Blogs
- ☐ Any type of fiction, class or contemporary
- ☐ Any type of nonfiction, classic or contemporary
- ☐ Poetry, plays, or other expressive works
- ☐ Music and lyrics
- ☐ Letters, messages, notes from other people
- ☐ Text messages, tweets, or other short digital posts
- ☐ Other _____

How do you usually have your students complete their classwork most of the time?

- ☐ Usually on paper
- ☐ Usually on electronic device
- ☐ A mixture
- ☐ I don't know

Do you think electronic devices make students more or less likely to read better overall?

- ☐ More likely
- ☐ Less likely
- ☐ Makes no difference
- ☐ I don't know

Do you think using electronic devices make students more or less likely to be interested in what they read?

- ☐ More likely
- ☐ Less likely
- ☐ Makes no difference
- ☐ I don't know

How often do your students work with the following digital literacy tools in your classroom?

Word Processing (Fonts, Column/Margins, Pictures, Tables, Headers/Footers, Spell Check, Cut/Copy/Paste Skills)	Never	Rarely	Sometimes	Most of the time	Always
Internet (Searching, Viruses, Research, Evaluation, Library, Catalogue, Downloading, Chat Pages, Online Tutorials)	Never	Rarely	Sometimes	Most of the time	Always
Computer Basics (Multitasking, Menu Bar, Navigation, Save and/or Name Files/Folders, General Troubleshooting Skills)	Never	Rarely	Sometimes	Most of the time	Always
E-mail	Never	Rarely	Sometimes	Most of the time	Always
Spreadsheets (Graphs/Charts, Tables, Sorting, Formulas)	Never	Rarely	Sometimes	Most of the time	Always
Graphics/Design (Photoshop Software, Basic Drawing Skills, Web Design, Inspiration Software)	Never	Rarely	Sometimes	Most of the time	Always
Scanners	Never	Rarely	Sometimes	Most of the time	Always
Publishing Programs (Layers/Frames, Graphics, Text Wrapping)	Never	Rarely	Sometimes	Most of the time	Always
Presentation Software (PowerPoint, Prezi)	Never	Rarely	Sometimes	Most of the time	Always
Digital pen	Never	Rarely	Sometimes	Most of the time	Always
Podcasts	Never	Rarely	Sometimes	Most of the time	Always
Google Docs	Never	Rarely	Sometimes	Most of the time	Always
One Note	Never	Rarely	Sometimes	Most of the time	Always
Video Editing Software	Never	Rarely	Sometimes	Most of the time	Always
Digital Cameras	Never	Rarely	Sometimes	Most of the time	Always
Blogs	Never	Rarely	Sometimes	Most of the time	Always
Cell Phones/Smart Phones	Never	Rarely	Sometimes	Most of the time	Always
iPads/iPad Minis/Tablets/e-Reader/Kindle	Never	Rarely	Sometimes	Most of the time	Always
District Learning Management System	Never	Rarely	Sometimes	Most of the time	Always

How important is it for your students to be familiar with the following digital tools?

Word Processing (Fonts, Column/Margins, Pictures, Tables, Headers/Footers, Spell Check, Cut/Copy/Paste Skills)	Not important	Slightly important	Moderately important	Important	Very important
Internet (Searching, Viruses, Research, Evaluation, Library, Catalogue, Downloading, Chat Pages, Online Tutorials)	Not important	Slightly important	Moderately important	Important	Very important
Computer Basics (Multitasking, Menu Bar, Navigation, Save and/or Name Files/Folders, General Troubleshooting Skills)	Not important	Slightly important	Moderately important	Important	Very important
E-mail	Not important	Slightly important	Moderately important	Important	Very important
Spreadsheets (Graphs/Charts, Tables, Sorting, Formulas)	Not important	Slightly important	Moderately important	Important	Very important
Graphics/Design (Photoshop Software, Basic Drawing Skills, Web Design, Inspiration Software)	Not important	Slightly important	Moderately important	Important	Very important
Scanners	Not important	Slightly important	Moderately important	Important	Very important
Publishing Programs (Layers/Frames, Graphics, Text Wrapping)	Not important	Slightly important	Moderately important	Important	Very important
Presentation Software (PowerPoint, Prezi)	Not important	Slightly important	Moderately important	Important	Very important
Digital pen	Not important	Slightly important	Moderately important	Important	Very important
Podcasts	Not important	Slightly important	Moderately important	Important	Very important
Google Docs	Not important	Slightly important	Moderately important	Important	Very important
One Note	Not important	Slightly important	Moderately important	Important	Very important
Video Editing Software	Not important	Slightly important	Moderately important	Important	Very important
Digital Cameras	Not important	Slightly important	Moderately important	Important	Very important
Blogs	Not important	Slightly important	Moderately important	Important	Very important
Cell Phones/Smart Phones	Not important	Slightly important	Moderately important	Important	Very important
iPads/iPad Minis/Tablets/e-Reader/Kindle	Not important	Slightly important	Moderately important	Important	Very important
District Learning Management System	Not important	Slightly important	Moderately important	Important	Very important

Please respond to the following statements.

