Student Experiences, Attitudes, and Perceptions Toward Online Collaborative Tools: A Case Study

Jeremy Easley

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Student Experiences, Attitudes, and Perceptions Toward Online Collaborative Tools: A Case Study

A Dissertation Presented for the
Doctor of Education Degree

Kennesaw State University

Jeremy Easley
November 5\textsuperscript{th}, 2020
Dedication

This dissertation is dedicated to Arnold Nathaniel Thomas. Even though you did not have the same academic opportunities that I did, you impressed upon me, at an early age, the importance of an education. This is for you and the many lessons you taught me when I was young. I miss you every day, and I hope I am making you proud.
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I want to begin by thanking my Lord and Savior, Jesus Christ because without him, none of this would be possible. Every time I worked on this dissertation, I started with a prayer. Had it not been for God’s grace, guidance, wisdom, and strength, I would not have finished this process.

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Lastly, I want to thank the love of my life and my best friend, Brittnee Easley. I have never met someone more impressive and who challenges me intellectually the way you do. I cannot begin to express what you mean to me, nor explain what your support has meant to me throughout the years. This accomplishment is just as much yours as it is mine. I thank you, and I love you.
Abstract

This case study (Merriam, 1998) describes the experiences, attitudes, and perceptions of four twelfth-grade students at Bob Jones High School (pseudonym) with literacy deficiencies as they used collaborative technology tools in an online after-school tutoring program that focused on reading and writing skills. Leveraging the sociocultural theory of reading (Freebod & Luke, 1990), participants worked collaboratively to strengthen skills while completing tasks. In addition, students used online collaborative tools, based on the principles of the New Literacies Studies (Gee, 2010), to construct and share meaning. Data collection included semi-structured interviews, participant observation and student artifacts. The data from these sources were analyzed using the constant comparative method (Glaser and Strauss, 1967). The data from the study showed that although students took time to adjust to from the face-to-face learning environment to an online virtual environment during COVID-19 pandemic, they described and exhibited positive experiences and attitudes while working collaboratively. Students experiences and attitudes toward online collaborative tools were a mixture between positive and indifferent. Students became accustomed to using these tools and did not indicate overly positive or definitively negative attitude toward online collaborative tools. Students did perceive the usefulness of these tools because of their speed, ease, and convenience and identified how they could be used in other classes. The findings from this study support the use of small-group instruction and online collaborative technology tools to support students with literacy deficiencies.
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Chapter One: Introduction

Background

Reading and writing skills are used in the majority of grade school academic courses, thus making them possibly two of the most utilized skills in education. Whether a student is writing an extensive summary of the pivotal battles of the Civil War, or reading and comprehending a mathematical word problem, the student must possess the prerequisite reading and writing skills to be successful in other subject areas. Moore (1999) claimed that adolescents entering the adult world in the 21st century will read and write more than at any other time in human history. They will need advanced levels of literacy to perform their jobs, run their households, act as citizens, and conduct their personal lives (Vacca, 2001). However, roughly 12% of the world's population is considered functionally illiterate, with only basic or below-basic literacy levels in their native languages (International Literacy Association, 2014). In a study by United Nations Education, Scientific and Cultural Organization (UNESCO) (2017) 102 million of the illiterate population were between 15 and 24 years old. The global adult literacy rate was 86% in 2016. The Nation’s Report Card, released by the National Assessment of Educational Progress (NAEP), showed that just one-third of students are performing at a proficient literacy level (Wexler, 2018). The NAEP defines proficiency as demonstrated competency over challenging subject matter. For the duration of this study, literacy will refer to competency in reading and writing skills. This definition was developed after reviewing an Education for all Global Monitoring Report from UNESCO (2006), which focuses on the understanding of literacy as an autonomous set of skills; literacy as applied, practiced, and situated; literacy as a learning process; literacy as text.
The literacy problem carries negative implications beyond just the classroom; as these students grow into adults, the lack of literacy has the potential to alter their quality of life. Clark and Dugdale (2008) provide evidence from their research that shows literate individuals contribute to creating literate families and communities, which contributes towards a literate nation. The benefits for literate families include decreased divorce rates, increased likelihood of living in a working household, and more likely to own a home. This United Kingdom study also showed that 63% of men and 75% of women with very low literacy skills never received a promotion. Likewise, 41% of employers were concerned about their employees’ basic literacy skills. These statistics continue to strengthen the notion that high literacy levels lead to success beyond as school as well.

Based on a study from the Program for the International Assessment of Adult Competencies (PIAAC), one in every six adults under the age of 65 have a literacy level equivalent to that of a fourth-grade student (PIAAC, 2009). This roughly equates to 35 million adults who operate with a low level of literacy. This national problem has also impacted many Georgians. As reported by the HealthCare Georgia Foundation (2016), nearly one-fourth of Georgia adults may be illiterate. With a current adult population of over 6 million people, that calculates to approximately 1.5 million adults without the basic ability to read and write (Buster, 2016). The alarming number of illiterate adults in Georgia points to the number of students who drop out of high school or graduate from high school without being proficient in the literacy standards. Students who drop out of high school before they have mastered the fundamental reading and writing standards run the risk of becoming illiterate adults.
In an effort to measure student growth and proficiency, Georgia school districts adopted the idea of testing students to measure their growth from year to year, including reading comprehension standards. Each district was responsible for developing its own tests. These tests were administered during the years in which students did not take an End Of Course Test or Georgia Milestone. This program evolved over time to become the Student Progress Measure (SPM). Districts also administer writing diagnostic tests to measure student growth in writing proficiency. In my experience, I have noticed a decline in student achievement on the writing diagnostic tests and the SPM.

At Bob Jones High School (pseudonym), the average student growth in literacy assessments has declined over the years. From 2015–2019, 12th-grade students have scored 7% lower on the SPM and 4% lower on the County Writing Assessments (county writing diagnostic). The decline in test scores shows that students are becoming proficient in fewer areas and increasingly deficient in other areas. In addition to lower test scores, student achievement in the classroom has declined as well. From 2015–2019, the average final grade in 12th-grade literature dropped from 86% to 81%, furthering the literacy deficiency narrative. As seniors, students are preparing to graduate and hopefully become functioning members of society. If these students fail to master or become proficient in the literacy skills during their last year, there is a chance that they could contribute to the growing illiterate population in the state of Georgia and nationwide.

**Problem Statement**

The problem that this study seeks to address is the growing number of 12th-grade students who have a literacy deficiency. The literature (Clark, 2017; Dapkviashvili, 2017) indicates that an individual’s early literacy experiences have a profound effect on that
individual’s ability to participate in society and, ultimately, later success in life. The goal of this study is to help students overcome their negative literacy experiences at the secondary level through the implementation of technology tools that support students as they strive to become proficient in literacy. This study will also consider impact learners' attitudes have on achievement. Evans (2007) discovered significant correlation between students’ attitude and achievement. Mohamed and Waheed (2011) confirm positive relationship between students’ attitude and their academic performance. It is possible that if students have a positive attitude toward literacy instruction and the practices used to teach literacy, students could experience success. Considerations should also be given to learners' perceptions of literacy instruction and the practices used to teach literacy. The characteristics of the tasks as perceived by students are central to the understanding of student academic achievement (Alkharusi, 2008, 2010, 2011). Similar to the relationship between student attitudes and their academic performance, there is a possible relationship between students’ perception of a task and achievement. Brookhart (1997) postulated that students’ perceptions of the classroom assessment tasks may influence their academic achievement. If students who are literacy deficient perceived the value in literacy education and the strategies used to teach literacy, it could positively impact their achievement. This study is significant because this program may contribute to ending the negative effects of early literacy experiences and aid individuals in the generation and use of literacy skills that will allow for better participation in society and increased success (Clark, 2017; Dapkiashvili, 2017).
**Purpose of the Study**

The purpose of this case study was to describe the experiences of students with literacy deficiencies as they use collaborative learning technology tools in an online after-school tutoring program that focused on reading and writing skills.

**Research Questions**

Central Question: What are students with literacy deficiencies perceptions and experiences with using online collaborative tools in a small group, after-school tutoring program that is intended to improve reading and writing skills?

Subquestion 1: How do the students use online collaborative tools to support their development of reading and writing skills in a small group, after-school tutoring program?

Subquestion 2: What are the students’ attitudes and perceptions toward using online collaborative tools?

Subquestion 3: What are the students’ attitudes and perceptions toward strategies used to implement online collaborative tools?

**Theoretical and/or Conceptual Framework for the Study**

Literacy can have many different definitions, depending on the context. This is because there is not a universally accepted definition of literacy. UNESCO (2008) defined literacy as "A person is literate who can, with understanding both read and write a short simple statement on his or her everyday life" (p. 145). This definition is one of the most common definitions of literacy. In education, someone’s ability to read and write determines if they are literate or illiterate. UNESCO (1978) refers to a functional definition of literacy as, "A person who can engage in all those activities in which
literacy is required for effective functioning of his (her) group and community and also for enabling him (her) to continue to use reading, writing and calculation for his (her) own and the community's development" (p. 183). This definition still references the ability to engage in reading and writing, but it also includes calculations (math-related), not only for the individual’s development, but for the development of the community. The Program for International Student Assessment (PISA) proposed a definition of reading literacy as "An individual's capacity to understand, use and reflect on written texts, in order to achieve one's goals, to develop one's knowledge and potential and to participate in society" (Organization for Economic Co-operation and Development, 2007, p. 46). All three definitions of literacy require the individual to engage with reading and writing activities, but they differ in the way the individual engages with the two. UNESCO’s definition is to understand how to read and write a simple statement, while the Experimental World definition calls for the use of the use of reading, writing, and calculations for the development of the individual and the communities. I am drawn more toward the PISA definition because it not only stresses comprehension, but the application of comprehended material to achieve a goal to better oneself in hopes of becoming a functioning member of society. As this study focused on students who were preparing to leave high school and enter the real world, I selected the PISA definition to be the most appropriate. I used the PISA’s definition of Literacy for the duration of this study.

Sociocultural and Sociocognitive Theories of Literacy

Although there is not a universally accepted definition of literacy, it is typically associated with an individual’s ability to read or write. Over the years, researchers and
experts have discussed different ways to approach literacy. Two approaches in particular are the sociocultural and the sociocognitive theories of literacy. Sociocultural perspectives on literacy include various theories focused on the myriad ways in which people use literacy in context, which include a strong emphasis on power relations (Perry, 2012). One perspective by Freebody and Luke (1990) explains that through the sociocultural theory, meaning is not merely a cognitive act but is instead socially and culturally constructed. Comprehension involves three elements influenced by the sociocultural context: the reader, the text, and the activity of reading itself. Perry’s (2012) approach agrees that literacy is a social and cultural learning experience, but he focuses on three major perspectives: (1) literacy as social practice, (2) multiliteracies, and (3) critical literacy. The idea that there are several different approaches to the sociocultural theory of literacy can be confusing. The definition that I found most helpful and that casts an umbrella over the various approaches to sociocultural theory comes from Gee. According to Gee (1996), language “always comes fully attached to ‘other stuff’: to social relations, cultural models, power and politics, perspectives on experience, values and attitudes, as well as things and places in the world” (p. 74). The above-mentioned expert’s perspective on the sociocultural cultural theory of literacy, like many others, is derived from psychologist Lev Vygotsky’s, who believed that parents, caregivers, peers, and the culture at large were responsible for developing higher order functions. According to Vygotsky (1978), learning has its basis in interacting with other people. Once this has occurred, the information is then integrated on the individual level (Cherry, 2019). In literacy, the sociocultural theory relies on the text or writing prompt, the
student’s experiences and attitudes, and the experiences and attitudes of peers and educators to promote learning.

In practice, the sociocultural theory of reading can be exemplified by using the reciprocal teaching method. With reciprocal teaching, students take turns leading dialogues', thinking aloud within small groups, and are encouraged to share their strategies in a collaborative learning environment (Fielding & Pearson, 1994). Reciprocal Teaching (Palinscar & Brown, 1984) is a guided reading comprehension strategy that encourages students to develop the skills that effective readers and learners do automatically. Teachers model the skills they want students to master, then students' practice/teach these skills in pairs or small groups.

A sociocognitive view of literacy combines issues of society and schooling, asserting that (1) all learning is socially based, (2) literacy learning is an interactive process, and (3) cognitive behaviors are influenced by context and affect the meanings that learners produce (Langer, 1986). This theory was derived from Albert Bandura’s Social Cognitive Theory (1985). The theory states that when people observe a model performing a behavior and the consequences of that behavior, they remember the sequence of events and use this information to guide subsequent behaviors. Observing a model can also prompt the viewer to engage in behavior they already learned. Sociocognitive theory of reading seems to refer to the process in which a student learns, places importance, and sets goals through social interactions with related participants, and develops meaning based on those interactions. These social interactions can include, but are not excluded to, class discussions led by the instructor, discussions with classmates about academic content, observing student responses to good and bad grades,
the importance parents and peers place on literacy, the importance the school places on literacy, and how literate or illiterate individuals are portrayed in society. Laurie (1978) discusses how learners see models of literate behavior as other people engage in literacy activities, and when they talk and ask questions about what is happening, why, and how.

In the classroom, sociocognitive theory of literacy can be seen through strategies such as the Gradual Release method. The Gradual Release Model is a best practice instructional model in which teachers strategically transfer the responsibility in the learning process from the teacher to the students (Fisher & Frey, 2008). Typically, the model of teaching has four phases: I do — where the teacher models the lesson objective in a focus lesson; We do — guided instruction with both input from the teacher and the students; You do together — collaborative learning in small groups or partners; and You do alone — independent practice. This strategy allows students to construct meaning based on the text, their experiences and attitudes, and interactions with the instructor and peers.

**New Literacy Studies**

The New Literacy Studies are about studying new types of literacy beyond print literacy, especially, “digital literacies” and literacy practices embedded in popular culture (Gee, 2010). Lankshear and Knobel (2007) state the significance of new literacies has mainly to do with how it enables people to build and participate in literacy practices that involve different kinds of values, sensibilities, norms and procedures, and so on from those that characterize conventional literacies. The values, sensibilities, norms and procedures could be established from a myriad of sources that include, but are not limited to gaming lobbies, social media, social networking, productivity tool (Word, PowerPoint, Excel), YouTube, television, Learning Management Systems (LMS), and many other
advances that have yet to be discovered or popularized. One quality that all of the above-mentioned tools possess, is the ability to connect learners. They have the ability to allow learners to construct meaning from their own experiences, experiences of other users, and based on the task, like sociocultural theory; or learners can set goals and values based on modeled behavior, like the sociocognitive theory. The social qualities of the new literacies are abundant.

**Integrating the Theories**

The above-mentioned theories have contributed to the pedagogy, educational practices and methods used in this study. The sociocultural theory of literacy promotes students to gain information and create meaning, not only from the text, but from the knowledge and experiences of their peers and the teacher. By creating collaborative tasks and assignments, I am allowing students to learn from each other and use the knowledge they have gained to be successful. The sociocultural theory (Vygotsky, 1978) also has, what I like to refer as, a scaffold in the form of the Zone of Proximal Development (ZPD). Higher achieving students demonstrate their thought process or any other educational process, in hopes that the lower achieving student is able to learn from the higher achieving student (More Knowledgeable Other) and use the knowledge gained to raise their own cognitive level. The sociocultural theory supports the collaborative pedagogy and practices used in this study.

The sociocognitive theory of literacy (Langer, 1986) supports this study because it maintains the idea that literate behaviors need to be modeled. By promoting and hosting a voluntary, after-school tutoring program for reading and writing skills, students are exposed to the importance of literacy that the teacher and the school place on it. They
also get a better understanding of the importance of literacy when they see their peers attending the tutoring sessions as well. Almost to say, “my peers value improving reading and writing skills as well.” Parents also show they believe literacy is important by supporting their student’s attendance to the tutoring sessions. Based on sociocognitive theory, various social groups (parents, teachers, school, peers) have established the importance of literacy. During the tutoring sessions, the sociocultural theory continues to support the practices of the teacher. The teacher will model literate behaviors through demonstrating higher order thinking skills, close readings, brainstorming, editing, revising, and other writing processes. Students will begin to model those literate behaviors and begin to become models of literate behaviors to their peers. The sociocognitive theory helped to establish importance (social groups), goal setting (social groups), and modeling (teachers and peers).

Both the sociocultural (Freebody & Luke, 1990) and sociocognitive (Langer, 1986) theories of literacy depend heavily on social interaction. Similarly, Gee (2010) refutes the idea that literacy is solely a cognitive process that people do alone. By encouraging students to work collaboratively, students are given the opportunity to learn more than their thought process, but about them as individuals. While reading texts as a group, students are encouraged to share their own experiences with the ideas of a text. Students who were raised in a rural area would read *Their Eyes Were Watching God* differently than a student who was raised in the city. Not because he or she has a higher literacy level than the other student, but some of the ideas or events may resonate better with that student. This gives students the power to enlighten and provide context to the text. Hopefully students will not dread reading because they think it is something they
have to suffer through alone when they do not know a word or are inexperienced with a
category; they will begin to see reading as a process of sharing experiences to create
meaning.

Continuing to promote social interactions as a method to gain meaning, the New
Literacies Studies encourages participation in literacy activities outside the conventional
methods (print). This study will use digital technologies as a method to engage in literacy
activities. With so many ways to use digital technologies to stay connected, students are
able to engage in the same principles of the New Literacies Studies, sociocultural theory
(Vygotsky, 1978), and sociocognitive theory (Bandura, 1985) from inside and outside the
classroom. It was also my hope that students would look at the digital tools utilized
during this study as methods to connect and learn from their peers and the world around
them.

**Nature of the Study**

To be able to effectively investigate student attitudes and experiences while using
online collaborative tools while practicing literacy skills, it was appropriate to use a case
study design (Merriam, 1998). Case study allowed me to observe the process in which
these tools were used as students practiced literacy skills. Case Study was chosen because
it involves investigation of real-life phenomenon through detailed contextual analysis of a
limited number of events or conditions and their relationships. The "case" may focus
upon an individual, organization, event, project, or phenomenon anchored in a specific
time and place (Burns, 2017). This “case” focused on a group of students with literacy
deficiencies, as they sought to strengthen their literacy skills, while using online
collaborative tools in an after-school tutoring environment.
I served as the primary researcher for this study. I used the online conferencing tool Zoom to observe student-perceived attitudes and experiences and documented how students collaborated during each online tutoring session. Direct observations have been used in studies of practically all aspects of the behavior of young children, and it has been widely applied in classrooms, camps, homes, discussion groups, playgrounds, museums, studies of the behavior of adults, and special situations (Jersild & Meigs, 1993). As I observed, I will took notes on students’ body language, what they said, how they interacted with one another, and the degree of difficulty of their collaboration.

The last data collection method I used was interviews. Semi-structured interviews allows the interviewer to ask participants the same set of questions but can ask follow-up questions to gain a deeper understanding of possible vague answers (Leedy & Ormrod, 2001). These individual, online interviews enabled me to further establish rapport with participants and therefore gain their cooperation. Interviews will help gain insight into students' attitudes.

**Definitions**

*Attitude:* An individual's disposition to react with a certain degree of favorableness or unfavorableness to an object, behavior, person, institution, or event – or to any other discriminable aspect of the individual’s world (Ajzen, 1993).

*Experiences:* Are based on the interaction between the human being and the world (Dewey, 1937; Hohr, 2010).

*Google Suite (G Suite):* It is a software environment, with interlaced and fully compatible applications, that allows students and teachers to do many of the tasks involved in the modern teaching-learning process. It allows the use of several Google
products in a unique domain, which is customizable by the client (Artacho, Jesús, Romero, 2018).

**Literacy:** An individual's capacity to understand, use and reflect on written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society (UNESCO, 2006).

**Literacy Deficient:** For this study, a student is identified as having a literacy deficiency if they did not pass the American Literature End of Course Test (EOCT), or if they are not passing 12th-grade Literature at the time of the study.

**More Knowledgeable Other (MKO):** Refers to someone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept.

**New Literacies:** New literacies studies are new types of literacy beyond print literacy, especially “digital literacies” and literacy practices embedded in popular culture (Gee, 2010).

**Online Collaborative Tools:** Internet-based tools that allow users to work together and collaborate while being connected to the internet. Users can communicate and make edits in a face-to-face setting, or from remote locations.

**Proficient:** Demonstrated competency over challenging subject matter (Hinckley, 2018).

**Perception:** The way you think about something and your idea of what it is like; b) the way that you notice things with your senses of sight, hearing etc.; c) the natural ability to understand or notice things quickly (Qiong, 2017).
The New Literacy Studies: Refers to studying literacy in a new way. The New Literacy Studies names a body of work that started in the 1980s. This work came from linguistics, history, anthropology, rhetoric and composition studies, cultural psychology, education, and other areas (Gee, 2015).

