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Developmental Readers, New Literacies, and the Impact of Direct Instruction

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DEVELOPMENTAL READERS, NEW LITERACIES, AND THE IMPACT OF DIRECT INSTRUCTION

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Many students enter college underprepared for the rigors of college-level reading, and these students are often placed in developmental courses. Furthermore, many students, with and without the developmental label, face challenges when reading online and in print, and research shows that these reading processes are not exactly the same. Research into new literacies finds that online reading comprehension gaps exist that are different from print reading. Varying reading strategies as well as metacognitive strategies can help assist students in successfully comprehending texts at the college level. This study investigated how explicit instruction in new literacy strategies impacts a reader's ability to comprehend as well as their self-concept. The seven participants were 18-19-year-olds in a developmental college reading course at a Historically Black College and University in the Mid-South region. This university setting had elected to use all digital texts for courses. Data was collected using questionnaires, interviews, and screencasts. The analysis of data shows that students need explicit instruction and practice in using new literacy strategies before, during, and after reading as well as instruction in digital platform navigation. Furthermore, students need opportunities to practice metacognitive strategies while reading online.

Chapter 1

Introduction

Since humans began using images and markings to communicate, those writing systems have had an impact on the way our brains form and develop. What we read and how the text is presented, whether in print or online through digital devices, has an influence on cognitive development (Baron, 2015; Wolf, 2008). The current rise of digital platforms for reading, whether with tablets, mobile cellular devices, e-readers, or computers, is of particular interest to educators because the task of reading seems to change when we scroll, click, and swipe during the reading process (Mangen, 2013; Young, 2014). Educators across the globe are investigating how these platforms for reading and multimedia consumption are connected to readers' choices and employment of reading strategies when reading on digital devices. Leu, Kinzer, Coiro, Castek & Henry (2013) define New Literacy as an uppercase theory that encompasses commonalities found in the lowercase new literacies theories. The investigation described here falls under the purview of the New Literacy studies research and focuses on students in a university-based developmental reading course.

The process of reading online, whether it is reading an article or comments on a web page, and/or navigating hypertext, differs from reading in print (Baron, 2015; Hayles, 2007; Leu et al., 2014; Wolf, 2008). There is much at stake for students' comprehension as they are often expected to seamlessly transition from reading print materials to reading on digital platforms. When students read on digital devices, they may not employ the same strategies as when they read in print. Furthermore, Leu, Forzani, and Kennedy (2015) note that there is an additional gap in online reading achievement that is

separate from the print reading achievement gap. Specifically, students who are successful at reading in print may not be successful when reading online and vice versa. Leu and colleagues (2014) assert that there is an achievement gap between online and offline reading for some students at the middle school level. This gap does not decrease or disappear as students get older.

This gap is a concern for those in higher education as students are increasingly underprepared for the rigors of college coursework. According to the ACT (2016), 56% of students who enter college are not meeting reading readiness benchmarks, which are measured in traditional reading measures. Those who do not meet the university admissions requirements or who score below proficiency in a specific content area such as reading or English are often placed in remedial courses to build the skills necessary to pass full credit- bearing college courses.

These students who have taken the remedial reading courses have demonstrated a deficiency in reading, typically in print, paperbound text. However, the concept of text is no longer limited to print materials but also includes Internet-based texts, photos, videos, and animations; "thus to be literate in the modern digital world, one must develop familiarity with the scope, depth, structure, and organization of these new texts" (Tracey, Storer, & Kazerounian, 2010, p. 107). Digital reading skills, like print reading skills, are essential for student success.

Further research is needed to investigate how explicit new literacies instruction affects college developmental readers. This study occurred within remedial reading courses in a university setting that has elected to use digital texts, rather than paperbound print, for all courses. Some print texts are available for certain courses, but the majority

of textbooks are entirely digital. The goal of this study was to pinpoint developmental readers' needs within print and digital platforms, as they are immersed in a world that requires them to develop skill sets and transfer their uses among platforms.

Statement of the Problem

The high rate of underprepared students entering post-secondary education demonstrates the need for policy and instructional solutions at K-12 grade levels and in higher education. Online reading needs to be taken into consideration when creating policy and instructional solutions (Leu et al., 2015). Particularly at the college level, further investigations into both print and online reading practices are needed to mitigate the challenges faced by students in developmental courses.