I have a responsibility to equip my middle school students with the digital literacy skills they need.	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I have received support from the district in developing my own digital literacy skills to take back to my classroom.	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I would like training in developing my digital literacy skills.	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I know what digital literacy skills my students need in order to be successful in a high school one-to-one device environment.	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I know what digital literacy skills my students need in order to be college and/or career ready.	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
It is important to develop students' digital literacy skills.	Strongly disagree	Disagree	Undecided	Agree	Strongly agree

Do you think that the nature of reading is changing as a result of twenty-first century technologies?

- ☐ Yes
- ☐ No
- ☐ I am not sure

All high school students receive a laptop and are expected to engage with digital text and complete assignments digitally. The initiative helps our students become digitally literate global graduates. What are some ways middle school ELA teachers can best support the meaningful use and development of digital literacies?

_____

_____

_____

_____

APPENDIX H

TEACHER SURVEY PROCEDURES – FACILITATION GUIDE

Materials:

- Facilitator Instructions
- Teacher Questionnaires
- District approval letter (attached)
- Bag to collect gift card entry slips

Instructions:

- Say, "This afternoon you are invited to participate in a teacher survey. The purpose of this survey is to collect information about digital literacy practices from English Language Arts teachers. This survey is anonymous and voluntary. It should take approximately 5 to 10 minutes to complete. If you participate in the survey, your name will go in a drawing for an Amazon $25.00 gift card that will be given away today."

- Say, "Just a note, this research has been approved by the district Research and Accountability office. If you would like to see the approval letter, please ask to see a copy."

- Ask, "Raise your hand if you would like to participate." Pass out the surveys to the teachers who volunteer to participate.

- Say, "Make sure to write your name on the purple slip if you would like to participate in the gift card drawing. You do not need to write your name on the survey because the survey is intended to be completely anonymous."

- Provide time for them to complete the survey.

- Collect the surveys and place them in the box.

- Collect the purple slips and place them in the gift card drawing bag.

- Shake the bag and then draw one slip to determine the winner.

- Stephen Winton will collect the box from each room.

Your time, help, and support is greatly appreciated. Thank you! ☺

APPENDIX I

FINALIZED OPEN-ENDED QUESTION CODING RUBRIC AND SUMMARY

Finalized Open-Ended Question Coding Rubric and Summary

Comment Code	Code Total
Teacher actions	53
Access to resources	36
Professional development	12
District LMS	6
Concerns	5
No response	2

APPENDIX J

OBSERVATIONS

Observation 1_ELA 1_School A

Date: December 9, 2017	**Start**: 8:26 am	**End**: 8:56 am
School: School A	**Teacher**: ELA 1	**Grade**: 8th Grade

Literacy in the Middle Connections	
Teacher: whole group instruction ☑ small group instruction conferring other:	**Students:** reading independently reading collaboratively writing independently ☑ writing collaboratively independent inquiry collaborative inquiry other
Listening and Speaking: facilitated classroom discussions ☑ formal presentations	**Writing:** modeled writing process significant writing assignment systematic ways to summarize informal writing ☑ rubric using digital devices/tools
Reading: prior knowledge and making connections appropriate Lexile level authentic text purpose for their reading/note-taking ☑ content-specific academic language ☑ selecting books of their choice use digital devices/tools	

Observation Notes
• The objective is, "I will describe and analyze examples of fallacies" and "I will make complex inferences." • 24 students are present; arranged in pairs; detailed agenda is listed on the board • Teacher is located at the front of the classroom. • Class Dojo is projected on the board for 1st period; student avatars are displayed. • Teacher asks, "What does persuade mean?"