Zone Proximal Development: The zone of the closest, most immediate psychological development of learners that includes a wide range of their emotional, cognitive, and volitional psychological processes.

Assumptions

As an English teacher, I was interested in finding possible solutions to literacy problem. The findings of my research could help my colleagues and other teachers reach their students. I make a living teaching students reading and writing skills that they will need for the rest of their lives, so this problem was extremely important to me. I am firm believer that technology age is the wave of the future. Technology almost influences every part of life. As a specialist in instructional technology, I am confident that a possible solution lies in technology. I admit that collaborative technology tools may not be a solution, but I am sure this study will either support or argue against technology integration, collaborative technology tools, or collaborative teaching and learning practices.

Scope and Delimitations

This study sought to identify the attitudes and experiences students with literacy deficiencies had with using collaborative technology tools and how these students used collaborative technology tools to support their literacy skills, in an online after-school small group setting. Students without literacy deficiencies were excluded from this study.
Struggling readers and writers were included because my goal was to investigate methods that could help students become successful after graduation and as adults or disprove methods that may not be beneficial. This study was conducted in a remote learning environment. Tutoring sessions were conducted two times per week via Zoom. This study was bound by a six week, or twelve session time frame.

**Limitations**

A limitation of this research came from my own bias. Having studied and earned advanced degrees in Instructional Technology, I have become partial to the idea of technology integration. I managed my bias by member-checking from colleagues and participants. I reviewed observation and interview data with participants to reaffirm the accuracy of the data, as well as compare data interpretations with colleagues to agree upon unbiased findings. It is important to note that my colleagues were not experts in Instructional Technology.

I also attempted to keep my own bias in check by maintaining a reflective journal. This journal provided me with the opportunity to keep track of my thoughts about the study, participants, and the data I was studying. By keeping this journal, I was able to identify and track any bias that I may have had.

The sampling for this study required students to fit a criteria and volunteer, thus the results of this study may not be applicable to students who are not struggling readers and writers, in a typical class setting. The qualitative data collected details attitudes and experiences of the participants may not be representative of the attitudes and experiences of all students. The observation method may also provide limitations because I may not be able to observe all the meaningful behaviors from every student. This could negatively
impact the dependability of the data because some data points could be missing. Also, the honesty in which the participants answer the interview questions cannot be verified. If students answer in a dishonest manner, for whatever reason, the interview data could negatively impact the dependability as well.

Another limitation to this study is the access to technology. Students in this study had access to digital devices and to online collaborative tools. However, there were students who did not have as reliable internet connection as others. During some sessions, there were students who could not attend or could not fully engage because of their lack of internet connection. This caused some students to miss small-group and collaborative opportunities.

**Significance**

Researchers have found that individuals equipped with literacy skills gain control over their lives, but without literacy, life experience is dramatically narrowed, and opportunities are lost. This not only affects an individual's personal success and happiness, but also affects their family, the community where they live, and society (Dapkvashvili, 2017). For students, literacy leads to higher grades, which leads to social benefits, promotions, a higher salary, and overall well-being.

Educators and experts continue to seek out methods and practices that will allow students to be proficient in literacy skills. With many school districts now pushing technology integrations, some teachers may ask: “Which technology tools and methods should we use to promote literacy development? The results of this study may provide insights to teachers and school districts on how to integrate technology for literacy development, which tools to invest in, and promote pedagogy and practices.
Using the new literacies, this study explored student attitudes about technology integration and using technology tools to collaborate with peers to strengthen their own skills. This study also has the possibility of adding support to The New Literacy Studies and the idea that literacy is social through students collaborating online to strengthen literacy skills.

Summary

Oftentimes, students graduate or reach their senior year without an adequate command of literacy skills. Literacy skills and how they are attached to an individual’s post grade-school success cannot be understated. In an effort to assist students in becoming proficient in these skills and to test the merits of the push for technology integration in schools, this research explored the students’ attitudes and experiences by using online collaborative tools. These attitudes and experiences were documented in small group, after-school tutoring sessions.

The New Literacy Studies provided a framework for how students used technology to work collaboratively to construct and share meaning as they solved problems while practicing literacy skills. This research advances the notion set forth by the New Literacy Studies, that literacy is social and the connective nature of technology makes collaboration instantaneous. It is my hope that the results from this research will inform the practices of teachers, students, schools, and districts.
Chapter Two: Literature Review

The purpose of this case study will be to describe the experiences and attitudes of students with literacy deficiencies as they use collaborative technology tools in an after-school tutoring program that focuses on reading and writing skills. To better understand student attitudes and experiences as they are involved in an after-school tutoring session that applies collaborative technology to practice literacy skills, a constructivist qualitative approach will be utilized. This literature review will explore three areas of research: literacy education, technology integration, and the New Literacies. The following review will analyze the above-mentioned areas and provide the major findings of these areas, in order to provide a framework for studying the use of collaborative technology tools in an after-school tutoring program that aims to support students with literacy deficiencies.

The Progression of Literacy Education

In an effort to help parents and guardians understand what they can do to help their children comprehend the importance of literacy at an early age, the U.S. Department of Education (2016) published information explaining how the road to literacy begins at birth. Years of research, including work from Swain, Cara, Vorhaus, and Litster (2013) show clearly that children are more likely to succeed in learning when their families actively support them. Talking, listening, reading, and writing are important components of literacy. When family members read with their children, help them with homework, talk with their teachers, and participate in school or other learning activities, they give their children a tremendous advantage (Federer et al., 2005).

The practice of a parent reading with a child, at an early age, has numerous benefits to the child’s literacy development. Involvement with reading activities at home
has significant positive influences not only on reading achievement, language comprehension and expressive language skills (Gest, Freeman, Domitrovich & Welsh, 2004), but also on pupils’ interest in reading, attitudes towards reading and attentiveness in the classroom (Rowe, 1991). Although the child may not be old enough to read, practicing and modeling literate behaviors may spark a genuine thirst and enjoyment for reading.

When a parent reads to their child, they are also engaging in listening and talking. The child is listening to the pronunciation of the words so he or she will be able to emulate those sounds when they are talking. A study by Keller and Just (2009) found that when a child listens to someone reading, there is increased activity in the language output center in his or her brain as they are trying to store the spoken words into their memory. Children will use this information as they attempt to master spoken language.

Parents reading with children at an early age also supports writing skills. Listening to the sounds that different letters make provide children with a better understanding of how to create words in the own writing. This is a crucial step in understanding language because children’s knowledge of the sound system of language enables them to move from oral to written language, understand the individual components of language, and develop an understanding that letters make sounds (Roberston, 2011).

The U.S. Department of Education (2016) continues to point to the important role families play in the development of the literacy development of young children. Research also shows that the earlier parents become involved in their children’s literacy practices, the more profound the results and the longer lasting the effects (Mullis, Mullis, Cornille
et al., 2004). As children begin their formal education, not only are the methods in which they are taught literacy skills different, but the way they are assessed changes as well.

In public education, literacy instruction is informed by standards. Nationally, the Common Core State Standards initiative (CCSS) (2010) set forth a set of standards that students are expected to master by the completion of each grade level. State education chiefs and governors in 48 states came together to develop the Common Core, a set of clear college- and career-ready standards for kindergarten through 12th grade in English language arts/literacy and mathematics. These standards were developed with student college and career readiness in mind. The English language arts and literacy standards include expectations in reading, writing, speaking, and listening that apply in English language arts classes (Alberti, 2012). In a study, Finn and Petrilli (2010) measured the effectiveness of the Common Core State Standards (CCSS and the standards of each individual U.S. state and territory. They found that the CCSS measured seventh highest amongst all U.S. states and territories. Common Core was so popular that it was adopted by 46 states and three U.S. territories.

CCSS represented numerous shifts in literacy education. One of the shifts that CCSS caused was to build content knowledge through content-rich nonfiction. Research from Nelson, Ojose, and Waithaka (2005), who implemented Informational Text Reading Inventory (ITRI) strategies into a fourth-grade class experienced an increase in performance in vocabulary from 75% to 100%, and an increase from 38% to 83% in applying graphic skills. Nonfiction became the focus partly because it fell in line with the college and career readiness of CCSS. Zissner (1998) found about 80-90% of the reading adults do is nonfiction—newspapers, magazines, memos, manuals, and
directions, as well as informational trade books. Students need to be grounded in information about the world around them if they are to develop the strong general knowledge and vocabulary that they need to become successful readers and writers. Nonfiction plays an important part in building students' knowledge about content (Alberti, 2012). By focusing on nonfiction texts, students will be prepared to engage in texts that will be closely aligned with texts related to a future career. Being skillful at reading nonfiction texts also will help students as they attempt to read to gain information in other subjects such as science, history, and social studies. This change was different from what students were used to. Before CCSS, students overwhelmingly read stories; on average, fewer than 10% of elementary English language arts texts are nonfiction (Alberti, 2012). The shift to more nonfiction texts does not mean that fiction texts and literature is abandoned. The standards celebrate the role literature plays in building knowledge and creativity in students (Alberti, 2012), but the primary focus will be on nonfiction texts as they promote college and career readiness and provide students with necessary skills to read texts across curriculums.

Another shift includes reading and writing grounded in evidence. Mckeown, Beck, and Black (2009) compared an approach focused on the content of the text (i.e. evidence from text) with a strategy-based approach and a traditional basal approach in a low-performing urban district. Mckeown, Beck, and Black (2009) found a variety of benefits from the content approach: Length and quality of student recall was higher; Student discussion was dramatically more text-focused (97% vs. 66%); Length of student response was nearly triple. The CCSS emphasize using evidence from texts to present careful analyses, well-defended claims, and clear information (Alberti, 2012). These
standards require students to read texts closely and carefully, instead of responding to texts solely with information from prior knowledge. This also places a burden on educators to ask quality text-based questions so that students can engage in close readings and gain a deep understanding of the text. Students will also be required to use grounded evidence in writing as well. Starting with a heavy focus of narrative writing, in order to gain command of sequence and details, students will progress to argumentative and informational writing. The standards’ focus on evidence-based writing and speaking to inform and persuade is a significant shift from current typical practice. Today, the most popular forms of writing in K–12 draw from student experience and opinion, which alone will not prepare students for the demands of college and career (Alberti, 2012). In a study by the Intersegmental Committee of the Academic Senates of the California Community Colleges (ICASCCC), the California State University, and the University of California, (2006) researchers found college instructors consider identifying, evaluating, and using evidence to support or challenge a thesis one of the most important skills expected of incoming college students (ICASCCC, 2006).

The third shift was to practice regularly with complex texts and academic language. The standards focus on text complexity because the ability to comprehend complex texts is the most significant factor differentiating college-ready from noncollege-ready readers (Alberti, 2012). Researchers Stenner, Stanford-Moore, and Williamson (2012), measured median complexity of 12th grade texts as 1130 Lexile levels, while college and career texts showed a median complexity of 1300 Lexile levels. Thus, the difference between grade 12 and post-secondary levels was 170 Lexile levels, greater than the difference between 6th grade and 10th grade medians (130 Lexile levels).
These findings continue to support how important it is to expose students to more complex texts before post-secondary life. Vocabulary and syntax are some of the factors that determine the complexity of a text. Understanding and possessing a command for academic vocabulary is key to understanding complex materials. These are words that commonly appear across genres and content areas and that are essential for understanding most informational text. This shift toward complex text requires practice, supported through deliberate close reading (Alberti, 2012).

In a study by Northern and Petrilli (2018), over 1,000 elementary, middle, and high school English Language Arts (ELA) teachers took part in a nationwide online survey that inquired about literacy instruction, with special attention on the adoption of the CCSS. After reviewing the comments from participants, researchers found “Rather than focusing solely on the skills of reading and writing, the ELA/literacy standards highlight the growing complexity of the texts students must read to be ready for the demands of college, career, and life” (Petrilli, 2018, p. 13). In order to prepare students for success after high school, the standards demand students to engage in more rigorous texts and complete more difficult tasks. The mastery of basic skills is no longer enough, based on the standards. This demand of excellence is experienced in writing as well. The expectation for students has risen above writing and punctuating complete sentences. Though the standards still expect narrative writing throughout the grades, they also expect a command of sequence and detail that are essential for effective argumentative and informative writing. The standards’ focus on evidence-based writing, along with the ability to inform and persuade is a significant shift from current practice (Petrilli, 2018).
These forms of writing are deemed most crucial for incoming freshmen by college professors (ACT, 2009).

**Struggling Readers and Writers**

There are numerous reasons why adolescents struggle as readers. Possible causes include learning disabilities (Swanson and Hoskyn, 2001); a lack of strong English language skills (Short and Fitzsimmons, 2007); and students’ low levels of belief in their ability to succeed at reading and the subsequent lack of engagement in academic tasks (Guthrie, 2008; Yudowitch et al., 2008). Szklut and Cermak (1995) discuss that learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. McLean and Murdoch-Eaton (2001) defines English skills as a number of generic skills identified as outcomes of higher education, largely to prepare graduates for success. Generic skills include – but are not limited to – information-handling, managing learning, communication and presentation, computer literacy, critical thinking and problem-solving. These skills point to the inexorable pace at which knowledge in many professions is being generated, it is impossible for today’s students to learn everything they will ever need to know in their respective post graduate endeavors. Hall (2012) conducted valuable research about student identities and the importance of how they see themselves as learners. Findings indicated that students who self-identified as high-performing readers talked about texts and strategies in ways that were different from students who self-identified as being average or low-performing readers. These differences remained regardless of students’ assessed reading levels. Students who identified as high-performing readers discussed using comprehension
strategies as a way to clarify or deepen their knowledge of content and to support their interpretations of text. Students who have reading disabilities can struggle with language comprehension, have phonological deficits, or have issues with naming/fluency speed. Moats and Tolman (2009) found "reading impaired" children may be all those who score below the 30th percentile in basic reading skill. Among all of those poor readers, about 70-80 percent have trouble with accurate and fluent word recognition that originates with weaknesses in phonological processing, often in combination with fluency and comprehension problems. These students are often labeled as dyslexic.

Salinger (2010) suggests that fourth grade is the point at which students must make the transition from “learning to read” to “reading to learn.” This is a pivotal point in a reader’s development, and failure to make the transition could have negative effects on the reader throughout the rest of their life. Additionally, struggling readers are at a great risk of going unnoticed because of how and when they are assessed. Although students’ reading abilities are frequently formally and informally assessed in the primary grades, Leach, Scarborough and Rescorla (2003) found that students whose reading difficulties emerged after third grade were often overlooked. According to Paris (2005), standardized tests given in elementary school primarily assesses “concentrated skills” such as letter-sound knowledge, decoding, and low-level comprehension. He maintains that these skills are quickly learned and easily tested, but initial proficiency with these skills may mask a shallow overall mastery, which ultimately will impede students’ ability to read independently with deep comprehension. The International Literacy Association (ILA) (2017) suggests that standardized tests have limited ability to provide specific diagnostic information about student growth and achievement. In addition, standardized tests are
most often silent regarding the development of students’ motivation and self-concept.

Based on the presented research, most students begin struggling with reading around 4th grade and continue to go unnoticed because the standardized tests are not equipped to identify a student’s ability to succeed in the future.

**Strategies to support struggling readers and writers**

To support struggling readers and writers, small group instruction may be useful because it allows for differentiated instruction and individualized lessons. Differentiated instruction adapts learning to students’ unique differences based on students’ current abilities and understandings, personal interests, and learning preferences (Chapman & King, 2005). Hester (1994) found personalized instruction benefits those students who might be thinking about dropping out of school or struggling in the educational arena, by improving their attitudes about learning. Moyer (2011), after working with various students groups, found that students can be placed in many different groups and still complete work at a high quality. Small-group instruction allows the teacher to give the students the attention they require, as well as the ability to give one-to-one attention if need be. In her findings, Wilson references Vygotsky (1978), as she notes that small-group instruction is social. Small group reading instruction is in alignment with the beliefs of Vygotsky. Ultimately, she found that through social interaction and small group learning activities, children begin to integrate and control specific knowledge and skills gradually, as they participate in meaningful, hands-on practice of those skills (Wilson, 2012). These findings are similar to those of previous researchers, who would also add that reading with a peer motivates struggling readers to read a text that might be a bit
higher than the text they normally read, is a common form of differentiation (Koskinen and Blum, 1986).

In a study by Leigh Talley (2017), she uses research to justify the use of small group instruction, in the classroom. After collecting and analyzing the qualitative data, from her study, the researcher found that small-group instruction was a viable strategy to help struggling readers. Small groups, specifically cooperative groups, encourage communication among students. She refers to Ward (1987) who states cooperative groups require students with diverse ability and characteristics to work together and learn from one another to accomplish assigned learning goals or tasks. Communication could lead to questions, debate, deep questioning, and discussion (Talley, 2017).

Small-group instruction is not only beneficial to reading instruction, but also for struggling writers. Social interactions (peer-to-peer and student-to-teacher), is foundational to thinking and writing. Peterson and Rajendram (2019) examined teacher-student and peer interactions during collaborative writing and writing-mediated play in 10 northern Canadian primary classrooms. After analyzing observation and artifact data, Peterson and Rajendram (2019) concluded that collaborative writing contexts for young children should be placed alongside the more formal approaches that are deemed to be effective. A study by Deveci (2018) also supports the incorporation of small group instruction for collaborative writing. After completing the task, student attitudes were recorded. This study showed that first-year students in an Emirati university were quite satisfied with their collaborative project writing experience in an English course, often reporting benefits such as social and language skills development along with the utilization of higher order thinking skills. These studies have shown that small group
instruction is not only effective, but students have a positive outlook and experiences collaborating with their peers.

Small group, social interactions were utilized during this study to support struggling readers and writers. The above-mentioned studies support the use of cooperative and collaborative small-group instruction. The opportunity for students to collaborate and learn from each other is extremely beneficial, which is also supported by the work of Vygotsky (1978).

**After-School Literacy Programs**

Some schools have developed after-school programs that specialize in literacy support (e.g. Rogan, 2018). These after-school programs have the potential to provide the small group instruction opportunities needed to differentiate and individualize learning in order to support struggling students. Rogan (2018) documented the experiences of two principals as they implemented these programs into their schools. Findings from the study included increase in students’ English Language Arts proficiencies as well as improved attitudes towards attending school. These after-school programs provide an opportunity for students to receive tutoring in areas of need. Nelson-Royes (2018) details the importance and advantages of after-school tutoring. He describes tutoring as an excellent way to spend time with students in need and an opportunity to provide a less frustrating environment to provide additional experience. Along with the lack of frustration with their academic development, students are likely to be more organized, self-assured, and proficient at identifying relationships between ideas. Other research, National Education Association (2004), suggests that after-school programs could increase student achievement on standardized achievement tests. Furthermore, after-
school tutoring was most effective with low-achieving and at-risk students because these students developed more when one-on-one assistance was provided. Campbell-Cornelius (2018) researched the possible relationship between corrective reading interventions and student reading achievement in an urban public middle school after-school program, 21st Century Community Learning Centers (CCLC). The research data collected showed teachers believe the program was beneficial to students with regular (30) days of consistent attendance, corrective reading addressed the needs of students struggling with decoding, students were more confident readers, and they showed gains in assessments.

Throughout history, importance has been placed on after-school programs that promote literacy skills. Both former Presidents Bill Clinton and George W. Bush were instrumental in the America Reads Challenge Act (1997), Reading Excellence Act (1998), and funding that supported after-school programs for reading. Afterschool Alliance (2001), advocates for students to be involved in after-school literacy programs. Their research indicates that such activities can improve students’ achievement in reading and language arts and foster their appreciation for reading as a lifelong hobby. One of the most obvious benefits to after-school literacy programs they found, is that they provide additional assistance that some students may need to master skills. This has the potential to be extremely helpful to students who may not have completely grasped a skill during the allotted class period. These programs typically involve a small number of student participants, so struggling students can engage in individualized and possibly one-on-one instruction.

After-school tutoring programs also allow for teachers to try innovative strategies that they may not have the time or the resources to attempt during the school day.
Afterschool Alliance boasts authentic experiences that students can have in an after-school literacy program. Students at Juarez High School in Chicago learned the art of storytelling during the After-School Matters program. The program stimulates literacy by allowing youth to work with professionals from the world of drama, storytelling, and literature to read and create stories and learn about the technical elements of storytelling. Participants have the opportunity to read aloud and to write and improvise stories to a variety of audiences (After School Matters, 2001).

The literature and studies presented in this section support the idea that students begin struggling with literacy skills at a young age and because some students who struggle with reading and writing skills are not properly remediated at a young age, they continue to struggle. One possible strategy to support struggling readers and writers is through small group instruction. Small group instruction allows for differentiation and collaborative (social interaction) learning practices. Unfortunately, the enrollment numbers in most public schools do not allow for small group instruction. Fortunately, after-school tutoring programs allow students to experience authentic, small group instruction. These programs have experienced noticeable success, partly because teachers are able to individualize learning and are able to implement innovative practices.