The ACT Profile report (2016) found that only 44% of students met college reading readiness benchmark scores, indicating that students are entering college underprepared in reading. There are many possible explanations for this, including poverty, lack of access to educational materials, traumatic experiences, and disruptions in education. One area that might illuminate the problem of students' preparedness for college courses is their use of reading strategies. Students in this particular context read predominantly digital and online texts for their coursework. This study does not look to find a cause and effect relationship but rather to examine how being taught new literacy strategies within a developmental reading course affects students' strategy uses, reading skills, and self-concepts. Furthermore, students can use metacognitive strategies to monitor their comprehension for reading texts in print and on digital devices, but these are strategies that must be explicitly taught and practiced. This research will examine how explicitly teaching new literacy strategies affects students' comprehension and self-

concepts in a developmental reading course.

Research Questions

This research study is guided by the following questions:

1. How does explicit instruction in new literacy strategies impact a reader's ability to comprehend texts?
2. How does explicit instruction in new literacy strategies impact a reader's self-concept?

Rationale

The rationale for this study is focused on three aspects of new literacies (a) lack of systematic policy and instructional solutions in K-12 classrooms, (b) the key differences between digital reading skills and print reading skills, and (c) the rising rate of underprepared students entering college.

Policy and provisions for teaching online reading in K-12 Students engage in reading both print and online texts throughout their K-12 experiences. The Common Core State Standards (CCSS), which have been adopted by the majority of states in the U.S., include technology and the Internet in the standards but only to mention them as a means for publishing under the category of Production and Distribution of Writing (National Governors Association, 2010). The other time the Internet is explicitly mentioned in the CCSS-ELA is on the introduction page to the grades 6-12 College and Career Readiness Anchor Standards for Speaking and Listening. It is stated as a note on this page that "The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously" (p. 48). Yet, specific standards or strategies for achieving this

simultaneous use of modalities are not included. The CCSS further assert that students who are college and career ready "use technology and digital media strategically and capably" but there is no mention of the specific skills for navigating and reading online (p. 7).

Contributions to this field of research by Leu and colleagues (2013) provide provisions for addressing the skills needed by students. These five practices define the new literacies of online research and comprehension according to Leu and colleagues (2013):

(1) identifying a problem and then (2) locating, (3) evaluating (4) synthesizing, and (5) communicating information (p. 1164). Students need to be taught to engage in these five practices when reading online to help scaffold students to reach college and career readiness.

Underprepared students and college reading. At the postsecondary level, colleges offer—some institutions mandate—developmental education courses for students who need more skill development in content areas such as reading, writing, and math and who do not meet specific admissions requirements. In the literature, there is not a definitive number of postsecondary students in need of developmental courses nor is there clear understanding of what causes that population's skill gap compared to those who meet college readiness benchmarks. A 2014 brief by the Community College Research Center (2014) at Columbia University cites federal data that "68 percent of community college students and 40 percent of students at public four-year colleges take at least one remedial course" (p. 1). Furthermore, the ACT (2016) reported that just 44% of students met the national reading benchmark, down from 46% in 2015 and 52% in

2012. The standardized tests, such as the SAT or ACT, used to gain admittance to postsecondary institutions rely on deep attention reading (Hayles, 2007; Wolf & Barzillai, 2009), but these tests can complicate this reading process by being administered on a digital platform.

There is limited research concerning college students, and specifically developmental readers, and their technology use (Mokhtari, Reichard, & Gardner, 2009; Nadelson et al., 2013). Information about reading habits will provide insight into the types of platforms students use while reading and will demonstrate their preferences for constructing knowledge. Examining how explicit strategy instruction for new literacies affects readers is beneficial for students working towards college and career readiness.

In order for educators to better serve such a significant portion of postsecondary students, I will examine the relationship between learning new literacies strategies and reader behaviors in a developmental reading course. Examining instruction in new literacies and how it affects developmental readers can provide better insight to educators about new literacies and student strategy use. Educators can then help mitigate the challenges faced by developmental readers at the postsecondary level if more is known about how these readers employ strategies when engaging with digital texts.

Research has demonstrated that although print reading conditions better support reading comprehension (e.g., Mangen, Walgermo, & Bronick, 2013), students need to employ practices to make them successful at comprehending digital texts and at completing unique tasks involving new literacies, as well. This study of students in a developmental reading course will examine how being taught strategies to engage with digital texts affects readers' comprehension and self-concepts.