- Teacher cold calls on a student and the student responds, “It means to convince someone”.
- Teacher says “good” and adds point to the student’s avatar; student smiles
- Teacher uses digital randomizer tool to call on another student; teacher asks for student to read aloud learning objectives
- Teacher projects 8th Grade Master Course lesson (ELA HUB) and the student reads aloud the learning targets
- Teacher scrolls down master course lesson to “Engage” content box; displays a commercial
- Teacher invites the students to watch the commercial and think about the emotions the commercial evokes
- Teacher plays commercial (Ford Super Bowl commercial)
- Teacher pauses the commercial and scrolls down to reveal the following sentence stems:
    - This advertisement makes me feel ___ because ___.
    - The creators behind the advertisement probably want me to feel this way because ____.
- Teacher invites students to write a Quick Write about the commercial using the sentence stems.
- Teacher uses Class Dojo to set a timer for ninety seconds.
- Teacher says, ‘I know you are finished when your pencil is down.”
- After two minutes, teacher notices most of the students are still writing and says, “You are being thoughtful today, I am going to provide you a few more minutes to wrap up your thoughts.”
- After two minutes, the teacher invites students to share their thoughts about the commercial.
- Students share ideas such as “I feel persuaded to buy their product” and “The advertisers want me to touch my feelings because they want me to buy a Ford.”
- Teacher adds points for participation using Class Dojo
- Teacher asks, “Did they say anything about their product?” and students respond “no”.
- Teacher then begins discussing how advertisers use a variety of methods to persuade consumers.
- Teacher projects PowerPoint that displays the different types of fallacies (i.e., logical and rhetorical) and then has the students watch a video about logical fallacies.
- Teacher then asked for the students to take out their literacy notebook to take notes; teacher walked around to check on each student; 23/24 students on task

Observation 2_ELA 2_School A

Date: December 9, 2017	**Start**: 9:00 am	**End**: 9:30 am
School: School A	**Teacher**: ELA 2	**Grade**: 8th Grade

Literacy in the Middle Connections	
Teacher: whole group instruction ☑ small group instruction ☑ conferring other:	**Students:** reading independently ☑ reading collaboratively ☑ writing independently writing collaboratively independent inquiry collaborative inquiry ☑ other
Listening and Speaking: facilitated classroom discussions ☑ formal presentations	**Writing:** modeled writing process significant writing assignment systematic ways to summarize informal writing ☑ rubric using digital devices/tools ☑
Reading: prior knowledge and making connections appropriate Lexile level ☑ authentic text ☑ purpose for their reading/note-taking ☑ content-specific academic language ☑ selecting books of their choice ☑ use digital devices/tools ☑	

Observation Notes
• The content objective is, "I will determine and analyze examples of fallacies" and "I will make complex inferences" and "I will demonstrate comprehension by understanding ideas in graphic sources." • The language objective is, "I will share information in cooperative groups." • 22 students were present; arranged in groups • Upon entry, whole group just finished watching a discussing a video (commercial from Master Course ELA page) • Students then transitioned to groups – 8 students were sent to the teacher station, 6 students were assigned to the independent reading station, 6 students were assigned to the Achieve

3000 station; 2 students were working on independent assignment (reading passage with multiple-choice questions)

- Students in independent reading station were reading books of their choice and periodically stopping to write notes in digital dialectical journal
- Students in the Achieve 3000 station were reading informational article on their reading level and annotating using digital highlighter and digital comment boxes; students were permitted to discuss the article with their shoulder partner
- Students assigned to the teacher station revisited the commercial the whole group just watched; teacher projected the commercial using a laptop and asked for the students to "gather round"
- Teacher paused the video to point out persuasive techniques such as bandwagon and testimonials; teacher displayed and discussed vocabulary terms on sentence stems
- Teacher has students repeat vocabulary terms back to her
- Teacher then went over the activity procedures
- Teacher group went into the hallway; pictures were posted on 12 posters down the hallway; students were expected to walk around to each picture and determine what the picture was illustrating (i.e., bandwagon, appeal to emotion, ad hominin, testimonial, etc.
- Teacher remained in the doorway to monitor the students in the hallway and students in the classroom
- Teacher took several pictures of the students in the hallway and shared that she planned to post to the pictures to the school Twitter account
- As students rotated to the different pictures, the teacher encouraged them to talk with their partners and track their thinking on a "Gallery Tracker" graphic organizer
- All students on task

Observation 3_ELA 3_School B

Date: December 9, 2017	**Start**: 10:06 am	**End**: 10:36 am
School: School B	**Teacher**: ELA 3	**Grade**: 8th Grade

Literacy in the Middle Connections	
Teacher: whole group instruction ☑ small group instruction ☑ conferring other:	**Students:** reading independently ☑ reading collaboratively ☑ writing independently writing collaboratively ☑ independent inquiry collaborative inquiry other
Listening and Speaking: facilitated classroom discussions ☑ formal presentations	**Writing:** modeled writing process significant writing assignment systematic ways to summarize informal writing ☑ rubric using digital devices/tools
Reading: prior knowledge and making connections ☑ appropriate Lexile level ☑ authentic text ☑ purpose for their reading/note-taking ☑ content-specific academic language ☑ selecting books of their choice use digital devices/tools	