**New Literacies Studies**

The New Literacies Studies gives researchers a framework for understanding the ways the internet and Information and Communication Technology (ICT) impact not only the literacy development of students, but also the social contexts of classrooms (West, 2019). Originally published in 2004, this emergent theory is beginning to be used
by researchers as a theoretical lens for studies of technology and learning (Hutchison and Beschorner, 2014; Lima and Brown, 2007; Stevens and Brown, 2011).

Leu and colleagues (2017) framed the New Literacies Studies on two levels of theory: lowercase (new literacies) and uppercase (New Literacies). Lowercase theories explore a specific area of new literacies and/or a new technology, such as the social communicative transactions occurring with text messaging. Simply put, the lowercase new literacies refer to the technologies, practices, contexts, and/or the changes in literacy through online media. Uppercase New Literacies, as the broader, more inclusive concept, includes those common findings emerging across multiple lowercase theories. New Literacies theory benefits from work taking place in the multiple lowercase dimensions of new literacies by looking for what appear to be the most common and consistent patterns being found in lowercase theories and lines of research (Leu et al., 2017). Essentially, the lowercase new literacies and the studies conducted using them, help develop the uppercase New Literacies Theories.

**Uppercase New Literacies**

Leu and colleagues (2017) pointed to eight principles of New Literacies that appear to be common across the research and theoretical work currently taking place:

- The internet is this generation’s defining technology for literacy and learning within our global community.
- The internet and related technologies require additional new literacies to fully access their potential.
- New literacies are deictic.
- New literacies are multiple, multimodal, and multifaceted.
Critical literacies are central to new literacies.

New forms of strategic knowledge are required with new literacies.

New social practices are a central element of New Literacies.

Teachers become more important, though their role changes, within new literacy classrooms (Leu et al., 2017, p. 1158).

Although the idea of uppercase New Literacies theories is still new, these principles create a starting point from which to build. New Literacies theory tells us that the internet and other continuously emerging information and communication technologies will be central to both our personal and professional lives and that these technologies require new literacies to effectively exploit their potential (Leu et al., 2017).

**Lowercase New Literacies**

One of the lowercase new literacies referenced previously involves online research and comprehension. This frames online reading comprehension as a process of problem-based inquiry and includes the new skills, strategies, dispositions, and social practices that take place as we use information on the internet to conduct research to solve problems and answer questions (Leu et al., 2017). Most students, including grade school, undergraduate, and graduate level, participate in reading online information to learn and use that information as some form of academic benefit. Even in the professional world, being able to search for pertinent information and use that information in order to complete a task is oftentimes required. Similar to the central principles of an uppercase theory of New Literacies, Leu (2017) has uncovered elements of online research and comprehension, which include:
Online research and comprehension is a self-directed process of text construction and knowledge construction.

Five practices appear to define online research and comprehension processing: (1) identifying a problem then (2) locating, (3) evaluating, (4) synthesizing, and (5) communicating information.

Online research and comprehension is not isomorphic with offline reading comprehension; additional skills and strategies appear to be required.

Online contexts may be especially supportive for some struggling readers.

Adolescents are not always very skilled with online research and comprehension.

Collaborative online reading and writing practices appear to increase comprehension and learning (Leu et al., 2017, p. 1164).

As the Internet becomes an integral part of everyday life, the ability to use the internet to answer questions and solve problems becomes more important. The skills associated with online research and comprehension allow students and professionals alike to experience a level of success.

Researchers Coiro, Knobel, Lankshear, and Leu (2008) worked together to continue the studies in new literacies by bringing together research from around the world in diverse disciplines and even more diverse theoretical frameworks. By researching new literacies with such a diverse scope, the researchers were able to inspect the changing nature of literacy and gain the best understanding. Starting with the internet,
researchers believe that the presence of the former has brought unprecedented dimensions to both the speed and the scale of the change in the technologies for literacy, forcing us to directly confront the issue of new literacies (Coiro, Knobel, Lankshear, & Leu, 2008). The first of its kind, the internet allowed immediate dissemination and access of a high volume of information. The Internet has become so widely used that in the mid-2000s, the one-billionth person began reading, writing, viewing, and communicating online. Since then, that number has grown to the equivalent of one-sixth of the world’s population currently using the internet. Along with the growing rate of people using the internet practice literacy skills, the researchers note that as a technology, the Internet permits immediate, global, and continuous change to literacy technologies themselves (Coiro, Knobel, Lankshear, & Leu, 2008). The Internet is a space that allows for developing and sharing of tools that promote literacy skills. For example, technologies such as blogs, wikis, multiplayer online games, instant messaging, social networking technologies, and video- and music-dissemination technologies (e.g., YouTube and Bebo) have rapidly spread by means of the Internet. Literacy is no longer a static construct from the standpoint of its defining technology for the past 500 years; it has now come to mean a rapid and continuous process of change in the ways in which we read, write, view, listen, compose, and communicate information (Coiro, Knobel, Lankshear, and Leu, 2014). In large part, this will require individuals to adapt to the new literacies required by the new technologies that quickly spread on the Internet.

This article also tackles the issue of identifying what can be deemed “new” in new literacies. The fact that there is a change in technology does not automatically qualify that change as new literacies. The authors point out that part of identifying “new” literacies is
defining literacy. This definition, of course, varies depending on the person or organization defining literacy. Any definition of literacy will determine whether some aspect of it is new or not (Coiro, Knobel, Lankshear, and Leu, 2008). For example, if someone defines literacy in the traditional terms of reading and writing, engaging text on the internet may not be any newer than engaging print texts. Whether one thinks of literacy in terms of alphabetic writing, vocabulary writing, and recall of information, or in wider terms such as conceiving and communicating meaning presented in multiple media and modality forms, as informational problem-solving or another broader conceptualization, the central idea returns to using digital tools as a way of giving and getting meaning (Coiro, Knobel, Lankshear, & Leu, 2008). Knobel and Lankshear (2007) dissect the term “new literacies” by defining literacies as socially recognized ways of generating, communicating and negotiating meaningful content through the medium of encoded texts within contexts of participation in discourses. But to qualify as “new,” the literacy must have what the researchers refer to as “ethos stuff.” When they say that new literacies involve different “ethos stuff” from that which is typically associated with conventional literacies they mean that new literacies are more “participatory,” “collaborative,” and “distributed” in nature than conventional literacies (Knobel & Lankshear, 2007).

Knobel and Lankshear (2011) continue new literacies research in a book that discusses how they believe new literacies can be researched effectively only from a sociocultural perspective, of which the New Literacies Studies is an example. This is a result of the contemporary changes to social practices. The workplace, educational settings, personal life, in the community, and society as a whole have experienced
transformations in established social practices. Many of these new and changing social 
practices involve new and changing ways of producing, exchanging, distributing, and 
receiving texts by electronic means. These changes include the production and exchange 
of multimodal forms of texts including digital code as sound, text, images, video, 
animations, and any combination of these (Knobel and Lankshear, 2011). In practice, 
these changes may affect how people exchange text messages; send instant messages; 
construct hyperlinks between documents and/or images; create movies on movie- 
making software; identifying compatible software for particular files; uploading files to the 
Internet; building multimedia role-play universe online; and customizing a blog site. 

Beyond how these changes appear from a functionality standpoint, Knobel and 
Lankshear (2011) state that new literacies involve different kinds of social and cultural 
relations; they flow out of different kinds of priorities and values. They explain these 
social and cultural relations as being more collaborative, distributed, participatory, less 
dependent on the individual, and less author-centric than conventional literacies. Thus, 
continuing the sociocultural perspective and the idea of learners communicating across 
numerous technological platforms to develop and share information. 

New Literacies Studies History

As previously defined, New Literacies Studies are defined are new types of 
literacy beyond print literacy, especially “digital literacies” and literacy practices 
embedded in popular culture literacy practices, and the meaning of these literacies are 
constructed based on social, cultural, political, historical, economic, and institutional 
practices of groups (Gee, 2010). This concept derived from the New Literacy (singular) 
Studies (NLS), which refers to studying literacy in a new way. NLS names a body of
work that started in the 1980s. This work came from linguistics, history, anthropology, rhetoric and composition studies, cultural, psychology, education, and other areas (Gee, 2015). NLS in particular has been described as originating from Giroux (1983), Willinsky (1990), Bloome and Green (1992), Gee (1990), Barton (1994), Baynham (1995), Scribner and Cole (1981), Heath (1983), and Street (1984) (Barton, 2001). Also, a wider range of developments contributing to NLS include work in the areas of ethnomethodology, conversation analysis (CA), ethnography of speaking, sociohistorical psychology, and post-structuralist theory (Adams, 2012). Scollon and Scollon (1980) made the distinction between types of literacy including more pragmatically grounded literacies of everyday life, deeply contextualized in the situation with known participants, indicating that literacy was taking a central role in research into understanding communication. The field of NLS is grounded in the belief that knowledge is constructed through interactions with others and depends on human interaction (Adams, 2012). The underlying epistemology of the NLS is social constructivism. A central figure of social constructivism, Vygotsky, connected learning through dialogue and interaction between learners in the learning process with its sociocultural context (Veer, 2007). What has come to be termed the NLS (Gee, 1991; Street, 1996) represents a new tradition in considering the nature of literacy, focusing not so much on literacy as a ‘technology of the mind’ or as a set of skills, but rather on what it means to think of literacy as a social practice (Street, 1984). Depending on the pedagogy or the teaching strategies, the NLS dependence on social interaction lends to both the sociocultural and the sociocognitive theories.

As technology tools have become more advanced and the Internet has become more accessible to a larger population, users are becoming more connected and have the
ability to interact and learn from each other, thus changing how technology is viewed as a way to gain and receive knowledge. The study of these technologies and how they are used to give and get information is referred to as the New Literacies (Plural) Studies (Gee, 2010).

**New Literacies in Practice**

The use of new literacies in the classroom has been supported by researchers who have studied the impact new literacies have on education. West (2019) shares the ways in which New Literacies theory served as an interpretive lens to understand how the internet as a cultural tool mediates the literacy actions of adolescents in English Language Arts classrooms. The researcher utilized the eight central principles of New Literacies Theory (Leu et al., 2017) as a deductive analytical framework to analyze the classroom environments in which the participants were engaging in literacy practices. The study documented the experiences and perceptions of fourth grade and ninth-grade students that used the internet as the primary means for literacy learning in their classrooms (West, 2019). This is important to note, because it solidifies the idea that these students were engaged in an environment enriched with technology. A study by Hopson, Simms, and Knezek (2001) found the creation of a technology enriched classroom environment appears to have had a positive effect on student acquisition of higher-order thinking skills. Their study identified several implications related to classroom design to enhance the development of higher-order thinking skills. During their study, teachers reported that the technology-enriched classroom differed from the traditional classroom in several significant ways.
At the conclusion of West’s (2019) three-month study, when asked what their preference would be if they were given the choice to write with paper and pencil or with technology, students indicated that they preferred to complete written tasks on a computer. The affordances they identified for writing with technology included the level of enjoyment and ease they experienced while writing, the features they believed provided support to help them accomplish tasks, and the features built into the digital programs that facilitated peer collaboration (West, 2019). At the beginning of the study, students also preferred writing using technology, but only because they perceived the writing process to be easier using technology. Before taking part in the study, students also thought of using technology as “fun” and pointed to the ability to look up words, use spellcheck, and look at Youtube as contributors to the ease and fun. Students in this study also preferred writing with technology because of the features built into the programs that allowed for peer collaboration. For the two fourth-grade participants, writing in a classroom in which the interactive features were used as an integral part of the writing process, the ability to receive feedback within their documents from their peers was an important source of support and motivation for these adolescents (West, 2019). At the conclusion of the study, not only was the researcher able to document the experiences that the “at-risk” students had in a technology-enriched environment, but she found the principles of new literacies were generally in line with her observations, thus, adding validity to the theory.

Spires, Morris, and Zhang (2012) also studied the readiness of teachers to implement New Literacies studies strategies for international high school students. This study also had global implications because it included students from China. Based on the
analysis of this study, teachers in both countries are eager to create educational experiences that help students become active global citizens. Clearly, new literacies and technologies will facilitate important communication and problem-solving skills needed for participation in the global economy. Researchers were so compelled by this idea, that they advocated for both U.S. and Chinese teachers to receive customized professional development support to make important changes in their instruction that will facilitate new types of educational experiences and learning for the 21st century (2012). It is not uncommon for researchers to complete studies with global implications. The research by Spires, Morris, and Zhang (2012) demonstrates the importance of the New Literacies Studies, not only on education but on an economic level as well.

**Technology Integration**

Technology and technological innovations have come to play a critical part in the development and the advancement of society, particularly in education. Voogt and Pelgrum (2005) also assert that access to ICT can be used to improve the delivery and access to quality education. For the educator, the enormous diversities of digital technologies provide literally hundreds of tools to support teaching and learning (Ng, 2015). Some of these technology tools include internet-dependent tools such as open-source learning management systems (e.g., Edmodo, Blackboard, Google Classroom, Moodle), social networking sites and apps (e.g., Instagram, Twitter, Facebook, instant messengers), cloud storage (e.g., Google Drive, Dropbox), cloud-based creation services (e.g., Animoto, Prezi, GlogsterEDU), and educational resource sites (e.g., Khan Academy, itunesU) (Ng, 2015). Mobile devices such as tablets, Chromebooks, laptops, and smartphones have become useful tools in education as well. There also are stationary
tools that teachers use as aids in the classroom: desktop computers, interactive
whiteboards, voice recorders, microphones, projectors, and DVD players.

Although technology integration is not implemented by all educators and districts,
there are some justifications for the use of technology in the classroom, including: to
support learning for the achievement of successful learning outcomes; to develop 21st-
century skills as part of preparing students for the workplace and to become responsible
digital citizens and life-long learners (Ng, 2015). These justifications not only take into
account support for the learners while they are in school, but also prepare them to use
technology successfully and continue to learn after they finish school.

Over the past couple decades, there have been numerous studies, investigations,
literature reviews, and meta-analyses to assess the effect that technology use has on
learner outcomes. Coffey (2012) found that integrating technology and peer-led
discussions of literature can produce increased student engagement and motivation.
These online literature discussions have the ability to create a sense of community and
foster positive social interaction. Kurt (2010) found technology can be used to restructure
and redesign the classroom to produce an environment that promotes the development of
higher-order thinking skills. The consensus in the literature on the impact of educational
technologies on students’ learning is that they motivate and engage students (Ng, 2015).
Unfortunately, there is little conclusive evidence that shows the effect that educational
technology has on students’ learning outcomes and performance. There are studies, such
as Tamim et al. (2011), that found a small-to-moderate increase in achievement for
students who used technology. Like this study, other studies have experienced similar
results. Al-Bataineh, and Al-Bataineh (2016) compared student test scores from a
technology-infused-classroom versus a classroom that was taught using traditional methods. The 1:1 (One student to one technology device) Implementation Classroom scored significantly higher, 82.58% vs. 65.87%, on the Topic Test than the Traditional Classroom. These scores could be a result from the newness of the laptops, the excitement of the students participating, and the ability to better differentiate using a laptop.

Baytak, Tarman, and Ayas (2011) found that most students believe that their learning is improved by integrating technology into classroom curriculum. Students participating in the study reported that using technology in school makes learning fun and helps them learn more. A Turkish study by Bulut and Delen (2011) states information and communication technology has a positive effect on student learning and should be included in classroom instruction. Christen (2009) seemingly agrees by claiming, if their learning environment mirrors the ways in which they engage with the world, they will excel in their education.

Costley (2014) discusses technology integration initiatives such as the one-to-one laptop initiative. 1:1 is an initiative that some districts adopt in order to provide each student with access to a laptop or a mobile device. A study of 1:1 technology implementation in Texas, Shapley et al. (2011, p. 299) noted, “technology immersion had a positive effect on students’ technology proficiency and frequency of their technology-based class activities and small-group interactions.” Van Meter Community School in Iowa adopted a 1:1 laptop initiative in grades 6–12. They also enacted a strong technology focus throughout the district. Since the launch of this program, the school has reported that there was an evolving atmosphere of respect, creativity, collaboration, and
connection (Costley, 2014). By going to 1:1, students are capable of creating, collaborating, and communicating in and out of the classroom.

**Collaborative Technology Tools**

With an increase of classrooms that integrate technology, the focus now shifts to effective methods of technology integration and the possibility of using collaborative technology tools. Bernsten and Mallon (2015) outline numerous collaborative technology tools and how they are used in the classroom. More than 30 million students, teachers, and administrators in schools around the world use collaborative technology tools like Google Apps for Education (Google Inc., 2014). Collaborative learning technologies range from communication tools that allow for synchronous and asynchronous text, voice, or video chat to online spaces that facilitate brainstorming, document editing, and remote presentations of topics (Bernsten and Mallon, 2015). These are just a few of the capabilities of collaborative learning technologies, but the tools promoted by these technologies are used in most schools. Many tools are available for document collaboration in face-to-face classes or online. Rather than sending emails with attachments of different versions of a file back and forth, students can go to a cloud-based document to collaborate. Some document-creation tools include Google Drive, Zoho, Etherpad, and Evernote. These tools have a variety of features to encourage collaboration, such as built-in chat, colors for different authors, tracking changes, playback of writing, ability to insert comments, and different levels of sharing, ranging from viewing to editing. With the new tool named Poetica (2015), comments appear in the page margins, in a visual style as if you were adding comments to a paper document.
(Bernsten and Mallon, 2015). Because technology can be mobile, adaptive, instantaneous, and cloud-based, it makes for an ideal space for student collaboration.

Collaborative technology tools have particular value in online group work and collaboration. Students have the ability to work together on the same document in a face-to-face or a distant setting. Ryan (1997) discusses how the collaborative nature of technology tools can support effectively communicating ideas and more efficient than ever before and students may find themselves using interactive videos, e-mail, and discussion boards to complete their lessons. In the face-to-face setting, students can explain, question, support, or challenge certain choices as they work together to complete the given task. In the distant setting, students have the same communicative ability as the face-to-face setting while utilizing communication features. Features include audio via webcam or phone, text chat, polling, drawing, and screen-sharing. Many of the tools allow recording so that meetings can be archived via a course management system or YouTube to be viewed later (Bernsten and Mallon, 2015).

Bernsten and Mallon (2015) also discuss the benefit of peer learning. Staying consistent with the idea that learning is social, peer learning provides a great opportunity for students to be exposed to cognitive processes that differ from their own. For example, incorporating online brainstorming tools such as Padlet or MindMeister into library instruction allows students to bounce ideas off one another and share their own individual experiences and perspectives, which has been shown to increase cognitive thinking and comprehension (Bernsten and Mallon, 2015). With collaborative technology tools, peer learning is not limited to the classroom with the facilitation of the teacher. Students can connect and learn from the comfort of their own homes.
Deal (2009) discusses benefits of project-based online collaborative learning and the appropriate tools for these projects. Group work or asking students to collaborate is not a new practice. The collaborative pedagogy has been around for quite some time. So, what is so special about students collaborating when using technology? After reviewing literature from Finholt and Teasley (1998 as cited in Deal) found that computer-mediated groups outperform face-to-face groups in brainstorming tasks due to reduced production blocking (the tendency for one individual to inhibit contributions from other people during a group discussion). Deal also references how online collaborative assignments can support face-to-face group. In the online collaborative environment, students can share ideas or contribute to the assignment with a lessened sense of anxiety of face-to-face rejection. Deal (2009) also adds that online collaboration also discourages students who may dominate the discussion or input. With the lower sense of anxiety, there is a higher chance that all group members have an opportunity to provide input and have their input recognized.

**G Suite Tools.**

Google Apps represent a suite of free email and collaborative tools for K-12, university education, or large school districts, university consortiums, and state governments (Railean, 2012). These applications are referred to as G Suite. G Suite comprises Gmail (communication), Hangouts (instant messaging and video chat), Calendar (collaborative and shareable), and Google+ for communication; Drive for storage; Docs (word processing), Sheets (spreadsheets), Slides (presentations), Forms (survey administration), and Sites (web-page creation tool) for collaboration. Experts in the field of instructional technology, McQuillan and Robinson (2018) have devoted time
to discovering uses for G Suite apps in the classroom. One major benefit of Google Docs (sheets, slides, forms, sites) is that student work can be reviewed by teachers in real time (McQuillan and Robinson, 2018). As many teachers know, it is very difficult to provide real-time feedback and support for every student in a class period. It could be beneficial to place students in pairs for peer reviews or collaborative groups so students can provide feedback and support to each other. By supporting each other and providing feedback, student work can be seen and edited before it is submitted (McQuillan and Robinson, 2018).