Observation Notes
• Objective is, "I can summarize and breakdown persuasive texts" and "I will demonstrate comprehension by reading, speaking, and listening." • 23 students present; students are arranged in pairs; co-teacher present • Teacher projects the text "Hold On! I've Got Another Call – New Study Finds Cell Phones Can Be Addictive" using the document camera • Teacher reads aloud the text and periodically pauses to invite students to share their thinking with their shoulder partner; teacher also conducts think aloud • When the read aloud/think aloud is over, the teacher projects a graphic organizer and works with the students to complete it (claim, evidence, concession, counter-argument, refutations).

- Teacher manually switches back and forth from the graphic organizer to the text several times to model how to pull evidence from the text
- Teacher then invites the students to share their ideas about the topic by asking, “Do you think cell phones are addictive?”
- Several students share their ideas after the teacher pointed out thinking stems on the board by saying “I agree with the author because…” and “I don’t agree with the author because…”
- Students then transitioned to small groups
- Teacher said “Let’s turn into quads in 30”; teacher set the timer and desks were turned from pairs into groups of 4 in less than 30 seconds.
- Teacher then referenced a list to readjust seat assignment
- Teacher privately shared that the students were grouped by Lexile
- Students were provided with the text “Ending World Hunger by Stopping Food Waste in the Fields” by Bjorn Lomborg (group texts were differentiated by reading level).
- Teacher told the class that they were expected to read the article together and then complete the graphic organizer (same one from model lesson)
- Teacher then worked with one group and a co-teacher worked with another group
- During small group instruction, teacher had students round-robin read the text while the co-teacher had the students silently read the text as she quietly listened to individual students read; both teachers took notes in binder
- The teacher periodically glanced around the room to check on the remaining groups
- 20/23 students on task

Observation 4_ELA 4_School B

Date: December 9, 2017	**Start**: 10:40 am	**End**: 11:10 am
School: School B	**Teacher**: ELA 4	**Grade**: 8th Grade

Literacy in the Middle Connections	
Teacher: whole group instruction ☑ small group instruction ☑ conferring other:	**Students:** reading independently ☑ reading collaboratively writing independently ☑ writing collaboratively independent inquiry collaborative inquiry other
Listening and Speaking: facilitated classroom discussions ☑ formal presentations	**Writing:** modeled writing process significant writing assignment ☑ systematic ways to summarize informal writing rubric using digital devices/tools ☑
Reading: prior knowledge and making connections ☑ appropriate Lexile level ☑ authentic text ☑ purpose for their reading/note-taking ☑ content-specific academic language ☑ selecting books of their choice use digital devices/tools ☑	

Observation Notes
• The content objective is, "I can make inferences and draw conclusions about the ideas in a text" and "I can use text evidence to support my understanding". • The language objective is, "I can share information in cooperative group settings." • 24 students present; students arranged in groups (4 to 5) • Upon entry, all students have an open laptop on their desk. • Teacher has the text "Hold On! I've Got Another Call – New Study Finds Cell Phones Can Be Addictive" projected using the Smartboard. • Teacher is conducting a read aloud/think aloud; modeling annotations using digital tools such as digital highlighter, underlining tool, and adding a comment box; students follow along by looking at the PDF on their computer

- The comment boxes have connections and questions
- Once read aloud is over, teacher projects graphic organizer and asks for students to open the document on their laptop; document is on class HUB page
- Teacher walks through the graphic organizer and writes notes using digital pen on Smartboard (i.e., concession, counterargument, claim, evidence, etc.)
- Teacher then projected the following prompt on the Smartboard.
- Teacher asked for students to scroll down on class HUB page to following prompt:
    - A recent study reported that student grades improved when cell phones were banned in classrooms. Do you agree or disagree with banning cell phones in classrooms? Write a paragraph explaining your position.
- Students were asked to respond to the prompt on the class discussion board and respond to at least one classmate
- Teacher walked around and assisted students as they wrote their paragraph; teacher sat with 2 students to assist with formatting on computer
- Once students were finished, the teacher invited a few students to read aloud their response and share their thinking
- Students then transitioned to a reading assignment; teacher directed their attention to a list of articles posted on the class HUB page (PDF documents)
- A list of 7 articles about various topics was posted on the page (i.e., bottled water, food waste, children's rights, climate, plastic straws, banning balloons, and child slavery)
- Teachers assigned specific students to specific groups (list on class HUB page)
- Each group was assigned to read a specific article
- The teacher privately shared that the articles were differentiated based on reading level
- Teacher pulled up one article and discussed expectations for reading and annotating
- Teacher said, "As you read, you may want to use the tools to annotate your thinking. I should see you making some sort of notes."
- Teacher referenced "Ways to Track Your Thinking" anchor chart posted on side wall
- Teacher set the timer for 7 minutes and then walked around assisting students as needed
- Three students put earbuds on and 1 student moved to beanbag chair in the classroom library area
- Teacher shared that the students using earbuds were using the text-to-speech option and the 1 student is permitted to go to the beanbag during independent reading assignments