Constantinou (2019) identified the problem of insufficient technology support for classroom management and attempted to remedy the problem with the integration of G Suite applications. A similar study reported that students found Google Apps more enjoyable to use when compared to Microsoft Office tools (Apple et al., 2011). It is interesting to note that none of the students responded that they considered the tools to be difficult to use (Constantinou, 2019). Concerning the learners’ perceptions on the efficiency of the G Suite for Education, results showed that in general, all of the tools used in the courses were regarded as efficient for their delivery (Constantinou, 2019). Overall, regarding the general evaluation of the whole experience using the Suite, students’ comments during the two courses, the facilitator’s field notes, and their questionnaire responses revealed that students were satisfied with the whole experience (Constantinou, 2019). Brodahl et al. (2011) found students’ attitudes and competence using online writing applications (i.e., Google Docs and EtherPad) played more important roles in students’ perceptions of collaborative writing as compared to other demographics characteristics (e.g., students’ gender or age). In particular, students found the following
elements the most enjoyable: sharing work and collaborating with classmates; communicating through the platform (Google Classroom); working on assignments and group projects; watching the video clips that were uploaded on Google Classroom; and working online (Constantinou, 2019).

Although the study does not comment on the students’ ability to accurately complete tasks, it does show that students find G Suite tools as useful and easy to use. Based on their survey responses, students who were not familiar with these applications were able to navigate the tools, with some getting used to, and found them useful overall. At the conclusion of the study, the researcher synthesized that the latest developments in the theories of learning that embrace social constructivist and connectivist approaches, learning is very much based on social interaction with the environment and networking, which means learning from one another. Such approaches can be catered for by cloud technologies, such as the G Suite for Education (Constantinou, 2019). This study and others like it informed my study, as the participants in my study used cloud-based technologies to communicate and collaborate in order to practice and strengthen literacy skills.

Summary

This literature review attempted to connect three major categories that would help inform the answers to the research questions by reviewing relevant studies, articles, and journal entries from researchers and experts in hopes of providing context for the research questions in this study. The review began with literature pertaining to how literacy is taught prior to formal education and how it is taught in grade schools. This included research about teacher experiences with the English Language Arts Common
Core standards and the expectations set forth in the standards that students be more college and career ready. The review then shifts to struggling readers and writers and how to support students who are unable to keep up with the high demands of the Common Core standards.

The next section introduced the New Literacies studies, emerging practices in new literacies (lower case new literacies), and possible theories that could emerge because of New Literacies practices. Because New Literacies Studies is relatively new, this section focused primarily on the emerging practices of new literacies. This review then investigated the integration of technology, collaborative technologies, and G Suite tools. Falling in line with the practice of collaborative education (small group instruction) to support struggling readers, the technological aspects and social interactions embedded in New Literacies studies, the review delves into the benefits of collaborative technology tools, namely the G Suite. Because they are easy to use and the ability for students to collaborate on the same task, at the same time, without needing to be in the same room, the research detailed, heavily endorses G Suite tools to support literacy skills.
Chapter Three: Methodology

The purpose of this case study was to describe the attitudes and experiences of students with literacy deficiencies have as they use collaborative learning technology tools in an online after-school tutoring program that focused on reading and writing skills. It is my hope that the research and findings will be used, in collaboration with other research relative to this topic, to help guide educators as they strive to support students with literacy deficiencies.

Central Question: What are students with literacy deficiencies perceptions and experiences with using online collaborative tools in a small group, after-school tutoring program that is intended to improve reading and writing skills?

Subquestion 1: How do the students use online collaborative tools to support their development of reading and writing skills in a small group, after-school tutoring program?

Subquestion 2: What are the student’s attitudes and perceptions toward using online collaborative tools?

Subquestion 3: What are the student’s attitudes and perceptions toward strategies used to implement online collaborative tools?

In this chapter, I describe the foundations of the chosen methodology, the context of the study, participant selection, researcher bias and ethical considerations, and the data collection and analysis procedures utilized.

Research Design and Rationale

To best answer the research questions, which primarily describe student experiences, how students completed tasks, and detail student’s attitudes using
collaborative technology tools, I decided that a qualitative research design would be appropriate. Qualitative research is a systematic scientific inquiry that seeks to build a holistic, largely narrative, description to inform the researcher’s understanding of a social or cultural phenomenon (Astalin, 2013). Case study (Merriam, 1998) was chosen because it involves investigation of real-life phenomenon through detailed contextual analysis of a limited number of events or conditions and their relationships. Case study is defined as: "analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods (Astalin, 2013, p. 122).

Merriam (1998) defines the case as a phenomenon of some sort occurring in a bounded context. The case for this study was a group of students (persons) who were involved in a small group, after-school tutoring program that utilized collaborative technology tools to reinforce literacy skills. This case was bound by the time (6 weeks, after-school), location, and tutoring program during the 2019-2020 school year.

Some of the benefits of conducting case study research are that it is narrowly focused, provides a high level of detail, and can combine both objective and subjective data, including observations, semi-structured interviews, and artifacts, to achieve an in-depth understanding. Case study allowed me the opportunity to observe the participants in a natural educational setting while collecting observation data. This observational data was key because the detailed qualitative accounts often produced in case studies not only helped to explore or describe the data in real-life environment, but also helped to explain the complexities of real-life situations that may not be captured through experimental or survey research (Zainal, 2007).
Yin (2002), Stake (1995), Merriam (1998), and many other researchers provide valid approaches to case study. Ultimately, my views align more with Merriam's constructivist approach. Merriam conceives qualitative case study as “an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit” (Merriam, 1998). Merriam (1998) presents a step-by-step process of designing qualitative research in a rather detailed fashion. Her discussion includes conducting literature review, constructing a theoretical framework, identifying a research problem, crafting and sharpening research questions, and selecting the sample (purposive sampling). Merriam’s process of designing a qualitative study appealed to a novice researcher like myself, because it provided structure for me to follow.

Role of the Researcher

Simon (2011) states that a good qualitative researcher asks probing questions, then listens, thinks, and asks more probing question to get to deeper levels of the conversation. An effective qualitative researcher seeks to build a picture using ideas and theories from a wide variety of sources. She continues by discussing that the qualitative researcher should also explain if their role is emic--an insider, who is a full participant in activity, program, or phenomenon, or the role is more etic –from an outside view, more of an objective viewer (Simon, 2011). My role in this study was split between facilitator/instructor and researcher/observer. There were times when it was difficult to manage my time as both a facilitator/instructor and observer. I was able to overcome these difficulties by structuring my time as an observer and instructor. As an instructor, my responsibility to support and help students grow was my first priority. I was not
willing to sacrifice the students’ right to a quality education for research. During the instructional period, I solely focused on instruction and support. As the students worked independently or in groups, I took field notes, while still making myself available to answer questions or provide the support. I then watched the recordings of the sessions to fill in any gaps I may have missed while assisting a student or a group.

Denzin and Lincoln (2003) describe my role as a researcher as an instrument of data collection, which means that data is mediated through this human instrument, rather than through inventories, questionnaires, or machines. As an instructor, I was responsible for reviewing key concepts, assigning practice assignments, and modeling skills during the tutoring sessions. This involved re-teaching points of confusion and communicating student expectations for completing assignments. Once I explained the tasks and students had a clear understanding of the expectations, I began my role as the researcher. Some tutoring sessions, I could strictly observe, because colleague was able to facilitate some of the tutoring sessions. During this time, I will observe students’ interactions as they use collaborative technology tools.

My epistemology follows those of a constructivist (Brooks & Brooks, 1993). Constructivists defines knowledge as temporary, developmental, socially and culturally mediated, and thus, non-objective. I used my constructivist epistemology to help guide how I studied student attitudes and how they used digital tools to gain knowledge.

Participants

Student participants for this study were identified by their academic performance. Students who did not receive a score of “meets” or “exceeds” on the End Of Course Test for American Literature or those who were currently failing twelfth grade literature were
not eligible to participate. For this study, the above-mentioned students were considered literacy deficient because they struggled to master the required minimum amount of English/Literature standards. Students who were identified as literacy deficient and parents of those students received a letter and email, explaining that they were selected to participate in a tutoring program that will help support their literacy development. This correspondence also included details about the case study and how the students will contribute to the study, which were included in the Informed Consent and Assent forms (Appendix E & F). Students were not required to participate and had the option to participate in tutoring sessions that were not studied. A more detailed description of the participant demographics is included in Chapter 4.

I required the assistance of a colleague, who also teaches twelfth grade Literature. For this study, she was referred to as Ms. Jones. Ms. Jones has worked with me at Johnson High School for the past three years and has been a key contributor to the collaborative planning process for the twelfth grade. She had been teaching twelfth grade Literature for 17 years, 14 of which were spent at a Title-1 school in Alabama. She had a Bachelor of English Education degree and a Master of English degree. She agreed to conduct some of the tutoring sessions to allow me the opportunity to fulfill my role as a researcher/observer. Also, to address any issues with power, Ms. Jones agreed to collect the informed consent forms so that I did not know who was participating in the study and who was not. After the tutoring program was over, Ms. Jones provided me with the list of consenting participants. This helped protect the students from feeling pressured to participate or lack of participation would influence their grade in some way.
Qualitative inquiry seeks to understand the meaning of phenomenon from perspectives of participants, it is important to select a sample from which the most can be learned (Merriam, 1998). This is called purposive of purposeful sampling. To create a purposeful sample, a criterion must be established. For this study, the criteria were twelfth grade students who were either failing at the time of the study, failed the previous semester, or failed the American Literature End of Course Test. Following Merriam’s definition of purposeful sampling, I also included convenience sampling (Teddlie & Yu, 2007) as the participants must meet a certain criterion and will be easily accessible and willing to participate in a study.

Deciding on the number of participants to include in the study was a complex decision (Creswell, 2008; Yin, 2009). I considered best practices in both case study and small group instruction. Merriam (1998) recommends setting an approximate sample size with the understanding that more participants may need to be included in order to address the phenomenon under study. Small-group instruction on the other hand, is defined as classroom instruction in which a small group of students (nine students), receive the same lesson as the students who are part of the whole-group instruction (Behringer, 2018). I decided it was best to follow the definition of small-group instruction to select the number of participants for the study. Thus, my tentative sample size was six to nine students.

**Research Setting and Context**

Bob Jones High School was a suburban, Metro-Atlanta high school in a southeastern state. Bob Jones High School had an enrollment of 1200 students in grades 9-12. 80% of the students enrolled were classified as minorities, with 34% of the total
population classified as economically disadvantaged. Bob Jones High School was one of five high schools in the Pretty Good School District (pseudonym). Bob Jones High School was often ranked last of the districts five high schools in terms of enrollment, Advanced Placement enrollment, Advanced Placement test scores, End of Course Test scores, and graduation rate.

In an effort to improve the graduation rate and the level of college and career readiness, as it pertains to literacy skills, the English department developed a tutoring program that focused on remediation and reinforcement of literacy skills. This program was in the third year of operation and had supported students in an after-school tutoring setting. The tutoring sessions took place in a classroom and that was typically instructed by one teacher. Students were encouraged to utilize their 1:1 Chromebook device during the sessions. Although the tutoring sessions were designed to take place in a face-to-face setting, the sessions were moved to an emergency remote learning environment because of the Covid-19 pandemic. A more detailed overview of the program is presented in chapter 4.

**Data Sources**

**Participant Observation**

Participant observations was used as a data collection method. As a method of qualitative research, participant observation is recognized as appropriate for gathering data on interactions and relationships through the recording of behavior, conversation and experience *in situ* (Van Maanen, 1995). Participant observations were also deemed appropriate because, “the methodology of participant observation is exceptional for studying processes, relationships among people and events, the organization of people
and events, continuities over time, and patterns, as well as the immediate sociocultural contexts in which human existence unfolds” (Jorgensen, 1989, p.12). Because of the remote learning environment, these observations were completed using Zoom, an online video conferencing tool. While completing participant observations, I documented my observations using field notes. Field notes are commonly defined as written records of observational data produced by fieldwork (Hammersley & Atkinson, 2002). Field notes consist of descriptions of social interactions and the context in which they occurred (Roper & Shapira, 2000). I created a field note protocol that included noting educational activities, focus standards, student interactions, student’s interaction with the teacher, technology use, perceived student attitudes, and evidence of attitude perception (See Appendix A). Following a style of comprehensive note-taking, similar to Lofland and Lofland (1984), these field notes started with a generalized list of concerns such as:

- Who is involved?
- What are they doing?
- What tools did they use to do what they are doing?
- What does their success, or lack of, look like?
- How did they work with others?
- Perceptions about their attitudes towards collaboration and tools.
- What evidence the above detailed perceptions?

When taking field notes, I answered each of the questions above as descriptively as possible. These questions were instrumental in describing students' experiences, detailing how students collaborated and used technology tools to support literacy skills, and providing insight into student attitudes and perceptions.
**Interviews.**

This study also relied on semi-structured interviews as a means to understand students’ use of online collaboration tools, their attitudes and perceptions towards strategies used to implement the tools and the tools themselves (See Appendix B). In a semi-structured interview, the interviewer also has the freedom to probe the interviewee to elaborate on the original response or to follow a line of inquiry introduced by the interviewee (Fox, Mathers, & Hunn, 2002). To triangulate students’ responses, I used the other data collection sources. For example, if a student was observed being off task or sleeping during the tutoring session but notes that he has thoroughly enjoyed using collaborative technology tools, I would inquire about the difference in observed behavior and the given response.

The interviews were conducted after the six-week tutoring cycle. This provided the students with enough experiences prior to the interviews to speak in depth about their experiences and attitudes. I conducted two interviews per evening in order to provide adequate time to ask the written questions and ask follow-up questions. I allotted one-hour blocks for each interview. An in-depth interview can last between 40 minutes and three hours depending on the level of interest generated in the topic (Foxx, Hunn, & Mathers, 2007). Interview responses were recorded on Zoom and I transcribed all interview responses after the final interview for that day.

**Artifacts.**

Student artifacts were important to study to monitor student progress. When studying a culture, social setting or phenomenon collecting and analyzing the texts and artifacts produced and used by members can foster understanding. When analyzing texts
and artifacts, the researcher may focus on how and for whom the artifact is created, what is included and not included in the document, and how the document is used (Silverman, 2001). Student provided me with an understanding of the student’s used online collaborative tools to support reading and writing skills. I collected these artifacts as they were due and typically received submissions via Google Classroom.

**Data Analysis**

LeCompte and Schensul (1999) define analysis as the process a researcher uses to reduce data to a story and its interpretation. Data analysis in the process of reducing large amounts of collected data to make sense of them. The data analysis method that was used during this study was the constant comparative method. Constant Comparative method assigns codes that reflect the conceptual relationships (Merriam, 1998). This method analyzes data by assigning codes that represent categories and properties to data units by sorting them into meaningful groups. Categories Should:

- Reflect the purpose of the research,
- Be exhaustive,
- Be mutually exclusive,
- Be sensitive to category content, and
- Be conceptually congruent (p. 160).

Categories can be added or eliminated depending on how unique the category is, or how frequent the category is used during the coding process. Boyatzis (1998) stated that a good code has five elements: (1) a label; (2) a definition of what the theme concerns; (3) A description of how to know when the theme occurs; (4) a description of any qualifications or exclusions to the identification of theme; and (5) a listing of examples,
positive and negative, to eliminate confusion. The coding process involved data driven coding, a process where codes were established based on the data collected during the study.

After confirming the data for this study via member checking, I will began coding the data. The initial pass at coding generated 54 codes. After several more passes and discovering commonalities in existing codes, the number of codes were reduced to 12 (See Appendix C). Data was managed and coded using a program called NVivo (QSR International Pty Ltd., 2020). NVivo was a qualitative data analysis computer software package. It has been designed for qualitative researchers working with very rich text-based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required.

The process of coding data includes looking for patterns and themes. DeSantis and Ugarriza (2000) defined a theme as “an abstract entity that brings meaning and identity to a recurrent experience and its variant manifestations. As such, a theme captures and unifies the nature or basis of the experience into a meaningful whole.” The previously mentioned twelve codes helped to identify four reoccurring themes used to help answer the research questions.

**Issues of Trustworthiness**

Because of my constructivist epistemology and the design of the study was exclusively qualitative, the strategies to ensure trustworthiness were different from other studies. The various data collection methods used in this study created triangulation. Merriam (1998) also advocates for triangulation as a method of credibility. Credibility, deals with the question, “How congruent are the findings with reality?” I used member
checking as one of the primary methods to ensure credibility. I shared all collected data with all participants to ensure they are represented accurately. Guba and Lincoln (1985) argue that ensuring credibility is one of most important factors in establishing trustworthiness.

Merriam (2009) writes that transferability “is concerned with the extent to which the findings of one study can be applied to other situations” (p. 222). In order to do that, was my responsibility to give the reader enough detail so they can assess whether this study can be transferred to their own. It was my hope that I provided enough detail in the previous chapters and the chapters to come, that transferability could be established.

According to Bitsch (2005), dependability refers to “the stability of findings over time.” Dependability was established using an audit trail, a code-recode strategy, stepwise replication, triangulation and peer examination or iterator comparisons (Ary et al., 2010; Chilisa & Preece, 2005; Krefting, 1991; Schwandt et al., 2007). An audit trail involves an examination of the inquiry process and product to validate the data, whereby a researcher accounts for all the research decisions and activities to show how the data were collected, recorded and analyzed (Bowen, 2009; Li, 2004). To keep an audit trail, I kept all raw data, including interview and observation notes, and artifacts for cross checking the inquiry process. My colleague, Ms. Jones, and analyzed research data and compared our results. The code-recode strategy involves the researcher coding the same data twice, giving one- or two-weeks’ gestation period between each coding. The results from the two coding are compared to see if the results are the same or different (Chilisa & Preece, 2005). By using code-recode strategy, I was able to evaluate the data patterns from both observations.
The concept of confirmability is the qualitative investigator’s comparable concern to objectivity (Shenton, 2003). Studies suggest that confirmability of qualitative inquiry is achieved through an audit trial, reflexive journal and triangulation (Bowen, 2009; Koch, 2006; Lincoln & Guba, 1985). With the reflexive journal, I was able to reflect on the data collection process, as well as reflect on my ideas as I analyze the data.

**Ethical Procedures.**

Bias is defined as: “an inclination or prejudice for or against one person or group, especially in a way considered to be unfair”; “a concentration on an interest in one particular area or subject”; “a systematic distortion of statistical results due to a factor not allowed for in their derivation” (Oxford Dictionary). In a qualitative study, a researcher can be biased in different ways. The researcher can have a participant/selection bias, which includes both the process of recruiting participants and study inclusion criteria. To avoid a participant/selection bias, I invited all students who fit the criteria to take part in the tutoring opportunity. Due to the shift to the remote learning environment, I also held office hours to provide additional support to all students who needed or wanted it. I contacted the parents/guardians of all students to inform them of all tutoring opportunities.

Bias can also influence the collection of data. Data collection bias can occur when a researcher’s personal beliefs influence the way information or data is collected. In qualitative research, interviewing is a commonly used method of data collection; how questions are asked will influence the information elicited. (Noble & Smith, 2014). To avoid bias during data collection, specifically during interviews, I asked open-ended questions so participants can detail their experiences, attitudes, and perceptions. During
observations, I kept my own perceptions out of the observation notes, except to detail students perceived attitudes, and include objective details and facts.

Avoiding bias during the data collection was of the utmost importance as well. When analyzing data, the researcher may naturally look for data that confirm their hypotheses or confirm personal experience, overlooking data inconsistent with personal beliefs (Noble & Smith, 2014). To avoid this bias, I reviewed collected data, specifically interview recordings, with the participants to ensure my interpretations represented their beliefs, experiences, and actions. I also reviewed my findings and conclusions with my colleague in hopes that she could identify any holes or inconsistencies that require attention.

It was key to address the relationship of power between researcher and participant. Because I taught the majority of the students that participated in this study, there was a chance that students felt as if their participation or lack of participation could have been tied to their grade. This could have forced the students to feel as if they were obligated to participate, or there could have been students who wanted to receive tutoring, but did not want to participate in the study. To help remove any notion that their participation was tied to their grade, my colleagues and I hosted alternate tutoring times and office hours, for students who wanted tutoring, but did not want to participate in the study. Also, my colleagues and I decided that practice or tasks completed during the study would not be included in the semester grade calculations. It was my hope that students would be incentivized by the opportunity to receive support for literacy skills and the chance to help construct research that could impact educational practices. These steps were taken in an attempt to create an environment where the students did not feel
pressed or obligated by the researcher/teacher. Various traditions of qualitative inquiry (e.g., biography, phenomenology, ethnography, and case study) respond to this call (Creswell, 1998). They all pose a common epistemological ground: the researcher determination to minimize the distance and separateness of researcher–participant relationships. Some traditions, such as the feminist tradition, specifically take it on themselves to bring an end to the oppression of specific populations (Maguire, 1987), to actively remove the power imbalance between the researcher and the participant (Brayton, 1997), and to remove the notion of ownership of the research from the researcher to redistribute (or replace) ownership with the participants (Wolf, 1996). Others, such as the constructionist tradition, emphasize the co-construction of knowledge between the researcher and participants, also placing emphasis on the researchers’ role and their responsibility to construct the knowledge (Karneili-Miller & Strier, 2009). I explained to the participants that we were working collaboratively to not only support their literacy skills, but the findings could help improve other students’ literacy skills as well.

To protect the identity of the participants in this study and in accordance with the Family Educational Rights and Privacy Act (FERPA) (1974), each student was given a pseudonym. All print documents used for the study were locked file cabinet, which was housed in a key locked office. All digital documentation or voice recordings were filed on a password protected laptop.

Summary

This chapter discussed the methodology that was used in this study, which includes research design and rationale, data collection, data analysis, trustworthiness, and
ethical considerations. Case study provided me the opportunity to observe students as they interact with collaborative technology tools to support their literacy skills. By referring to the research questions, I was able to decide upon the best data collection methods for this particular case study. The multiple data collection methods also served as a source of triangulation for the sources of data. Data was analyzed using Merriam’s (1998) constant comparative method of coding. The participation of a colleague was important as I attempt to eliminate my personal biases and to member check data collection and analysis. The observations, interviews, artifacts and findings from this study contributed to research that focused on attitudes, perceptions, and experiences students with literacy deficiencies had while using collaborative technology to support literacy skills.
Chapter Four: Results

The purpose of this case study was to describe the experiences of students with literacy deficiencies as they used collaborative learning technology tools in an after-school tutoring program that focused on reading and writing skills. In doing so, the answers to the following research questions were sought:

Central Question: What are students with literacy deficiencies perceptions and experiences with using online collaborative tools in a small group, after-school tutoring program that is intended to improve reading and writing skills?

Subquestion 1: How do the students use online collaborative tools to support their development of reading and writing skills in a small group, after-school tutoring program?

Subquestion 2: What are the student’s attitudes and perceptions toward using online collaborative tools?

Subquestion 3: What are the student’s attitudes and perceptions toward strategies used to implement online collaborative tools?

This chapter will describe the tutoring sessions that the students participated in during this case study, including details about the activities, the focus skills, student interactions, various student processes for learning, and interview responses. The findings will be organized by themes that emerged during the data analysis process.

Tutoring Session Background

To support students who have been struggling to become proficient in reading and writing skills, Ms. Jones, the teacher participant, and I started an after-school tutoring program in the fall semester of 2017. This tutoring program focused on the reading and
writing skills necessary for senior students to graduate. The program featured after-school tutoring sessions that were held three times per week from 4 p.m. to 5 p.m. Although all students in need of support with reading and writing skills were encouraged to participate, student attendance averaged between four and ten students per session. Because of the relatively low attendance, the students who did attend enjoyed the benefits of small-group instruction. We were able to provide individualized attention and closely monitor the progress of each student.

As classroom teachers, Ms. Jones and I maintained a portfolio for each student to track their progress. These portfolios helped us identify the areas of need for the students. We designed the tutoring program based on the common areas of remediation for each student. We started by focusing on the skills and standards that were common amongst the students and transitioned to less common standards and skills. Each tutoring session began with guided instruction that typically consisted of a short review of a skill or a standard that students struggled with in the past. After the review, we would assign a group or partnered assignment. The assignment guidelines and scoring rubric would be posted to the Learning Management System (Google Classroom). Depending on the assignment, students could select the collaborative technology tool best suited for their working style. For example, if the assignment asked students to identify and analyze textual evidence from a passage to explain the change in an author's tone, students could use tools, like Google Doc, Google Slide, Google Sheets, Text2MindMap, and other collaborative technology tools, to work together and share their findings. As the students collaborated to complete the task, we would circulate around the room to check on the groups and ask guiding questions but avoided directly giving a possible answer. We often
encouraged students to take turns leading the discussion and vocalizing their thought process. The goal was for the students to view us as facilitators and view the collaborative process with their peers as a method to develop meaning.

During the last ten to fifteen minutes of the tutoring session, the groups would share and discuss their responses with the whole group. This time allowed all students to hear and be exposed to the responses and thought processes of students with whom they did not work. Students would also use this time to ask any clarifying questions that they still may have had. On the occasions that students did not finish working by the end of the session, students were encouraged to continue working and collaborating remotely, so they could continue to share and ask questions at the beginning of the next session. It was important for students to share responses and ask questions regularly. Sharing responses and monitoring student collaboration were important for us to measure progress toward mastery of the focus skill or standard. For the last few years, the tutoring program operated this way and experienced a high level of success. All the students who regularly attended the after-school tutoring sessions became proficient in most of their areas of need and eventually graduated from high school. Unfortunately, no one could have predicted the changes in the tutoring program and education as a whole that would occur in 2020.

**Modified Version of Tutoring Sessions for Study Implementation**

In February of the 2019-2020 school year, the Covid-19 pandemic began to spread across the United States. Because of its highly contagious characteristics, businesses, religious institutions, parks, public transportation, and schools all began to suspend service or were altered to limit human interaction. As government officials and
school districts, nationwide, began to deem it unsafe for students and staff members to return to school buildings, emergency remote teaching (ERT) became the new norm for students and teachers. ERT refers to a temporary shift in instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated (Bond et al., 2020). In our case, classes were being held virtually using tools, like Zoom, Blackboard Collaborate, Microsoft Teams, and Google Meet, that allowed for synchronous communication, such as video conferencing and real-time chat features.

At Bob Jones High School, classes were conducted using Zoom and Blackboard Collaborate. Class schedules were altered to feature an A/B schedule. Mondays and Thursdays were A days, where students attended virtual classes for 1st through 4th periods, and Tuesdays and Fridays were B days, where students attended virtual classes for 5th through 7th periods. Each virtual class session was one hour long, starting at 9 a.m., with an hour-long lunch block at 12 p.m. Wednesdays were left open for students to get extra help, and it also allowed teachers the opportunity to get caught up on grading and communicating with parents. As a way to reduce workload stress, teachers were asked to limit all work outside of virtual sessions to three hours per week, per class. The school district also adopted a grading policy that allowed students to choose, in every class, between their midterm grade and their end of semester grade for their final grade. Not surprisingly, many students who had already achieved their desired grade by the midterm made very few attempts to continue to engage in schoolwork for the rest of the semester.
To support struggling students during this time of remote learning, Ms. Jones and I knew we had to adapt the tutoring program so that we could meet with the students virtually. We contacted students and their parents who were previously identified as literacy deficient and students who previously participated in face-to-face tutoring to inform them of the changes and how they could participate. Some of the major changes included meeting via Zoom instead of meeting face-to-face, and tutoring sessions meeting twice per week (Monday and Wednesday) instead of three times per week.

Tutoring sessions were reduced to two sessions per week instead of three sessions per week to avoid going over the allotted three hours of work outside of virtual meeting hours per week. Other than those changes, the core of the tutoring sessions was still intact. We still met with students virtually and used Zoom to facilitate and monitor student progress toward proficiency in focus standards and skills. The use of collaborative pedagogy and collaborative technology tools remained vital to the instructional practices utilized during tutoring sessions.

During this study, I fulfilled the role of facilitator and researcher. I provided a short review and gave instruction during the first ten to fifteen minutes of the session, collected data, and provided guidance when solicited as the students worked. When she was available, Ms. Jones led the sessions, which allowed me to serve as the researcher for the entire tutoring session. I also recorded each session to review during data analysis in order to maintain accuracy while taking field notes and while transcribing discussions.

After we shifted to meeting virtually, seven twelfth grade students expressed interest in attending the tutoring sessions and verbally committed to participating in the study. Six students attended the first tutoring session, but two students opted out of the
study/tutoring sessions and chose to seek individual tutoring from their English teacher of record, Ms. Jones. The remaining four students, of whom I regularly taught, agreed to participate in the study.

Before the study could officially begin, I had to amend the initial IRB application (Appendix G) to request approval to collect data via video conference. The amendments specifically outlined that students would be video recorded during the sessions because the learning environment changed to a remote setting. These changes were also included in the consent and assent forms that participating students and their parents/guardians signed and returned.

**Participants**

Of the four students who agreed to participate in the study, two were male and the other two were female. Three of the students were African-American and one of the students was Caucasian-American. All of the students had been identified as literacy deficient either by their current failing grade or their failing grade on the End of Course test the previous year. During this section, student participants will be referred to as Tom (African-American Male), Ron (African-American Male), Leslie (African-American Female), and Ann (Caucasian-American Female). Because I taught these students regularly, I had the opportunity to get to know them and build a rapport with them prior to the study. Tom was a very respectful student and kept mostly to himself. He rarely asked questions and would struggle in silence most times. Socially, Ron was the polar opposite of Tom. Ron was very social, and some of his previous teachers would describe him as a “class clown.” Although he was a respectful student, I did notice that he used humor as a way to cope with his struggles. Both Tom and Ron failed the 11th grade End
of Course Test in English and were failing 12th grade English. Unlike Tom and Ron, Leslie and Ann were in class together. They had little to no interactions with their classmates. Instead, they preferred to talk to each other. They did not disrupt the class, only themselves. Neither were defiant or disrespectful when asked to focus on their assignment. Unfortunately, their work was rushed and lacked attention to detail. Even when I separated them, their level of effort diminished, and they would often sleep. Leslie and Ann were failing 12th grade literature at the time of the study.

**Tutoring Session Content**

As stated previously, these study sessions did not introduce new material to the students. Instead, these sessions remediated previously assessed skills using materials and texts from English class. Ms. Jones and I followed the same curriculum map, so we cover the same materials with our students, and they were similarly paced. At the time of the study, students were in the midst of reading *Frankenstein*. The Georgia Standards of Excellence for 12th grade English assessed during the study are listed below.

**Reading Literary**

- **RL1**: Cite textual evidence to support analysis of what the text says explicitly as well as inferences are drawn from the text.
- **RL2**: Determine a theme and/or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- **RL6**: Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant.
Language

- L1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.

Writing

- W1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.

Speaking and Listening

- SL4: Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks.

These standards focus on skills such as citing textual evidence, using evidence to determine theme and tone, using proper grammar and conventions, writing arguments, using textual evidence to support arguments, making inferences, verbally presenting information, and engaging in productive discussions.
Thematic Analysis

The data presented will reflect the themes that developed after analyzing the various sources of data. These themes were created by following the data analysis methods detailed in Chapter 3. The themes that emerged include: Student Experiences, Collaborative Technology and Literacy, Collaboration, Student Attitudes.

Student Experiences: The Virtual Learning Curve

Understanding student experiences as they use collaborative technology tools to support their literacy skills, was a foundational pillar of this study. To gain this understanding, I relied heavily on fieldnotes and student interview responses. During the observation process, I took notes specifically about their experiences as they navigated through the virtual meeting platform and as they used digital tools to complete tasks. One of the first experiences I observed from the students was with the virtual meeting platform, Zoom. While analyzing the data, one of the most common and recurring codes was the virtual meeting learning curve. During the first two virtual sessions especially, I noticed that students seemed reluctant to show their faces on camera. Tom, Leslie, and Ann had their video turned on, rarely showing their faces. When they are not speaking, they either remove themselves from camera view of or turn their camera so it no longer shows their face. Ron only enabled audio. Oftentimes, students' communication was difficult, because they would attempt to speak at the same time and the lag time between the audio and video caused confusion as to who was attempting to talk. Students also experienced some difficulties when being divided into groups for assignments. Ron and Ann would have to be reminded to accept the invitation to join the breakout room with their partner. This would delay the start of their assigned task for some minutes. Tasks
were also disrupted by Wi-Fi signal strength. Students had to get used to using the chat option when Wi-Fi strength was not strong enough to support quality video and audio communication.

The difficulties students experienced with adjusting to Zoom even seemed to affect how students used collaborative tools, like the G Suite tools. Instead of discussing ideas, during the first two sessions, students would take turns typing their individual responses into a single paragraph. They were not working together. They were working separately on the same task. As previously stated, the students were studying *Frankenstein* at the time of the remote tutoring sessions. During session one, we provided students an excerpt from a chapter that they read previously. One of the tasks asked students to, “discuss why you think the creature reacts to Victor the way he does in Chapter 10. Use evidence from the text to support your claim.” The response below was submitted by Tom and Ron.

*I think the creature reaches the way he does just for the simple fact that* He said he found peace in nature and finds the scenery comforting. So I think he just wants to serve frankenstein like he is supposed to without all of the drama. He says in he passage “haven't I already been through enough”. He also says Do your duty towards me, and I will do mine towards you and the rest of mankind. Victor takes a tour of a nearby mountain and glacier on Mount Montanvert to refresh his tortured soul. While on the glacier, the monster confronts his maker. Victor seems ready to engage in combat to the death, but the monster convinces Victor to listen to his story. The two go to the monster’s squalid hut on the mountain, and the monster begins to tell his tale (Tom & Ron, Session 1, Task 1).
After reviewing their response, it was clear that the two students did not construct this response collaboratively. Although the response begins somewhat off base and riddled with grammatical errors, there was an attempt to respond to the prompt and provide textual evidence to support the claims. The second half of the response was completely off base and does not answer the prompt at all. Upon further investigation, I found the second half of the response was plagiarized from another source, Cliffnotes.com. During session one, these students did not appear to use collaborative technology tools to share ideas through communication and collaboration. In the field notes, I commented that Tom and Ron did not communicate much. Even after asking them if they needed help and reminding them to share ideas, they still had little to no interaction with each other. It appeared that because the students were not used to and still learning how to meet digitally, they decided to work individually. Because students were not used to meeting virtually for academic purposes, their interactions greatly differed from their usual face-to-face interactions. During the interviews, when asked to describe their experience using collaborative technology tools, Leslie and Ann described that video chatting for school was “super weird at first” and “it was something I had to get used to.” The awkwardness that these students referred to may be why students failed to correctly use the collaborative tools early on to correctly complete the task.

During the third session, I began to observe students becoming more comfortable meeting and working virtually. They became better at anticipating the lag in audio and providing adequate pause before attempting to speak to avoid interrupting or talking at the same time as someone else. This led to noticeably smoother and more productive communication during the virtual meetings. Students also seemed to become more
comfortable meeting virtually. Tom, Leslie, and Ann started to appear on video more often when they were speaking. To me, it appeared that the students were passed the virtual meeting learning curve.

**Student Experiences: Students Having Fun**

Around the third session, I also observed a shift in the overall mood of the students. They seemed to be more lighthearted as if they looked forward to meeting. They appeared eager to talk about the book, read aloud, and especially translate the text into their own words. This form of comprehension was a constant form of entertainment, typically accompanied by smiles and giggles. The transcript below shows various conversations between students as they read a passage and find textual evidence to complete a task.

Leslie: [Reads part of the passage]

Ann: *Remember Victor is from Germany, so you need a German accent.* [laughs]

Leslie: [The student continues and attempts a German accent] [laughs] *Yet I ask you not to spare me: listen to me; and then, if you can, and if you will, destroy the work of your hands*” (Shelley, 1818).

Leslie: *I’m going to highlight this quote. He is literally directing anger at him.*

[Leslie highlights on the shared document]

Ann: *I like that part because he says destroy me if you can. Basically saying “try it!”* [laughs]

Leslie: *Yeah, like calm down. We get it, you are better than Victor.* [laughs and continues to read]

Ann: *Pause for a second, I want to highlight that. Is that one good.*
Leslie: *I know in chapter 11, he gets burned pretty bad and an old man yells at him.*

Tom: *Interesting.*

Leslie: *Would him being hungry count as experience?*

Tom: *Like starving?*

Leslie: *Right here he says “It was about seven in the morning, and I longed to obtain food and shelter; at length I perceived a small hut, on a rising ground” (Shelley, 1818). And it’s a bunch in the paragraph above it. Like the whole time, he was complaining about how hungry he was. Yo, I need food and shelter.*

Tom: *[laughs] Yeah, I think that comes into play.*

The students made it a common practice to translate the text to terms that they could better relate to. They also seemed to enjoy connecting the characters and situations to what was going on in society.

Tom- *[Reads passage]* I lay on my straw, but I could not sleep. I thought of the occurrences of the day. What chiefly struck me was the gentle manners of these people, and I longed to join them, but dared not. I remembered too well the treatment I had suffered the night before from the barbarous villagers, and resolved, whatever course of conduct I might hereafter think it right to pursue, that for the present I would remain quietly in my hovel, watching and endeavoring to discover the motives which influenced their actions (Shelly, 1818).

Tom- *This dude is mad lonely, it’s crazy.*

Ann- *Yeah, look a few paragraphs below that. [Continues to read]* I spent the winter in this manner. The gentle manners and beauty of the cottagers greatly
endeared them to me; when they were unhappy, I felt depressed; when they rejoiced, I sympathized in their joys (Shelly, 1818).

Tom- That’s crazy

Leslie- This guy is the king of quarantine

Tom- He was practicing social distancing for the longest

All- [Laugh]

Tom- I know good and well he won’t get Corona.

Ann- Well, he’s been eating other people’s food, so you don’t know.

Tom- [Reads passage] I had admired the perfect forms of my cottagers—their grace, beauty, and delicate complexions; but how was I terrified when I viewed myself in a transparent pool! At first I started back, unable to believe that it was indeed I who was reflected in the mirror; and when I became fully convinced that I was in reality the monster that I am, I was filled with the bitterest sensations of despondence and mortification. Alas! I did not yet entirely know the fatal effects of this miserable deformity (Shelly, 1818).

Leslie- So what I take from that is that he realizes how ugly he is.

Ann- Also, I think he understands why he is alone and why he is mistreated.

Tom- Yeah, all that (Tom, Leslie, Ann, & Ron, Session 3, Task 3).

The transcripts above show that the students were frequently amused while working, but they remained engaged in the assigned task. These transcripts, along with those that reflected similar interactions were coded Students Having Fun during the data analysis process.
During the interviews, when asked to describe his experience using online collaborative tools during this tutoring program, Tom said “I enjoyed it because I like working with peers and talking about different topics and brainstorming.” Ron stated that “I liked it because it helped build relationships and we finished work quicker because people type faster.” Although Leslie and Ann said that the use of Zoom was “super weird at first” and “it was something I had to get used to,” they also described the use of collaborative tools as “a fun experience. I enjoyed working with everyone. Working face to face is not my strength, but it was easy and everyone got along.” and “I liked the experience and liked the small group setting. Mainly because everyone contributed and the tools made it easy to work together.” Based on the student responses, I found that students had fun and enjoyable experiences using collaborative tools during the tutoring program.

Collaborative Technology and Literacy

During this study, collaborative technology tools, mainly G Suite tools, Google Classroom, Text2mindmap, and Padlet, were used to reinforce and support the literacy skills and standards discussed previously. Google Docs is a cloud-based word processor that allows for real-time collaboration between multiple users. Users can edit a document and watch the edits of other users as they happen. Google Docs was the most frequently utilized tool at our disposal. Not only was it used to construct responses, but it was also useful for peer reviewing and editing. Students used the “suggesting” feature to provide suggestions and feedback to their peers. When completing a short constructed response or a short essay, students would provide suggestions, edits, and comments using Google Docs. This feedback was key in supporting standards RL1, L1, and W1. The feedback
from the peer reviewer and the writing from the reviewee allowed Ms. Jones and I to assess the paired students simultaneously. If the reviewer provided accurate feedback and identified all of the mistakes, I assumed that he or she understood the standards and skills. If the reviewee’s writing had minimal errors, he or she has demonstrated a functioning command of the skills or standards. If the reviewer fails to identify numerous errors and the reviewee’s writing possesses numerous errors, we would continue to provide support.

We also used Google Docs to annotate and cite textual evidence to support claims and make inferences. For the tutoring sessions, I would copy and paste excerpts from the text into a Google Doc. I typically would make one copy per whole group or student pairs depending on the task. Once shared with each member of the group, some tasks would ask students to make a claim and support their claim by highlighting evidence from the text. For example, students were asked to respond to the following prompt:

*Step into Victors shoes during Chapter 17. Explain if the Monster would have been successful in persuading you to create a second creature. Highlight evidence from the text that supports your answer.*

The response below is from Ron (yellow highlighter) and Leslie (green highlighter).

*I would make peace with the whole kind! But I now indulge in dreams of bliss that cannot be realised. What I ask of you is reasonable and moderate; I demand a creature of another sex, but as hideous as myself; the gratification is small, but it is all that I can receive, and it shall content me. It is true, we shall be monsters, cut off from all the world; but on that account we shall be more attached to one another. Our lives will not be happy, but they will be harmless, and free from the misery I
now feel. Oh! my creator, make me happy; let me feel gratitude towards you for one benefit! Let me see that I excite the sympathy of some existing thing; do not deny me my request!"