Observation 5_ELA 5_School C

Date: December 9, 2017	**Start**: 1:05 pm	**End**: 1:35 pm
School: School C	**Teacher**: ELA 5	**Grade**: 8th Grade

Literacy in the Middle Connections	
Teacher: whole group instruction ☑ small group instruction ☑ conferring other:	**Students:** reading independently ☑ reading collaboratively ☑ writing independently writing collaboratively independent inquiry collaborative inquiry ☑ other
Listening and Speaking: facilitated classroom discussions ☑ formal presentations	**Writing:** modeled writing process significant writing assignment systematic ways to summarize informal writing rubric using digital devices/tools ☑ (teacher)
Reading: prior knowledge and making connections ☑ appropriate Lexile level authentic text ☑ purpose for their reading/note-taking ☑ content-specific academic language selecting books of their choice use digital devices/tools ☑ (teacher)	

Observation Notes
• The objective is, "I will analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis" and "I will explain messages conveyed in various forms of media" and "I will identify faulty reasoning used in persuasive texts." • 26 students present; students arranged in pairs • Each pair of students received a set of comics in an envelope • The comics are about technology (i.e., technology impacting people and relationships) • Teacher asked for the students to look at the comics with their partner • After 2 minutes, the teacher asked, "What did you notice?" and "What are you thinking?"

- Students were invited to share their thinking; students shared that some were funny.
- One student shared he did not understand the comic; teacher explained what a rotary phone is and then he shared that he "got it now"
- Teacher projected T-chart on Smartboard; one side had a positive sign and the other side had a negative sign
- Teacher asked for students to share positive and negative effects of technology
- As students shared ideas, the teacher wrote them using a digital pen (i.e., GPS, look up words using the digital dictionary, order food online, shop online, some people are addicted to their phone, people text and drive, online bullying, bad people online, etc.)
- Teacher said, "Today we are going to explore this topic of technology and its impact on relationships."
- Teacher displayed "Persuasive Text" anchor chart and reviewed information
- Teacher distributed the essay "How Technology Affects Us" from *TeenInk*
- Teacher invited the students to read the essay independently; teacher encouraged the students to chunk the text to stop and "Say Something…Silently" as they read; teacher told the students to be alert for how the author is trying to persuade the reader
- As students read, the teacher pulled a small group of students (5) to the back table to had them round robin read the text as the rest of the class worked
- After 5 minutes, the teacher said, "If you are done, I want you to reread the text and be ready to share your thinking with the class."
- After 10 minutes, the teacher brought the whole group back together and invited students to share their thinking about the text
- The teacher projected the text using the Smartboard and used the digital pen to locate information and text evidence and underline important words and ideas
- All students on task

Observation 6_ELA 5_School C

Date: December 9, 2017	**Start**: 2:00 pm	**End**: 2:30 pm
School: School C	**Teacher**: ELA 6	**Grade**: 8th Grade

Literacy in the Middle Connections	
Teacher: whole group instruction ☑ small group instruction conferring other:	**Students:** reading independently reading collaboratively writing independently writing collaboratively independent inquiry collaborative inquiry ☑ other
Listening and Speaking: facilitated classroom discussions ☑ formal presentations	**Writing:** modeled writing process significant writing assignment systematic ways to summarize informal writing rubric using digital devices/tools
Reading: prior knowledge and making connections ☑ appropriate Lexile level ☑ authentic text ☑ purpose for their reading/note-taking ☑ content-specific academic language selecting books of their choice use digital devices/tools	

Observation Notes
• The objective is, "I will analyze, make inferences and draw conclusions about expository text and provide evidence from text to support my understanding" and "I will share my thinking in cooperative learning interactions." • 21 students present; students arranged in groups (3 to 4) • Teacher projected PowerPoint slide with several pictures on it (black cat, clover, ladder, and broken mirror) • Teacher provided students a post-it note and asked for them to write down what they notice about the pictures • Teacher collected the post-it notes and then read aloud a few of them; for example, "I notice that all the pictures are things that cause bad luck."

- Teacher said, “Today we are going to read an article about the power of curses. As we read, we will think about what we already know about curses and sift what is important from what is interesting in the article.”
- Teacher projected the article “The Power of Curses” using the document camera
- Teacher conducted a think aloud of the article and pointed out the text features
- Teacher chunked the text and told the students that they would pause after each chunk to think about what was read and make a note; “road map” of our thinking
- Teacher conducted a read aloud/think aloud of the article; wrote annotations on the document while it was projected using the document camera
- During the read aloud, teacher got up from the document camera to walk around the room to check on the students
- Teacher invited the students to turn and talk once during the read aloud
- Teacher then gave each group a set of discussion cards in an envelope; students read and answered the questions in groups
- Teacher encouraged the students to use the “road map” to locate information in the text
- All students on task

APPENDIX K

INITIAL CLASSROOM OBSERVATION CODING RUBRIC

Category	Comment Code	Comment Codes						Code Total	Category Total
		ELA1	ELA2	ELA3	ELA4	ELA5	ELA6		
Objective Driven Lesson									9
	Prior Knowledge & Making Connections	0	0	1	2	3	1	7	
	Introduce Learning	2	0	0	0	0	0	2	
Check for Understanding									11
	Check for Understanding	0	5	1	2	0	1	9	
	Checkpoint	1	0	0	0	0	1	2	
Differentiation									24
	Flexible Grouping	0	3	4	3	2	0	12	
	Leveled Text	0	2	3	2	0	1	8	
	Scaffold	0	0	1	1	0	0	2	
	Co-Teacher	0	0	2	0	0	0	2	
Teaching Moves									21
	Reading Strategy	0	0	1	1	5	5	12	
	Instructional Strategy	1	2	1	1	0	0	5	
	Teacher Questioning	2	0	0	0	2	0	4	
Maximizing Instructional Time									10
	Tight Transitions	0	1	1	1	0	0	3	

	Material Organization	0	2	0	1	1	1	5	
	Use of Timer	0	0	1	1	0	0	2	
Communicating Content/Concepts									9
	Academic Language	1	1	1	1	0	0	4	
	Using District Curriculum	2	0	0	0	3	0	5	
Track Student Data									2
	Running Records	0	0	2	0	0	0	2	
Student Engagement									25
	Real World Connections	0	1	1	1	2	1	6	
	Students on Task	1	1	1	1	1	1	6	
	Collaboration	0	2	3	0	2	2	9	
	Choice	0	2	0	0	0	0	2	
	Reinforcer (Participation)	2	0	0	0	0	0	2	
Classroom Management									7
	Reinforcers (Behavior)	1	0	0	0	0	0	1	
	Student Actions	0	0	0	2	0	0	2	
	Digital Management Tool	4	0	0	0	0	0	4	
Classroom Climate									10
	Praise	1	0	0	0	1	0	2	
	Student Reactions	1	0	0	0	1	0	2	
	Class Arrangement	1	1	1	1	1	1	6	

Digital Tools									25
	Digital Tools	0	4	0	3	1	0	8	
	Multimedia	5	1	0	0	0	0	6	
	Project & Display Text	1	0	2	3	2	3	11	
Digital Literacy									23
	Digital Reading	0	1	0	2	0	0	3	
	Digital Writing	0	1	0	6	1	0	8	
	Digital Annotations	0	2	0	4	2	0	8	
	Digital Formatting	1	0	0	3	0	0	4	
Literacy Routines									57
	Purpose for Reading/Note-Taking	1	1	1	1	1	1	6	
	Whole Group Instruction	1	1	1	1	1	1	6	
	Read Aloud/Think Aloud	0	0	2	1	0	4	7	
	Independent Reading	0	2	1	1	2	0	6	
	Independent Practice	0	1	1	0	0	0	2	
	Pencil/Paper Annotations	0	0	0	0	0	1	1	
	Pencil/Paper Writing	2	2	0	1	0	2	7	
	Informal Writing	1	1	1	0	0	0	3	
	Peer Conversation	2	4	1	1	2	2	12	
	Share Thinking	1	0	3	1	2	0	7	

APPENDIX L

FINALIZED CLASSROOM OBSERVATION CODING RUBRIC

Category	Comment Code	Comment Codes						Code Total	Category Total
		ELA1	ELA2	ELA3	ELA4	ELA5	ELA6		
Digital Tools									25
	Use of Digital Tools	0	4	0	3	1	0	8	
	Multimedia	5	1	0	0	0	0	6	
	Project & Display Text	1	0	2	3	2	3	11	
Digital Literacy									23
	Digital Reading	0	1	0	2	0	0	3	
	Digital Writing	0	1	0	6	1	0	8	
	Digital Annotations	0	2	0	4	2	0	8	
	Digital Formatting	1	0	0	3	0	0	4	