I was moved. I shuddered when I thought of the possible consequences of my consent; but I felt that there was some justice in his argument. His tale, and the feelings he now expressed, proved him to be a creature of fine sensations; and did I not as his maker, owe him all the portion of happiness that it was in my power to bestow? He saw my change of feeling, and continued—

"If you consent, neither you nor any other human being shall ever see us again: I will go to the vast wilds of South America. I will quit the neighbourhood of man, and dwell as it may chance, in the most savage of places. My evil passions will have fled, for I shall meet with sympathy! my life will flow quietly away, and, in my dying moments, I shall not curse my maker."

His words had a strange effect upon me. I compassionated him, and sometimes felt a wish to console him; but when I looked upon him, when I saw the filthy mass that moved and talked, my heart sickened, and my feelings were altered to those of horror and hatred. I tried to stifle these sensations; I thought, that as I could not sympathise with him, I had no right to withhold from him the small portion of happiness which was yet in my power to bestow.

Short response

We would agree to do it because we would feel responsible. We also think that Victor agreeing to create the second creature was the right decision because it’s a risk that he kind of needs to take. If Victor is that concerned with the creature’s
behavior and wants him gone, it is worth the risk to put him in a peaceful exile.

(Ron & Leslie, Session 4, Task 4)

The work sample above displays student annotations as they attempt to support their constructed response with textual evidence.

As I observed students working on this task and other tasks similar to this one, I paid close attention to how they used Google Docs to support writing and comprehension skills. Ron and Leslie agreed that they both read faster in silence and would highlight as they read, and then they would discuss what they highlighted after reading. Tom and Ann decided that Ann reads faster than Tom and preferred that Ann read aloud, and they would annotate together. Although their processes were different, both groups were successful in developing a claim and identifying textual support.

These shorter assignments gave students the opportunity to practice making claims and supporting those claims with textual evidence. These skills are necessary for writing an argumentative essay. The final assignment for twelfth grade English was an argumentative essay that asked students to identify the “real” monster in Frankenstein between Victor and his Creature. To help students plan and organize their essays, we used Text2mindmap. Text2mindmap is a web-based, sharable tool that allows students to create visual outlines. As central ideas are typed into tabs on the side, they also appear as a colorful map, thus creating a mind map. This map can be moved and manipulated to fit the user’s preference. Students were asked to complete a mind map that showed their flow of ideas for their essay. They were assigned a partner and shared their mind map with their partner for feedback or input. Students would engage in the process until they...
felt ready to begin their essay using Google Docs. The mind map in Figure 1 was completed by Ron in preparation for his essay.

Figure 1

*Mind Map*

Google Slides is a collaborative presentation tool, similar to Google Docs, which allows users to make real-time edits on a cloud-based platform. Google Slides is a familiar presentation tool that students have typically used to make group or individual presentations about a specific topic. For the tutoring sessions, Google Slides was used as a discussion tool. I would create a Google Slides presentation that included a discussion question on the title slide. Following the title slide, I would assign each student a slide to construct their responses. After students were finished constructing their individual responses, they would share in an attempt to have productive and thought-provoking discussions with the entire group. At this point, either me or Ms. Jones would serve as the
discussion moderator. While moderating the discussion, we were assessing standard SL4 and the students’ ability to present information, findings, and supporting evidence that convey a clear and distinct perspective, such that listeners can follow the line of reasoning. The transcript below is from a discussion that students participated in while explaining the constructed response they added to Google Slides. The students were asked to explain how the theme of prejudice is emphasized when the Creature introduces himself to the De Lacey family, including if their actions were justified and if the students would have reacted differently.

Tom- *They completely judged him off of his looks, because he was getting along with the blind De Lacey, but when the rest of them saw him, they judged him.*

Leslie- *Yeah and if they would have given him a chance, they would’ve found out that he was smart and compassionate.*

Ann- *All because he was ugly. And they did more than reject him, they beat him.*

Leslie- *That was a bit much.*

Teacher- *Are you saying that you would have acted any different? Remember what the Creature looks like again.*

Leslie- *I definitely wouldn’t have hit.*

Ann- *I would’ve just ran.*

Tom- *I mean, tall people make me nervous anyway, so I can’t imagine coming home to a seven foot thing in my house.*

Ann- *No, he was eight feet remember.*

Tom- *Even worse.*

All- [laugh]
Teacher- ok, let’s take a look at what Ann wrote. [Reads Ann’s slide] The De Lacey family acted out of fear, not prejudice. Theme is not evident.

Ann- I’m not sure that they were prejudiced against the Creature. I think they were just afraid of this big ugly thing in their house talking to their dad.

Teacher- Does everyone agree?

Tom- I see that, but I think they formed an opinion that wasn’t based on anything and judged him too early.

Ann- But I think it could have come with their experience with other large animals. Larger animals are typically aggressive, so that’s why they reacted that way.

Leslie- That is true, but they never met this large creature, so they didn’t know for sure. A giraffe is huge, but I don’t think people go around attacking giraffes because they think they are aggressive.

Teacher- Good points (Tom, Leslie, Ann, Session 5, Task 7).

Google Slides allowed students to present and take ownership of their ideas in a group setting, and the discussions that sparked from their ideas provided insight into how they thought. Ann’s written response that “The De Lacey family acted out of fear, not prejudice. Theme is not evident” was unique and differed from the line of thought of the other group members. Tom and Leslie presented statements about how prejudice led to the Creature being rejected and the lack of prejudice could have led to a nurturing relationship. So, her claim that the theme of prejudice was “not evident” was interesting, but, through discussion, she was able to address standard SL4 by conveying a clear and
distinct perspective, such that listeners can follow the line of reasoning. Although the other group members might not have agreed with her, they understood her reasoning.

Padlet is a tool that allows users to post on a digital wall. These posts typically respond to a prompt to measure general understanding. It is oftentimes referred to as a digital bulletin board. We used Padlet to check understanding by asking for general understanding of an idea or concept, asking students to rate their confidence moving on to the next skill, or as a way for students to ask clarifying questions anonymously. For example, before discussing the theme of prejudice, using Padlet, we asked students to define prejudice in their own words. Based on their responses, we knew how much time we should spend reviewing the definition of prejudice and examples of prejudice. Enabling students to post anonymously created a judgement free space. I hoped that the ability to post anonymously encourage shy and soft-spoken student, like Ron, to post frequently.

**Learning Literacy Skills Collaboratively**

The collaborative pedagogy was a key method of instruction during the tutoring sessions. Every task required students to work together. Students worked in pairs or as a small group of four as the teacher gave guidance. As students worked, I took notes on how they collaborated to learn from each other and complete tasks. One of the codes that emerged during the analysis process was “Assigning Roles and Responsibilities.” When assigned a task, students almost immediately divided the workload based on interest (what students wanted to do), skill level (what students did well), or the task itself (what the task asked them to do). The transcript below is an example of how the students worked together to assign responsibility while completing a task.
The interaction above demonstrates student’s ability to delegate responsibilities and accept roles that would benefit the group. Upon Ann’s suggestion, Leslie agrees to read while the other members identify supporting textual evidence. Leslie then identifies the need to check for correct MLA format, which Ann volunteers to do. At the end of this conversation, all the students have accepted a role they are responsible for. During the interview process, Leslie discusses the importance of roles and how successfully fulfilling roles can be beneficial to a group. She discussed a prior positive experience, not related to the tutoring sessions, where she feels her talents were adequately utilized. She said,

I am most successful in English class. In middle school, we were thinking of different ideas for our eighth grade year. My group came up with suggestions for a class jacket. And then, due to the fact that I was one of the more artistic people in the class, I was able to design the class jacket and that went very well. Everyone loved my idea (Leslie, Interview).
I did not observe any tension or constant negative behavior between students. Even though Ron was not very social in the beginning, he did not note an issue with another student as the catalyst. As he became accustomed to meeting digitally, he seemed to get along with the other students as well. Tom explained why he got along with his group members. During the interview, he stated,

*I try and keep a calm, steady head with everything that goes on. I don't know about other people. But like, I try and get along with who I work with. And I think that's why we're generally well liked, even with a terrible group project, I still manage to keep a level head. I think it's more of, I don't know, like it depends on the person* (Ron, Interview).

All of the students in this study seemed to take the same approach as Tom. During his interview, Ron attributes the reason why they got along because they all shared a common goal. He expressed,

*There were little to no distractions. So it's not like we could get off track or anything, we all seem to take it pretty serious. So then that brought us close. And then with the tools that we had, we just did what we needed to do* (Tom, Interview).

As I investigated why students adopted this non-confrontational approach during the sessions, Leslie discussed how group work is better with people you know. In her interview, she stated,

*if you get along with them, well if you really, if you work together with that person well and I feel like you have to actually know that person, instead of forcing each other, forcing people upon you, and that's my only issue. It's like, you let us*
choose who we work with, because that's the only way we'll get stuff done (Leslie, Interview).

The familiarity that Leslie referred to had been established over the past few years. These students had been in school together since their freshman year and had prior experience working with each other throughout the years.

While observing student collaboration, I also noted that students often acknowledged the different perspectives from their group members. During their conversations, students would say things like “I didn’t think about it that way,” or “I never thought about that, but that is a good point.” The excerpts below show conversations between students where students acknowledge a different perspective or thought process.

During a conversation about Victor's decision to create a second creature:

Leslie- The problem with creating the second monster is that she could go through the same things that the first monster did.

Ron- Probably worse. The first monster could be trying to protect her from everything and she won’t have a life.

Leslie- So true. Didn’t think of that.

Ron- I might not disagree with him creating the second monster. He may need someone to help him with that pain.

During a conversation about facing prejudice:

Leslie- I am atheist and I hate when people find out and they treat us like we don’t have morals. I just think that’s ignorant.
Tom- I feel you. I don’t know much about being atheist, but I can see people believing that, especially in the south. It's wild down here, but I never really thought about it.

Ann- Yeah, people just think we are out here worshiping the devil or something. It’s like they think we are in a cult.

During a preliminary discussion on who the real monster was:

Ann- He's less of a monster but I just think somethings should not be forgotten and like, I hope you feel bad for what you did. That's the whole thing. Like you should feel bad. Thank you for at least admitting you're terrible.

Teacher- Right, so Ann and Ron after hearing Leslie and Tom discuss their point of view, you’re pretty firm that Victor is the real monster?

Leslie- I'm pretty confident.

Ron- I'm not really gonna change my thought process, but I do see you side a little more. But I feel confident in our answer (Tom, Ron, Leslie, Ann, Session 8, Task 9).

During the interview process, students also discussed why considering or seeking to understand someone else's point of view has meaning. Tom described this process as “sitting there and creating an idea and seeing how what your friends view or think could possibly help and add on to what you're saying.” In his interview, Ron admitted that he “loved” collaborating “because, you know, you get to see the way people think, and how their brain is working compared to yours, and you notice that's pretty cool.” Leslie and Ann seemed to share the other’s sentiments by saying that sharing perspectives allows partners to “combine two brains” and “you can always get someone's input.” As we
progressed deeper into the study, I also began to observe students directly asking for their partner’s input by asking things like “what do you think about this quote,” “does my MLA format look correct here,” “what do you think he means in this quote” or “how would you word this sentence?” Students not only appeared to recognize the input and perspectives of their peers, but they also seemed to trust their judgement.

**Student Attitudes and Perceptions**

Observing and detailing perceived student attitudes toward collaborative learning and collaborative technology tools was also a key component to this study. In my field notes, I would document my perception of each student's attitude during the tutoring sessions, accompanied by evidence supporting my claim. During the first two sessions, I noted that Ron’s attitude seemed disengaged and uninterested. He rarely engaged in the discussions, he did not collaborate with his partner, and would have to be called multiple times to respond when he was called on. Having experiences with this student prior to the digital learning setting, I noticed his virtual personality was starkly different from his in-person personality. He was usually very lively and charismatic. Before the third session, I had a private conversation with him to inquire about his lack of engagement. He admitted to me that digital communication was not “his thing” and he struggled connecting with people during social distancing. He also acknowledged that he was not really putting forth an honest effort to try to adapt to distance learning. We agreed that he would take small steps every meeting like asking questions, sharing opinions, providing feedback, and sharing his video. I did begin to note a change in his attitude and level of engagement after our conversation.
For the majority of the sessions, I perceived Tom, Leslie, and Ann’s attitudes as engaged, enthused, and generally positive. While working, I observed these students reading with inflection and accents, making modern day connections to the text, making lighthearted jokes, laughing, smiling, and engaging in productive conversations. Around session three (after our conversation), Ron began to exhibit similar behaviors and attitudes. During the interview process I specifically asked the students how they felt about working collaboratively with peers to complete tasks. The students' responses are below.

Tom- *I enjoyed it. I actually learned and got the job done. Still learned. I prefer to learn in a group to get someone else’s input and work toward a collective goal* (Tom, Interview).

Ron- *I love collaborating because you get to see how other people think compared to yours* (Ron, Interview).

Leslie- *I like it when you work well with the partner you choose. It really depends on the people that you work with. The right partner means everything. But I liked our group, so I think it was good* (Leslie, Interview).

Ann- *I think it is cool. Sometimes having two brains keeps the ideas flowing. It also seems like less work, but you have fun doing it. Also I think you are motivated to pull your weight to get the job done* (Ann, Interview).

All students responded positively to the collaborative pedagogy during this study. Although Leslie stipulated that collaboration is best with people you are familiar with, she still had a positive attitude toward collaborative learning at the end of the study. Some students also mentioned that working collaboratively helped to “get the job done”
and it “worked well” when referencing completing tasks. Based on their student work, that is a correct assumption. Out of the fourteen artifacts graded, twelve of them met or exceeded the requirements for standard/skill mastery.

To best understand student attitudes toward collaborative learning tools, I relied heavily on observations and interview responses. As previously discussed, students experienced a slight adjustment period to meeting via Zoom. After students adjusted to the virtual setting, I could not definitively attribute any of the previously perceived attitudes to the collaborative technology tools. Those attitudes seemed closely related to the collaborative process and the collaboration students engaged in. Based on my observations, the most appropriate description of students’ attitudes toward collaborative technology tools was indifferent. The students did not make any positive or negative remarks toward the collaborative technology tools utilized during the study. Outside of Zoom, the tools used during this study were familiar to the students. These tools were commonly used by teachers at Bob Jones High School and during our face-to-face tutoring sessions. It may have been difficult to gain a deeper understanding of students’ attitudes toward collaborative learning tools through observation, because these tools are routinely used. Ron did express his difficulty connecting with his peers using video chats, but I attributed this difficulty to, by his own admission, his lack of effort. He also seemed to respond positively after our one-on-one conversation.

In hopes of gaining a better understanding of student attitudes and perceptions toward collaborative technology tools, I turned to student interview responses. I asked students about their thoughts on using collaborative technology tools for academic
purposes. I paid close attention to the explanation of their thoughts to understand their perceptions. Their responses are below.

Tom- *I like it because. Because it provides an opportunity to learn. It allows us to get the education that we need. Especially now with Covid* (Tom, Interview).

Ron- *I think it helps for research in general. Like I mostly think about it for research in this class and Government. So it’s useful* (Ron, Interview).

Leslie- *I like it. I still think it was weird at first. But the Google stuff really helped us stay nice and organized* (Leslie, Interview).

Ann- *I don’t know, I don’t even think about it. I think I’m just used to it. I mean it makes things easier and faster* (Ann, Interview).

Students mainly refer to collaborative technology tools as being “helpful” and describe how these tools helped during the study. It is also interesting to note that all students perceived the usefulness of the technology tools differently. I also asked the students if they could use these tools could be used in other classes and each student listed and described how they could be used in at least one other core class. I asked students to describe how collaborative learning technology tools helped support their reading and writing skills. Ron referenced how “*Docs made annotating easier to do and save.*” Leslie pointed to how “*spell and grammar check made me focus on detail.*” Students seem to have a familiarity and comfortability using these tools, as well as understand the value these tools bring to an academic setting.

**Summary**

The data presented in this chapter directly ties to the research questions. This case study sought to understand the experiences, perceptions, and attitudes of student’s with
literacy deficiencies toward OCTs and collaborative practices in a small-group setting. This study was intended to be completed in person, but due to a global pandemic, it was conducted remotely. In spite of the change to remote learning, I was able to observe student interactions, conduct semi-structured interviews, and analyze student artifacts. The four participants in this study were either falling 12th grade English, or failed the End of Course Test, the previous year.

To analyze the data, I uploaded all transcriptions, video recordings, audio recordings, field notes, and artifacts to NVivo. Using the Constant Comparative method of coding, I uncovered 52 codes during the first round of coding. During the following rounds of coding, the initial codes were collapsed to 15 codes. By analyzing the relationship between the remaining codes, the four themes emerged. These themes include: (a) Online Collaborative Tools, (b) Supporting Literacy Skills through Collaboration, (c) Students Experiences, (d) Student attitudes. These themes will be present in the discussion and summary of the analyzed data used to answer the research questions.
Chapter Five: Discussion and Conclusions

The purpose of this case study was to describe the experiences of students with literacy deficiencies as they used online collaborative tools in an after-school tutoring program that focused on reading and writing skills. In doing so, the answers to the following research questions were sought:

Central Question: What are students with literacy deficiencies perceptions and experiences with using online collaborative tools in a small group, after-school tutoring program that is intended to improve reading and writing skills?

Subquestion 1: How do the students use online collaborative tools to support their development of reading and writing skills in a small group, after-school tutoring program?

Subquestion 2: What are the student’s attitudes and perceptions toward using online collaborative tools?

Subquestion 3: What are the student’s attitudes and perceptions toward strategies used to implement online collaborative tools?

The previous chapter provided descriptions of the participants, the activities they engaged in while practicing literacy skills, the virtual environment, and the student’s attitudes and experiences towards online collaborative tools (OCTs) and collaborative learning. This chapter will interpret the data from the case study and connect the theoretical frameworks discussed in Chapter 1, as they relate to the research questions. This chapter will also provide limitations of the study, implications for practice and recommendations for future research.
Subquestion 1: How do the students use online collaborative tools to support their development of reading and writing skills in a small group, after-school tutoring program?

Throughout this study, students were able to use OCTs in various ways support their reading and writing skills. Students were able to use OCTs to create collaborative opportunities, which not only provided opportunities for collaborative learning, but it also allowed students to be exposed to differing points of view. While working in groups, students, without solicitation from the teacher, modeled behaviors and strategies that contributed to higher achievement in reading and writing. On several occasions, Ann modeled how annotating helped her to comprehend a text. Her peers were able to adopt her behaviors and strategies to experience success of their own with reading comprehension. These interactions connect directly to Bandura’s discussion of the Sociocognitive Theory (1986). In school settings, students are influenced by their peers and their teachers through observational learning as well as social persuasions (Bandura, 2007). Through observational learning or modeling, a learner acquires new patterns of behavior that may have had a zero probability of occurring prior to observing the model. Students also experienced success when collaborating on a task when a peer served as a More Knowledgeable Other (MKO). Ann, the MKO, was able to expand the Zone of Proximal Development (ZPD) of Tom and Leslie while including parenthetical citations. By working with and learning from Ann, both Tom and Leslie were able to correctly use parenthetical citations on their own. Their experience is based on the Sociocultural Theory (Vygotsky, 1978), which supports the idea that learning requires a social and mental process as a result of linguistically mediated interaction between the child and
more able members of the society such as parents, teachers, and peers. Children make use of dialogues with the more knowledgeable member to find out about values, beliefs, norms, and ways. Therefore, learning is a socially mediated process influenced mostly by the language itself (Balbay & Dogan, 2018). Sociocultural Theory (Vygotsky, 1978) was also evident as students were exposed to varying points of view from their peers. Through discussion, each student served as an MKO when sharing their personal experiences connected to the text, and each student was able to learn from these dialogues.

The OCTs also acted as new literacies in which students collaborate to give and get meaning. While utilizing G Suite tools, this transference of meaning appeared mainly in the form of written and verbal feedback. As students engaged in peer reviewing, they provided suggestions and comments that were intended to affirm or improve the work of their peers. Semeraro and Moore (2016) postulate that the use of peer revision coupled with Google Docs technology can be a powerful tool for improving student writing quality and for changing the role of the writing teacher during revision. Verbal feedback was given in a whole group setting, using Google Slides. As students presented and discussed brainstorming ideas about a constructed response or an essay, peers would provide feedback or guidance as to how they could enhance or alter their method of thinking to best complete the task. In a study, Ching and Hsu (2013) found that students actively participated in the peer feedback activity and responded positively about how the peer feedback activity facilitated their learning experience. These findings directly align with the findings in this study, as the students had positive experiences and positive
attitudes while working collaboratively. Many on the collaborative experiences in this study involved the transference of peer feedback.