APPENDIX M

PROFESSIONAL DEVELOPMENT SERIES PROPOSED OUTLINE

From Reading Workshop to Digital Reading Workshop

Date: October 2018

Session Length: 90 minutes

Audience: Secondary ELA/ESL Teachers & Leaders

Session Outcomes:

- Participants will explore how digital reading expands traditional reading skills.
- Participants will explore the differences between traditional and digital reading workshops and consider how incorporate digital practices into their classroom.
- Participants will explore the different types of digital texts students will encounter and how to support mindful reading practices.

Suggested Facilitation Plan

Welcome & Introductions (2 minutes)

- Welcome the participants and invite them to create a table tent.

Session Norms & Intended Outcomes (3 minutes)

- Review the session norms and intended outcomes.
- Invite participants to Tweet their thoughts during the presentation using the department and facilitator hashtag.

Icebreaker (5-7 minutes)

- Invite the participants to take a Kahoot Quiz using their cell phone, iPad, or laptop to get them thinking and talking about digital reading.
    1. True or false? E-books and audiobooks are more popular than print books. (false)
    2. What percentage of Americans have read a book in the past 12 months? (74%)
    3. What percentage of Americans have read an audiobook in the past 12 months? (18%)
    4. On average, how many books do Americans read each year? (12)
    5. What percentage of Americans only read print books? (39%)
    6. What percentage of Americans only read digital books? (7%)
    7. What percentage of Americans are non-book readers? (24%)
    8. True or false? The percentage of college graduate who read digitally has increased since 2016. (true)
- Source: Pew Research Center (2018, March 8).
- Invite the teachers to share what they notice about the reading habits of their students.
- Invite the teachers to share why they think it is important to integrate opportunities for students to read and write digitally in their classroom.

Digital Reading – What It Is and What It Is Not (3 minutes)

- Review the chart from Bass II & Sibberson (2015).

- Invite the teachers to share some of the challenges they have noticed as digital readers.
- Invite the teachers to share their ideas about overcoming these challenges.

How Digital Reading Expands Traditional Skills (7 minutes)

- Invite the teachers to review the chart from Bass II & Sibberson with a partner (2015).
- Ask, "What role do we play in developing these expanded skills?"
- Invite participants to share their ideas and thoughts about this chart.

The Role of Digital Texts in the Literacy Workshop (12 minutes)

- Discuss what types of digital texts teachers may want to use during reading workshop.
- Share examples and discuss reflection questions for each.
    - Read-Aloud/Think-Aloud
    - Independent Reading/Reading Conferences
    - Reading Mini-Lessons
    - Shared Reading
    - Content Reading
- Provide each teacher with a reflection continuum to reflect on each area. Then, invite teachers to share their plans and ideas for the school year.

Difference Between Traditional and Digital Reading Workshop (10 minutes)

- Review the difference between traditional and digital reading workshops (Bass II & Sibberson, 2015).
- Provide each teacher with the district suggested literacy block for reading and writing.
- Invite them to discuss how they may want to fit in digital literacy applications.

Digital Texts (30 minutes – 10 minutes at each station)

- Teachers will rotate to stations to learn about the different digital texts students will encounter and how to support their understanding with each (Turner & Hicks, 2015, p. 62).
    - Short-Form: social network post, snippets/summaries, messages, forums
    - Mid-Form: online journalism, blog posts, web-based articles, fiction
    - Long-Form: online journalism, academic articles, e-books

Demonstration (10 minutes)

- Share sample screencast that demonstrates digital annotation and reflection using the excerpt "A Day at the Zoo" by Jack Prelutsky from *Guys Write for Guys Read* (2005).
- Provide participants with a handout that outlines how to screencast.
- Source: Turner & Hicks (2015, p. 85-86).

Closure & Reflection (8 minutes)

- Invite teachers create a 3-2-1 exit ticket on Padlet.
- Let them know that all the session resources with be housed on the Padlet "scratch pad" and district LMS.

Digital Tools to Connect Readers Before, During, and After Reading
Date: November 2018
Session Length: 90 minutes
Audience: Secondary ELA/ESL Teachers & Leaders
Session Outcomes: • Participants will learn about how students can participate in print-based reading using digital tools. • Participants will learn how to use digital tools to help readers become more skilled at using digital tools to make connections to each other and the world.
Suggested Facilitation Plan
Welcome & Introductions (2 minutes) • Welcome the participants and invite them to create a table tent. **Session Norms & Intended Outcomes (3 minutes)** • Review the session norms and intended outcomes. • Invite participants to Tweet their thoughts during the presentation using the department and facilitator hashtag. **Icebreaker (3-5 minutes)** • Model a traditional book talk using the book *The Crossover* (2014) by Kwame Alexander. • Then, show the teachers the digital book trailer at the following link: o https://www.youtube.com/watch?v=81q0OpjoG7o • Invite the teachers to share their ideas about book talks and book trailers. **Using Digital Tools to Engage Readers (45 minutes – 15 minutes at each station)** • Teachers will rotate to 3 stations of their choice to learn about ways to use digital tools to engage readers. • Resources for all stations will be housed on the district LMS. • There will be a total of 6 stations to choose from: o Increasing Access & Choice o Digital Literature Circles o Digital Trailers o Digital Bins o Multimedia Book Response o Virtual Author and Illustrator Visits **Model Lesson – Tweeting the Read Aloud (20 minutes)** • Participants will use Twitter to respond to a read aloud. • Distribute index cards for participants to have a “scratch pad”. • Read aloud *Love* by Matt de la Pena. • After the read aloud, provide time for the participants to share their thinking with a partner. • Have participants post their Tweet using the author’s hashtag.

Closure & Reflection – Wordle or Graffiti Wall (15 minutes)

- Invite the participants to select how they want to reflect on what they plan to do in their classroom – Wordle or Graffiti Maker.
- Provide time for the participants to create a Wordle or Graffiti Wall.
- Invite participants to post their Wordle or Graffiti Wall to the session LMS page discussion board.
- Invite participants to review the work of the other participants and leave feedback and ideas.

Using the CCP (Consume, Critique, & Produce) Model to Engage in Digital Writing Practices
Date: January 2018
Session Length: 90 minutes
Audience: Secondary ELA/ESL Teachers & Leaders
Session Outcomes: • Participants will explore how to incorporate the CCP model into a digital reading and writing workshop. • Participants will explore a variety of digital genres and digital text structures and discuss how to navigate these texts in 21st century classrooms.
Suggested Facilitation Plan
Welcome & Introductions (2 minutes) • Welcome the participants and invite them to create a table tent. **Session Norms & Intended Outcomes (3 minutes)** • Review the session norms and intended outcomes. • Invite participants to Tweet their thoughts during the presentation using the department and facilitator hashtag. **Icebreaker (3-5 minutes)** • Invite the participants to think about a movie they recently watched. • Say, "Now I want you to write a movie review." • Ask, "What might you do before starting your writing?" Invite participants to share their thinking. • Say, "Often writers will look at examples of publishing pieces to get an idea on how to write something in a specific format." • Share examples – resumes, dissertations, Amazon reviews, recipes, blog posts, etc. **Review the Components of Consume, Critique, Produce (5 minutes)** • **Consume:** We read examples of the genre and notice the features and characteristics of this type of writing. • **Critique:** We read through the lens of a critic, thinking about the effectiveness of the author's choices. • **Produce:** We use what we have learned consuming and critiquing to write in the genre. **Consuming: Must Have, Might Have, Won't Have (5 minutes)** • Review Katie Wood Ray's must have, might have, won't have graphic organizer. • Say, "Before revision, we need vision. Think about what you have read that is like what you are trying to write." • **Must Have:** What are we noticing is the same in all the texts? • **Might Have:** What are we noticing is different in the texts? • **Won't Have:** What are we noticing is different in the texts from other genres?

Consume Study Stack of Blog Posts (15 minutes)

- Provide a link to a study stack of blog posts about digital literacy.
- Have the participants read the blog posts and think about what a blog post must have, might have, and won't have.

Critique Study Stack of Blog Posts (15 minutes)

- Have participants create a Google Doc with their table to create a Must Have, Might Have, and Won't Have anchor chart about blog posts.
- Have the participants share their chart with the whole group for discussion.

Produce Blog Post (30 minutes)

- Model how to construct a blog post; think aloud by referring to the Must Have, Might Have, and Won't Have charts.
- Invite the participants to construct their own blog post about digital literacy.
- Provide time for them to share their blog post with a partner before posting to the session discussion board.
- Provide time for them to read the other blog posts and respond to at least one classmate.

Reflection and Closure (10 minutes)

- Invite the teachers to share how they might use the CCP method to explore other digital genres – infographics, book trailers, Flipgrid videos, podcasts, public service announcements, editorials, review or recommendation, etc.
- Have them complete a Give One/Get One exit ticket to obtain ideas from their classmates.