**Subquestion 2: What are the student’s attitudes and perceptions toward using online collaborative tools?**

The OCTs used during this study were G Suite tools, Zoom, Padlet, and online mind maps. While researching students attitudes toward these tools, I acknowledged that attitudes are defined as an individual's disposition to react with a certain degree of favorableness and unfavorableness to an object, behavior, person, institution, or event (Ajzen & Fishbein, 2000). Specifically, with regards to Zoom, students’ attitudes changed from unfavorable in the beginning to favorable or indifferent by the end of the study. This shift was due to how they perceived meeting via Zoom. When their perception of meeting online changed, so did their attitude. During the first two sessions, students would rarely appear on camera, where reluctant to participate, and explained that meeting via Zoom was “weird” and “awkward.” The words “weird” and “awkward” describe their perception of meeting via Zoom, which caused them to have an unfavorable attitude. Because meeting virtually for educational support was new to the students, I attributed their perceptions and attitudes to their lack of experience meeting via Zoom. Magen-Nagar and Shonfeld (2018) found that in the intervention group the student’s intrinsic motivation is affected by the level of his/her collaboration in the group, and it affects his/her attitudes towards technology. The most significant contribution is to the liking of using advanced technologies, then to the self-confidence in using technology, and lastly to decreasing the anxiety of technology.
As the sessions progressed, I noticed that students began to engage in
discussion/activities, appear on camera, and collaborated with their peers. During the
interviews, Tom, and Leslie definitively state that they like the tools used during the
study, citing their functionality and their distance learning capabilities. Clearly pointing
to favorable attitudes toward technology tools. Tom and Leslie perceived the usefulness
of OCTs, which allowed them to have a more favorable attitude. The change in students
attitudes also seemed to coincide with the adoption of virtual learning norms. Lankshear
and Knobel (2007) express the importance of establishing norms and procedures when
leveraging new literacies, like Zoom, in order to connect learners. The norms and
procedures we established included:

- Showing your face when possible
- One person is allowed to speak at a time
- Raising your hand, in camera view, to acknowledge that you would like to
  speak next
- Utilize the chat function if you are experiencing issues with audio and
  video
- Mute audio when you are not speaking
- During discussions, restate what you heard (the main points) the previous
  speaker said before responding
- It is ok to agree to disagree
- Be on time

Raygoza, León, and Norris (2020) discuss the importance of setting norms during
synchronous, remote learning. They claim that establishing and maintaining norms is an
essential step in developing an equitable learning community grounded by trusting and
caring relationships, a shared understanding and appreciation for diversity, and students’
sense of belonging in the classroom. Accordingly, as the students in the study began
adhering to and internalizing the norms and procedures, I noticed a shift in how smoothly
the tutoring sessions flowed. Students were on time, on camera (if not the entire time,
when speaking), and students were not constantly interrupting each other or attempting to
speak at the same time. The trusting and caring relationships built as a result of the
established norms helped students to cope with the trauma of being thrust into remote
learning and having to forgo the final months of their senior year and ceremonies like
prom and graduation. Cramer, Ortlieb, and Cheek (2008) discuss trauma-informed
pedagogy how important it is for teachers of students experiencing trauma to develop
relationships, trust, and safe learning environments. Establishing norms helped to create a
safe learning environment, which helped students to have favorable attitudes toward
Zoom, especially after possibly experiencing trauma due to changes to the school year
caused by the spread of Covid-19.

**Subquestion 3: What are the student’s attitudes and perceptions toward strategies
used to implement online collaborative tools?**

During this study, students engaged in paired, small group, and whole group
collaboration to learn and grow. One of my primary goals was to investigate student
attitudes and perceptions towards collaborative strategies and collaborative learning.
While being interviewed, students described their perceptions toward collaborative
learning and strategies, which contributed to their favorable attitudes. They list working
toward a collaborative goal, comparing thoughts, getting work done, and fulfilling roles
as contributors to their favorable attitudes. Patesan (2017) discussed how important it is that groups function well as students should accomplish their individual responsibilities within the group. Supporting group members, productively interacting with peers, and taking responsibility for assigned tasks, leads to the cohesion of the team/group and to good results as well. After observing students’ actions, I was able to conclude that students had favorable attitudes towards collaborative learning. Students were laughing, joking, acting out parts of a text, and humming while working together. They seemed to be genuinely having fun while collaborating. The fun that students were having is tied to affective engagement or, individual interest (Hidi & Harackiewicz, 2000; Ainley & Hidi, 2002). Meta-analyses have also found an important relationship between student emotions and academic outcomes (Roorda et al. 2011; Tze et al. 2016). A meta-analysis examining the influence of teacher-student relationships concluded that this type of affective engagement could be a “starting point for promoting school success” (Roorda et al. 2011, p. 520).

Not only were students having fun, but they were also growing and proficiently completing tasks. Students were proficient on 86% of tasks submitted. Using the Ace framework, which identifies behavioral, affective, and cognitive engagement as components of academic engagement, Borup, Graham, West, Archambault, and Spring (2020) explain that, similar to Vygotsky’s concept of ZPD, students are limited in their ability to independently engage in their online and blended learning, but they can more fully engage in the activities when scaffolded by others. Similar to Vygotsky (1978), they emphasize that all students have a dynamic developmental state that requires support to be dynamic and to adjust to students’ abilities to independently engage in course
activities. Individually students were able to engage with the tasks, whether it was behavioral (participation in academic activities), affective (student interest), or cognitive (students’ ability) engagement, students were able to engage in different ways to successfully complete tasks.

Central Question: What are students with literacy deficiencies perceptions and experiences with using online collaborative tools in a small group, after-school tutoring program that is intended to improve reading and writing skills?

The central research question seeks to understand student experiences as they use online collaborative tools to support reading and writing skills. Acknowledging that experiences can be identified as the interaction between the human being and the world (Dewey, 1937; Hohr, 2010), I focused on the interaction’s students had during the tutoring sessions. These interactions were mainly student to student, student to teacher, student to OCT, student to skill/task, and student to text/prompt. Relying heavily on observation, transcript, and interview data, I was able to understand some of the student's experiences, specifically using Zoom. While using Zoom, the students had unfavorable experiences in the beginning of the study (specifically the first two sessions) and started to have favorable experiences throughout the duration of the study. Based on interview and observation data, the description of student’s initial experiences were “challenging, weird, and awkward.” Their lack of experience or competence using Zoom led to their initial unfavorable experiences. Feeling competent is a basic human need (Deci & Ryan 2000); the desire to acquire mastery and to display competence is likely to be a strong motivator in the learning situation (Taylor, 2008). As students became more competent in
using Zoom, their experiences transitioned to being described as “*fun, enjoyable, and engaging.*”

As their confidence and competence in using Zoom grew, students were able to engage in the learning tasks and effectively collaborate using the OCTs. Students were able to demonstrate proficiency as they completed tasks. The students that participated in this study demonstrated proficiency in the assessed standards and the literacy skills required to pass 12th grade English. Zhu (2010) found that there was a significant and relatively strong correlation between student engagement and academic achievement, and King (2015) concluded that academic achievement was positively correlated with engagement. As a result of their academic success, students perceived the usefulness of OCTs. When interviewed, they discussed how OCTs were easy to use and could be used in other subject areas to enhance learning and mediate a collaborative experience. Students perceived the usefulness of OCTs and were able to envision how they could be utilized in other classes. Introduced by Schultz and Slevin (1975) and Robey (1979) and later refined by Davis (1989), the Perceived Ease of Use–Perceived Use (PEOU-PU) framework proposes that if an instrument is easy to use, it is also perceived to be beneficial by the user of the instrument.

**Limitations**

It is important to remember that this study was conducted during global pandemic. There were not established protocols to follow in the occurrence of the widespread of a communal disease. Schools districts were determining how best serve their students, while keeping them and all stakeholders safe. The Pretty Good School District was charged with creating a remote learning plan in a matter of days. Planning
and considerations of this magnitude typically took months to prepare. There were very little certainties and knowns about how teaching and learning would look.

The most obvious limitation of this study was that it was transferability. The study and the tutoring sessions were changed drastically because of the pandemic. It may be difficult to apply the findings from this study to other settings because the setting for this study was not a typical educational setting. As a researcher, I planned to rely heavily on observational data. I was particularly interested in the non-verbal cues that students provide through body language. The comments that students made were important, but body language can be just as important. Without being able to observe the students body language, I was reliant on the student's comments to understand their attitudes and experiences. Communicating virtually also made it difficult for students to read the body language of their peers.

Transferability was also limited by the reduced amount of tutoring sessions that I could host per week. Based on guidelines from the district, students could not exceed three hours of organized academic activity outside of their synchronous class sessions. These parameters were unique to shift to the emergency remote learning environment, in an attempt to reduce the workload of students as they adjusted to learning in a virtual setting. Even as remote learning is becoming a common practice, it is likely that the restrictions on tutoring sessions will not be as stringent as in this study.

**Implications for Practice**

As education embarks of the virtual plain, and the methods in which teaching is delivered continues to evolve, especially during a global pandemic, it is still vital that students continue to develop literacy skills When brick and mortar institutions closed,
students and teachers were treading water to survive until the end of the semester. Unfortunately, some students with literacy deficiencies were not getting the supports they needed to master reading and writing skills. Now that there has been some time to devise a plan to deliver online instruction, the question remains: How can we support students with literacy deficiencies. This study provides important insight into how OCTs can be utilized as new literacies to support reading and writing skills. This insight is not a one size fits all solution, but it does provide teachers with options that may work for their classroom and students.

As stated in Chapter 1, when students become literate, their overall quality of life has shown to drastically improve. During this study, small-group instruction proved to be beneficial when supporting students with literacy deficiencies. While working with a small group, as an instructor, I was able to provide timely feedback to student work. Giving feedback is an important skill for teachers and has a major influence on the quality of the students’ learning process (Hattie & Timperley, 2007). By working with a small group, teachers can give valuable feedback to students that will either encourage or correct their work, which is important for struggling students.

Engaging in small-group instruction also provided the opportunity for all students to be heard by their peers. Studies have found that students improved academically when teachers construct their classrooms in ways that value student voice (Oldfather, 1995; Rudduck & Flutter, 2000). The connection between academic growth and valued student voices referenced above, was a contributing factor in the academic growth students experienced during this study. Teachers should take every opportunity to encourage students to voice their thoughts and ideas, as it could lead to higher growth academically.
Utilizing a collaborative pedagogy was useful when supporting students with literacy deficiencies. Students who participated in this study benefited greatly from the ability to work collaboratively with their peers. Kirschner (2011) explains the higher efficiency of collaborative learning in terms of both cognitive and affective factors while engaged in high-complexity cognitive tasks. People may feel more confident regarding highly complex tasks when working in groups compared to working alone because they can use the processing capacity, expertise, and knowledge of others and because the high cognitive load can be distributed among group members. Students were able to leverage the knowledge they gained from their classmates to complete complex tasks. By including collaborative assignments into their classrooms, teachers can also challenge their students to complete more rigorous assignments.

School districts and administration staff often debate and research the kinds of technology tools to invest in. This study provides support for the investment and use of G Suite and other OCTs. OCTs were particularly useful, especially during remote learning, because they supported the student’s collaborative efforts in a virtual environment. Beyond this study, OCTs could be used to promote collaboration outside of the classroom, to engage homebound students with classroom student, and to support a study group in and out of the classroom. Students were also able to use OCTs as new literacies to share meaning and learn. The students in this study were able to work collaboratively and use feedback as a way to share meaning. It would be beneficial for teachers to understand new literacies in order to help their students become successful.
Recommendations for Further Research

It would also be beneficial to conduct research that tracks student growth or lack of student growth while using OCTs and collaborative strategies to support literacy skills. Student experiences and attitudes are important to consider when developing a student-centered classroom environment, but the affect these strategies have on student growth and achievement is also important. Definitive research on the effectiveness of these strategies will assist teachers and districts determine if they are valid and can be used in the classroom.

Although this study provides insight into the students experiences and attitudes toward OCTs and collaborative learning strategies, this study was conducting in a remote setting. The student’s experiences and attitudes detailed in this study are based on virtual interactions. As schools continue to make progress toward returning to in-person instruction, it is worth investigating how this study would look in person. Would this study, conducting face-to-face, yield similar results? Changing the setting of the study, broadens the context in which these OCTs are experienced. Likened to watching a sporting event in person and watching a game on television from home, the experiences and attitudes are different.

The sample size for this study includes four high school students. This sampling does not reflect an actual full class of students. Although the students in this study did have favorable experiences and attitudes toward OCTs to support literacy skills, what would be the experiences and attitudes of a students in a whole class setting. By conducting this study with a whole class of students, the experiences and attitudes can be drastically changed. An increased class size could allow for students to interact with a
wider range of students and experience more diverse interactions. An increased class size could increase the possibility that students would interact with students that they do not get along with and experience conflicts. A whole class includes more students with various personalities, experiences, attitudes, and skills that could drastically alter the experiences and attitudes of their peers.

Conclusions

The purpose of this case study was to describe the experiences, perceptions, and attitudes of students with literacy deficiencies as they use collaborative learning technology tools in an after-school tutoring program that focuses on reading and writing skills. This study was originally planned to be conducted in an in-person, after-school, small-group setting. Because of wide-reaching impacts of Covid-19, the study was relocated to a remote, virtual setting. Although there were adjustments made to the study, the data analyzed in this chapter accurately reflects the student’s experiences and attitudes toward OCTs and collaborative strategies.

Students with literacy deficiencies greatly benefited from working collaboratively to compete tasks. Based on students’ attitudes, experiences, and perceptions, small-group, collaborative instruction should be strongly considered as methods to support students with literacy deficiencies. The results from this study are aligned with the collaborative pedagogy and the theories that support literacy as being socially situated. Once the collaborative community was established, I observed the Sociocultural (Vygotsky, 1978) and Sociocognitive (Bandura, 1985) theories in action. Through partnering and grouping, students were able to broaden their ZPD and achieve more with the guidance of an MKO. Soon the skills and tasks that students could only
complete with an MKO, were being completed by students independently. Students were also adopting modeled literate behaviors by their peers and improving their own literate behaviors. These findings agree with Ward (1987) who states cooperative groups require students with diverse ability and characteristics to work together and learn from one another to accomplish assigned learning goals or tasks.

The observed literate behaviors included the giving and getting of meaning using new literacies such as the G Suite tools. Leadership at the district and school levels should heavily consider providing teachers with training on how to implement G Suite and other OCTs the classroom. The value of these tools for the students in this study was immeasurable. After analyzing the interview and observation data of student experiences using OCTs and collaborative strategies to support literacy skills, I concluded that students' experiences were overall favorable. The favorable experiences in this study were similar to the enjoyable experiences the participants in a study by West (2019) had. They explained the ease they experienced while writing, the features they believed provided support to help them accomplish tasks, and the features built into the digital programs that facilitated peer collaboration were key to their enjoyable experience (West, 2019).

G Suite tools were also important to provide real-time, instantaneous edits and feedback. Students were able to work on the same document and receive immediate feedback from me or their peers. This immediate feedback was referenced by the students throughout this study as reasons for favorable attitudes and experiences using OCTs. Students were able to leverage these new literacies to create meaning to support their literacy skills and shared their processes with their peers to help support their skills.
Research by McQuillan and Robinson (2018) describe similar conclusions about G Suite, explaining students can support each other and provide feedback, student work can be seen and edited before it is submitted. G Suite tools have demonstrated that students can learn from each other outside of the classroom. These tools and similar tools are extremely valuable when encouraging collaboration beyond the classroom.

Technology integration was a major driving force behind this study. Although the tutoring sessions were not meant to be held in a remote setting, the OCTs and the technology devices used provided students the opportunity to continue their education. Technology integration may not be practiced by all school districts, but this study shows that students perceive the usefulness of technology tools. Baytak, Tarman, and Ayas (2011) confirmed similar results when they found that most students believe that their learning is improved by integrating technology into classroom curriculum. Students participating in the study reported that using technology in school makes learning fun and helps them learn more. Because students perceive the usefulness of technology tools in the classroom, technology integration cannot be overlooked as a viable educational practice. Students were able to have favorable experiences and attitudes toward OCTs and collaborative practices because they were able to learn from each other in a remote setting. They saw value in the voices of their classmates and were valued by their classmates, which provided the opportunity for each student to grow. The students in this study do not speak for all students with literacy deficiencies. They only represent themselves and their experiences and attitudes during this study. Acknowledging this fact, I am hope that educators and students in similar situations can use the data analysis presented to inform their own instructional practices to best support their students.
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Appendix A: Observation Field Notes

Name of Observer: 

Time of Observation: 

Participants: 

Focus Standard(s): 

Activity Description: 

Technology Used: 

Students Actions and Interactions: 

Teacher Actions and Interactions: 

Observer Perception of Student Attitudes: 

Evidence Supporting Observer Perceptions:
Appendix B: Interview Questions

1. During tutoring sessions, we used Google applications and other online collaborative tools. Describe how these tools were used to practice reading and writing skills.

2. Reflecting on the tools used, explain some of the advantages and disadvantages of these tools.

3. In what ways were these tools, as a whole, beneficial to your academic development?

4. Describe your experience using online collaborative tools during this tutoring program.

5. Identify a skill that we practiced during one of the tutoring sessions. How did you use online collaborative tools to support this skill?

6. How did online collaborative tools effectively support your reading and writing skills?

7. Explain how you would use the tools utilized during this study for a different class or subject area.

8. What are your thoughts on using collaborative technology tools for academic purposes?

9. Recall your most successful and your most disastrous collaborative experience while completing an assignment. What made those experiences successful and unsuccessful?

10. What are your thoughts on the collaborative strategies used in this study?
Appendix C: Codebook

Codebook

Possible themes are in bold and codes, child codes, and grandchild codes are indented.

Student Experiences
- Students having fun: Descriptions of students laughing, joking, and displaying general lightheartedness while completing tasks.
- Adjustment period: Students have to adjust to meeting in a remote setting and adjust to the norms established for remote learning.

Student Attitudes and Perceptions
- Students like collaborative technology tools: Students acknowledge that they like working together while using collaborative technology tools and provide various reasons.
- I see why: Students explain or describe the usefulness of OCTs and discuss how they can be used in other subjects.

Learning Literacy Skills Collaboratively
- Collaborative Technology Tools in the writing process: Description of how students used technology tools to complete writing tasks.
- Collaborative Technology Tools in Comprehension: Description of how students assigned meaning after reading assigned texts.
  - Annotating textual evidence
  - Interpretation
    - Translating texts into modern language
- Comfort with technology tools: Students discuss their comfort levels of completing tasks and collaborating using technology.
- Digital tools not better than traditional tools: During the interviews, a couple students discuss how technology tools aren’t better than traditional tools, “they are just different.”
- Struggling with the Zoom learning curve: Students discuss how meeting virtually was weird and awkward at first. They also discussed issues with connectivity on some occasions. These issues were also observed.
- Digital tools make communication easy and simple: Students discuss how digital tools make communication and collaboration easy and simple.
- Benefits of Collaborative Technology Tools: Students discuss the benefits of using collaborative technology tools.
  - Collaborative technology tools help organize
  - Collaborative technology tools helped make the learning process easier
  - Collaborative technology tools are convenient
  - Transferability of Collaborative Technology Tools to other disciplines
  - Digital tools add motivation
- Comprehension: Description of how students assigned meaning after reading assigned texts.
  o Annotating textual evidence
  o Interpretation
    ▪ Translating texts into modern language
- Writing tasks: Description of the writing tasks students completed.

Collaborative Technology and Literacy
- Assigning roles and responsibilities: students discussed how to best work together by identifying strengths, weaknesses, and interests.
- Collaboration is best with people you know: During the interviews, students acknowledge that they prefer to collaborate with people they know.
- Collaboration skepticism: During the interviews, students discussed why they were initially hesitant to work together. This behavior was also observed during beginning sessions.
- Negative collaborative experiences: students discuss previous negative experiences with working collaboratively.
  o Lack or shared responsibility: Examples provided in the interviews.
  o Lack of communication: Examples provided in the interviews.
- Discussing key concepts
  o Agreeing: Through discussion, students often agreed on an idea or a solution.
  o Questioning: Students would sometimes ask for clarity about an idea that a student presented, a process to complete a task, or instructional clarity.
  o Difference of opinions or process: Students would often recognize differences of opinions and methods of working.
  o Presenting different POVs: Students would often recognize the different points of view from their group members.
  o Providing rationale: Students support their ideas or methods with a rational line of thought.
Appendix D: Structural Coding

Appendix E: IRB Application w/ Amendments
INSTITUTIONAL REVIEW BOARD APPLICATION

Review the IRB website for information about what type of IRB review applies to your study (https://research.kennesaw.edu/irb/review-classifications.php)

**Review type:**

___ Check here for a Request for Exemption

___x__ Check here for an Expedited Review [IRB Reviewers may recommend a Full Board Review]

**Status of Primary Investigator:**

___ Faculty  ___ Staff  ___x__ Student

**Students as the Primary Investigator (PI) and their Faculty Advisors**
Students (graduate and undergraduate) must have a faculty advisor complete the last page of this form and submit all documents from the faculty advisor's KSU email address. Students must also use their KSU email address in all IRB correspondence.

By submitting this form, you agree that you have read KSU's Federal-wide Assurance of Compliance and agree to provide for the protection of the rights and welfare of your research participants as outlined in the Assurance. You also agree to submit any significant changes in the procedures of your project to the IRB for prior approval and agree to report to the IRB any unanticipated problems or adverse events involving risks to subjects or others.

**Title of Research**
Understanding Students Experiences and Attitudes Towards Using Online Collaborative Tools to Support Reading and Writing: A Case Study of Students with Literacy Deficiencies

**Start Date is date of IRB approval**  
*Proposed start date: ___Mid-March, 2020________

*The official start date for research is the date the IRB approval letter is issued. Research activities may not begin prior to final IRB approval. Studies should be
submitted well in advance of the proposed start date to allow for processing, review, and approval. If you have not received a letter from the IRB in 10 business days of submission, please call or email requesting status update.

Is your research being funded in any way? ___Yes* _x__ No

*Where is the funding coming from? [Name of Federal Agency/Foundation/Department]

If you have obtained funding, please submit your award documentation along with this application.

Primary Investigator
All IRB correspondence goes only to the primary investigator (PI) and advisors are copied on student projects.
Jeremy Easley
Name:
Department: Teacher Leadership
Telephone: Email: 678-449-5765 jeasley6@students.kennesaw.edu

FOR RESEARCH CONDUCTED BY STUDENTS AS THE PRIMARY INVESTIGATOR, GO TO THE LAST PAGE OF THE APPLICATION FORM TO ENTER REQUIRED FACULTY ADVISOR INFORMATION.

Co-Investigator(s) who are faculty, staff, or students at KSU

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Additional Names (include status and email):

Co-Investigator(s) who are NOT employees or students at KSU: Please submit your human participants training certificate with application materials.

Name:
ALL researchers listed on this application MUST have completed CITI training BEFORE an IRB Approval will be provided.

Visit [http://research.kennesaw.edu/irb/citi-training.php](http://research.kennesaw.edu/irb/citi-training.php) for additional information about CITI training, how to choose the right course, and how to create a profile. ALL KSU faculty/staff/students MUST use their KSU provided email address on all correspondence.

NOTE: It is each researcher’s responsibility to ensure that the CITI Certificate does not expire during the course of the approved study. Failure to maintain a current certificate will invalidate your approval. Please use your KSU email address on your CITI profile and make sure your profile name matches the one provided above.

Does your research involve minors? _X__Yes___No

See item number 5 below for parental consent and minor assent information. See [http://research.kennesaw.edu/irb/consent-templates.php](http://research.kennesaw.edu/irb/consent-templates.php) for forms and information.

Will this research involve COLLABORATION with ANOTHER INSTITUTION?

___Yes _x__No, go to question 1

If yes, provide the name of the Institution

________________________________________

Has the other Institution conducted an IRB review of the study?

_x__No___Yes – Send that review with this approval form to the KSU IRB.

1. Prior Research

Have you submitted research on this topic to the KSU IRB previously? ___Yes* _x__ No

*If yes, list the date, title, name of investigator, and study number:

### 2. Description of Research

a. **Purpose of and anticipated findings for this study:**
The purpose of this case study will be to describe the experiences of students with literacy deficiencies as they use collaborative learning technology tools in an after-school tutoring program that focuses on reading and writing skills. The findings will detail students’ attitudes and experiences while using online collaborative technology tools. I am one of two teacher-tutors for this after school tutoring program. My co-instructor will also be asked to participate in the study.

### Research Questions:

**Central Question:** What experiences do students with literacy deficiencies have using online collaborative tools in a small group, after-school tutoring program that is intended to improve reading and writing skills?

**Subquestion 1:** How do students use online collaborative tools to support their development of reading and writing skills in a small group, after-school tutoring program?

**Subquestion 2:** What are the student’s attitudes toward using online collaborative tools?

**Subquestion 3:** What are the student’s attitudes toward strategies used to implement online collaborative tools?

b. **Nature of data to be collected (interview (includes focus groups), online or hardcopy survey, observations, experimental procedures, etc.):**
Data will be collected by using semi-structured interviews, participant observations, video-recorded conversation transcripts, and artifacts during this study.

c. **Data collection procedures:** (include information on how consent will be obtained, how links will be provided, where interviews will be conducted, audio or video taping, etc.). Note: student email addresses are FERPA protected. Student email addresses, grades, or work cannot be collected without student consent and IRB approval.

### Obtaining Informed Consent:

All students who are participating in an after-school literacy tutoring program and their parents/guardians will receive an Informed Consent letter, which will also include an assent statement for students under the age of 18. This correspondence will include details addressing what the child is being asked to do, the rights of the child not to take part in the study, details about the case study, and how the students will contribute to the study. Students who are given consent to participate in the study and have their consent and
assent form signed by a parent/guardian or a legally authorized representative will return their forms to a tutor in the program.

**Participant Observations and Semi-Structured Interview Procedures:**
The tutoring sessions will occur remotely via video conference (Zoom or Blackboard Collaborate), three times per week (Monday, Tuesday, Thursday); observations and interviews will be conducted there as well. I will document participant observations during the tutoring sessions using a field note protocol. Interviews will be conducted after the four-week tutoring cycle is complete. Each participant will be interviewed privately, via video conference. The interview sessions are expected to be between 30-60 minutes. Each interview will be voice recorded for accuracy and later transcribed.

**Artifacts:**
Students may produce artifacts such as peer reviews, online discussions via Google Classroom, annotated literary and informational text, short responses, and essays. I will collect these artifacts as they are due and will typically receive submissions via Google Classroom.

**Artifacts and Observations:**
Because I will not know which students are participating in the study until the tutoring program is over, students will submit work to me and my co-teacher-tutor with identifying information. This is typical for the tutoring program. I will only use artifacts and field note observations from students who have consented to participate in the study. All identifying data will then be removed prior to data analysis and a number or pseudonym will be assigned to each participant and their data. The informed consent and assent forms notify parents and students that by signing the forms, they give permission to use student work and artifact data in the study.

**Conversation Transcripts:**
The tutoring sessions via video conference will be recorded so that the conversations can be transcribed. The study is being completed remotely, thus making it difficult to observe and document student body language, because most web cameras only capture the head and neck area. By recording and transcribing participant conversations, I will be able to use this data to give me deeper insight into participant attitudes and experiences while using collaborative technology tools.

d. Survey instruments to be used (pre-/post-tests, interview and focus group questionnaires, online surveys, standardized
assessments etc.). Attach all survey instruments with your application document:
Field note protocol attached in Appendix A. Interview questions attached in Appendix B.

e. Method of selection/recruitment of participants:
Refer to the KSU Mass Email policy on the use emails to faculty/staff. For student recruitment via email, please also follow these mandatory instructions. ALL recruitment materials (flyers, emails, posters, etc.) MUST include your IRB Approval Study # and a statement that your study has been reviewed and approved by KSU’s IRB.
Student participants for this study will be identified by their academic performance. Students who did not receive a score of “meets” or “exceeds” on the End Of Course Test for American Literature or those currently failing twelfth grade literature will be eligible to participate. Students who are literacy deficient and parents of those students will receive a letter and email, explaining that they have been selected to participate in an after-school tutoring program that will help support their literacy development. They will be offered the opportunity to participate in a study associated with the tutoring program. They are not required to participate in the study in order to remain in the tutoring program. All students who choose to participate in the program are eligible to participate in the study if they submit a signed informed consent and assent document.

I have a colleague who is also a teacher-tutor in this after-school program. The teacher-participant must be a teacher-tutor between the ages of 25-55 that works in this after-school program designed to support students’ literacy development. I will discuss my research project with her and ask her if she is willing to participate.

Note: The sample email/letter to parents is attached. I have clarified that participation is not mandatory and that tutoring is available should they decide not to participate.

f. Participant age range: _16-18___ Number: _5-9___
Sex: __Males__ Females or _x_Both

g. Incentives, follow-ups, compensation to be used: (e.g., Gift cards, course credit, etc.). Please visit HERE on our website for guidelines on participant incentive payments.

N/A

3. Risks
Describe in detail any psychological, social, legal, economic, or physical risk that might occur to participants. *Note that all research may entail some level of risk, though perhaps minimal.*

According to the federal regulations at §46.102(i), *minimal risk* means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

___ There is minimal risk (if selected, must be reflected within consent documents)

___ There is more than minimal risk (requires full explanation below and in consent documents)

Anticipated risks include (if selected, specific potential risks must be incorporated into the consent documents):

If more than minimal risk is anticipated, describe your method for handling risk.

4. **Benefits**

Federal Guidelines and University policy require that risks from participation be outweighed by potential benefits to participants and/or humankind in general.

   a. Identify potential benefits to participants resulting from this research (It is possible that there are no direct benefits or possible specific benefits, either must be reflected in the consent documents):

One potential benefit for the students that they have the opportunity to improve their literacy skills and to provide feedback that may improve the program.

   b. Identify benefits to humankind in general resulting from this research. While there may be no potential benefits to participants there must be some benefit to humankind in order to receive IRB approval. Please include these benefits in the consent documents:

The results of this study may provide insights to teachers and school districts on how to integrate technology for literacy development, which tools to invest in, and promote pedagogy and practices. Using the new literacies, this study will explore student attitudes about technology integration and using technology tools to collaborate with peers to strengthen their own skills. This study also has the possibility of adding support to the New Literacies Studies and the idea that literacy is social through students collaborating online to strengthen literacy skills.
5. Informed Consent

All studies of human participants must include informed consent (see IRB approved templates). Consent may require a signature or may simply require that participants be informed. Minor participants must receive an assent form in conjunction with parental consent (see IRB approved templates). If deception is necessary, please justify and describe, and submit debriefing procedures.

What is the consent process to be followed in this study? Submit your consent form(s) with the application as a separate document(s).

Students who are literacy deficient and parents of those students will receive a letter and email, explaining that they have been selected to participate in a tutoring program that will help support their literacy development. This correspondence will also include details about the case study and how the students will contribute to the study. Students are not required to participate and have the option to participate in tutoring without participating in the study. To address any issues with power or undue influence, another teacher has agreed to collect the informed consents and place them in a sealed envelope so I will not know who is participating in the study and who is not. After the tutoring program is over, the colleague will provide me with the forms of the consenting participants. This will help protect the students from feeling pressure to participate or from fearing that a lack of participation will influence their course grades in some way.

I will inform my colleague, who is a teacher-tutor in the program, of the study and ask her to participate. If she is willing to participate, she will be given an Informed Consent document to sign.

Note: An additional Informed Consent document for my co-instructor has been attached.

6. Online Surveys (For all electronic surveys, you must submit a link to the final version of the survey.)

Will you use an online survey to obtain data from human participants in this study? Check all that apply.

_ x_ No. If no, skip to Question 7 below.

_ _ Yes, I will use an online survey to obtain data in this study. If yes:
a. How will online data be collected and handled? Select one and add the chosen statement to your consent document.

__ Data collected online will be handled in an anonymous manner and Internet Protocol addresses WILL NOT be collected by the survey program.

__ Data collected online will be handled in a confidential manner (identifiers will be used), but Internet Protocol addresses WILL NOT be collected by the survey program.

__ Data collected online will be handled in a confidential manner and Internet Protocol addresses WILL be collected by the survey program.

b. Include an “I agree to participate” and an “I do not agree to participate” answer at the bottom of your consent document. Program the “I do not agree to participate” statement to exclude the participant from answering the remainder of the survey questions (this is accomplished through "question logic" in Survey Monkey or “skip logic” in Qualtrics).

Ensure that the online consent document is the first page the participant sees after clicking on the link to your online survey.

Although you may construct your own consent document, see the IRB approved Online Survey Cover Letter template (http://research.kennesaw.edu/irb/consent-templates.php), which contains all of the required elements of informed consent that must be addressed within any online consent document.

7. Vulnerable Participants

Will minors or other vulnerable participants (e.g., prisoners, pregnant women, those with intellectual disabilities) be included in this research?

__x__ Yes. Outline procedures to be used in obtaining the agreement (parental consent, assent or guardian consent) for vulnerable participants. Describe plans for obtaining consent of the parent, guardian, or authorized representative of these participants. For research conducted within the researcher’s own classroom, describe plans for having someone other than the researcher obtain consent/assent so as to reduce the perception of coercion.

I will provide the parental consent and student assent forms to the students who participate in the tutoring program and their parents. The students will return the signed forms to another teacher/tutor in the program.
__No. All studies excluding minors as participants should include language within the consent document stating that only participants aged 18 and over may participate in the study.

8. Future Risks

How are participants protected from the potentially harmful future use of the data collected in this research?

a. Describe measures planned to ensure anonymity or confidentiality. Studies can only be considered completely anonymous if no identifying information is collected; therefore, a cover letter must be used in place of a signed consent form.

Students will be stripped of all identifying information, including their name, school identification number, address, phone number, etc., and given a pseudonym or assigned a student number for the study.

b. Describe methods for storing data while study is underway. Personal laptops are not considered secure.

Signed consent forms, field notes, artifacts, and interview responses will be kept in a file cabinet that is locked when files are stored. The only two people with keys to the file cabinet will be me and the other teacher/tutor in the program.

c. List dates and plans for storing and/or destroying data and media once study is completed. Please note that all final records relating to conducted research, including signed consent documents, must be retained for at least three years following completion of the research and must be accessible for inspection by authorized representatives as needed.

I will store the documents in a lock secured, filing cabinet for at least three years, then finely shred the documents to destroy them.

d. If digital audio, video, or other electronic data are to be used, when will they be destroyed?

Audio and video recordings will be destroyed after they have been transcribed and secured in the file cabinet.

9. Illegal Activities

Will collected data relate to any illegal activities? __Yes* __x__ No

This includes asking about illegal activities from participants or surveys containing any reference to illegal activities (e.g., questions requesting
information about witnessing illegal behaviors that others have engaged in, minors drinking or using drugs, or any illegal drug use or violence of any nature that would result in legal action).

*If yes, please explain.

Is My Study Ready for Review?

Every research protocol, consent document, and survey instrument approved by the IRB is designated as an official institutional document; therefore, study documents must be as complete as possible. Research proposals containing spelling or grammatical errors, missing required elements of informed consent (within consent or assent documents), not addressing all questions within this form, or missing required documents will be classified as incomplete.

All studies classified as incomplete may be administratively rejected and returned to the researcher and/or faculty advisor without further processing.

If you are a non-KSU researcher wishing to recruit participants from the KSU campus, please follow these instructions: https://research.kennesaw.edu/irb/international-research.php

Student researchers make sure that your faculty advisor completes the following page and sends all study related material from their KSU email address to irb@kennesaw.edu. Failure to follow this procedure will result in a significant delay in the approval process.

RESEARCH CONDUCTED BY UNDERGRADUATE AND GRADUATE STUDENTS AS PRIMARY INVESTIGATORS

All undergraduate and graduate students who will be acting as the Primary Investigator must be under the direct supervision of a faculty advisor. The faculty advisor must review the IRB application materials and agrees to supervise the
student’s proposed human subject research project by completion and submission of this routing sheet.

All application materials must be submitted by the faculty advisor from their KSU email address to irb@kennesaw.edu. Students may not submit their materials to the IRB for the first review; however, subsequent revisions can be sent directly to irb@kennesaw.edu with a cc to your advisor and MUST come from your KSU provided email account.

**FOR RESEARCH CONDUCTED BY STUDENTS OR NON-FACULTY STAFF.**
This study, if approved, will be under the direct supervision of the following faculty advisor who is a member of the KSU faculty:

**Faculty Advisor**
- **Name:** Laurie Brantley-Dias
- **Department:** Instructional Technology
- **Email:** ldias@kennesaw.edu
- **Office:** 470-578-2747
- **Cell:** 770-883-2057

By checking the items below and submitting all materials from your KSU email, the faculty advisor for this project attests the following:

- **x** I have personally reviewed each of my student’s IRB application documents (approval request, exemption request, informed consent documents, child assent documents, survey instruments, etc.) for completeness, and all documents pertaining to the conduct of this study are enclosed (consents, assents, questionnaires, surveys, assessments, etc.)

- **x** I have completed the Social/Behavioral Research course (Biomedical version only for medical/biological human studies) CITI training course in the ethics of human subject research within the past three years as have all researchers named within this application.

- **x** I approve this research and agree to supervise the student(s) as the study is conducted.

Date: __3/4/2020__ Revised 3/25/2020____
Appendix F: Informed Consent and Assent Forms

PARENTAL CONSENT FORM WITH CHILD ASSENT STATEMENT

Title of Research Study: Understanding Students Experiences and Attitudes Towards Using Online Collaborative Tools to Support Reading and Writing: A Case Study of Students with Literacy Deficiencies

Researcher's Contact Information:
Jeremy Easley
678-449-5765
jeasley6@students.kennesaw.edu

Your child is being invited to take part in a research study conducted by Jeremy Easley of Kennesaw State University. Before you decide to allow your child to participate in this study, you should read this form and ask questions if you do not understand.

Description of Project

The purpose of the study will be to describe the experiences of students with literacy deficiencies as they use collaborative learning technology tools in an after-school tutoring program that focuses on reading and writing skills.

Explanation of Procedures

Time Required
This study will take place two times per week on Monday and Wednesday over a six week period. The sessions will last from 12pm to 1pm.

Risks or Discomforts
This is a minimal risk study. Students may not feel comfortable being observed or answering one on one interview questions with a teacher.

Benefits
One potential benefit for the students that they have the opportunity to improve their literacy skills and to provide feedback that may improve the program.

Confidentiality

The results of this participation will be anonymous. Students will be stripped of all identifying information, including their name, school identification number, address, phone number, etc., and given a pseudonym or assigned a student number for the study. Signed consent forms, field notes, artifacts, and interview responses will be kept in a file.
cabinet that is locked when files are stored. The only two people with keys to the file cabinet will be me and the other teacher/tutor in the program. I will store the documents in a lock secured, filing cabinet for at least three years, then finely shred the documents to destroy them. Audio recordings will be destroyed after they have been transcribed and secured in the file cabinet.

**Inclusion Criteria for Participation**

Student participants for this study will be identified by their academic performance. Students who did not receive a score of “meets” or “exceeds” on the End Of Course Test for American Literature or those currently failing twelfth grade literature will be eligible to participate. Students who are literacy deficient and parents of those students will receive a letter and email, explaining that they have been selected to participate in an after-school tutoring program that will help support their literacy development. They will be offered the opportunity to participate in a study associated with the tutoring program. They are not required to participate in the study in order to remain in the tutoring program. All students who choose to participate in the program are eligible to participate in the study if they submit a signed informed consent and assent document.

**Parental Consent to Participate**

I give my consent for my child, __________________________________________________________, to participate in the research project described above. I understand that this participation is voluntary and that I may withdraw my consent at any time without penalty. I also understand that my child may withdraw his/her assent at any time without penalty.

__________________________________________________  
Signature of Parent or Authorized Representative, Date

__________________________________________________  
Signature of Investigator, Date

**PLEASE SIGN BOTH COPIES OF THIS FORM, KEEP ONE AND RETURN THE OTHER TO THE INVESTIGATOR**

Research at Kennesaw State University that involves human participants is carried out under the oversight of an Institutional Review Board. Address questions or problems regarding these activities to the Institutional Review Board, Kennesaw State University, 585 Cobb Avenue, KH3417, Kennesaw, GA 30144-5591, (470) 578-6407.
Child Assent to Participate

My name is Jeremy Easley. I am inviting you to be in a research study about students’ experiences and attitudes while using collaborative technology tools in an after school tutoring program. Your parent has given permission for you to be in this study, but you get to make the final choice. It is up to you whether you participate.

If you decide to be in the study, I will ask you to work together with other students to strengthen your reading and writing skills. Your interactions and overall progress will be observed and documented. At the end of the study, I will ask you some interview questions about your experiences and attitudes toward the methods used in the tutoring program.

You do not have to answer any question you do not want to answer or do anything that you do not want to do. Everything you say and do will be private, and your parents will not be told what you say or do while you are taking part in the study. When I tell other people what I learned in the study, I will not tell them your name or the name of anyone else who took part in the research study.

If anything in the study worries you or makes you uncomfortable, let me know and you can stop. No one will be upset with you if you change your mind and decide not to participate. You are free to ask questions at any time and you can talk to your parent any time you want. If you want to be in the study, sign or print your name on the line below:

_____________________________________________
Child’s Name and Signature, Date

Check which of the following applies

☐ Child is capable of reading and understanding the assent form and has signed above as documentation of assent to take part in this study.

☐ Child is not capable of reading the assent form, but the information was verbally explained to him/her. The child signed above as documentation of assent to take part in this study.

_____________________________________________
Signature of Person Obtaining Assent, Date