The reading medium and student reading paths. The reading medium influences a reader's process for reading, and though the CCSS recognizes the need to use digital technology strategically, the standards do not address the process of reading digital texts and how strategically using digital technology might look compared to reading in print. For instance, online reading is often geared towards solving a problem or investigating an inquiry. The reader creates the beginning and ending points of his or her reading path when navigating digital reading spaces. This differs from the path readers take when reading in print. In print, the path is somewhat already created for the reader because of key textual features such as a table of contents, headings, and body text (Cho & Afflerbach, 2015). When reading online, the task of constructing reading paths is the student's responsibility; this may be particularly daunting, especially for students who lack the skills to successfully comprehend texts with predetermined reading paths.

Students' skills in online navigation also have implications for their engagement in critical reading, an essential skill for college and career readiness. As they read online, they are engaging in hyper reading, or reading in snippets with minimal sustained attention due to competing outside stimuli (Hayles, 2007). Depending on the device, this outside stimuli may come in the form of push notifications, hypertext embedded in a web page, and other distractors. This shift in reader purpose and process has an impact on a reader's cognitive development (Boudreaux, 2016; Wolf, 2008). Thus, as students create their reading paths, they must devote attention to evaluating their choices and decisions before, during, and after reading online.

Strategy use and stamina. In the current post-secondary educational climate, students are required to navigate reading both in print and online; the strategies that they

employ for online reading differ from print reading (Baron, 2015). Educators must incorporate new literacies in the classroom and examine how learning specific strategies for new literacies affects students.

Strategies for new literacies include establishing purpose and previewing texts, annotating through close readings, note taking, synthesizing information through concept mapping, and conducting think-alouds (Cho & Afflerbach, 2015; Leu et al., 2014). These are tools that students can use to navigate reading on digital platforms. Cho (2013) argues that purposeful strategy use is critical for success when reading online because readers must create a reading path and build their understanding across multiple texts. Research into these strategies informs us of ways readers use the necessary strategies and mind-sets to be successful when reading online (Cho, 2013).

Active strategy use is essential for engaging with texts successfully because the reading medium, whether digital or printed text, has an impact on cognitive development. Cavanaugh, Giapponi, and Golden (2016) assert that students are continually using digital technology and that this interaction changes the structure of the brain "implicating the learning process itself" (p. 375). As students read on devices and scroll, click, and swipe through texts, they are participating in a type of reading that can come in snippets and requires them to be selective in constructing a reading path; this can be effectively done when employing strategies. However, the highly selective reading that is done online has a closer relationship to hyper reading than deep reading.

Wolf and Barzillai (2009) define deep reading as a type of reading characterized by sustained uninterrupted focus that requires a different level of stamina and a different use of comprehension strategies. Hyper reading also requires different comprehension

strategies, and it is a type of reading that requires the reader to make more cognitive choices and determine a reading path through the use of "executive, organizational, critical, and self-monitoring skills to navigate" and comprehend the information (Wolf & Barzillai, 2009, p. 35).

Students essentially have to consciously move toward altering their strategies and purposes based on task, text, and medium of delivery in order to be successful. However, there is not a significant amount of research on how students in developmental reading classes, who by definition struggle with reading, engage with new literacies and enact strategies to help determine task purpose and navigate varying texts.

The ability to engage critically with texts is at the core of higher education. Engaging critically with texts requires students to use the five practices mentioned by Leu and colleagues (2013); the processes of identifying a problem and then locating, evaluating, synthesizing, and communicating information are essential in higher education. This engagement requires deep attention to multiple sources. There are significant differences between hyper attention and deep attention. Deep attention, as defined by Hayles (2007), is "characterized by concentrating on a single object for long periods…ignoring outside stimuli while so engaged, preferring a single information stream, and having a high tolerance for long focus time" (p. 187). In comparison, Hayles (2007) notes, "hyper attention excels at negotiating rapidly changing environments in which multiple foci compete for attention" (p. 188). Students may be practicing using hyper attention as the prevalence of digital media saturates lives at an early age. However, the traditional educational model in the United States emphasizes deep attention to develop critical thinking skills for solving complex problems.

Definition of Terms

1. *deep attention* -- a cognitive style that requires long periods of focus on a single subject while the individual ignores outside stimuli (Hayles, 2007; Wolf & Barzillai, 2009)
2. *hyper attention* -- a cognitive style that requires an individual to rapidly change focus among various stimuli and streams of information (Hayles, 2007; Wolf & Barzillai, 2009)
3. *developmental readers* -- students who do not meet the college readiness standards and or admission requirements for post-secondary institutions.
4. *New Literacies* – the uppercase theories include a broader concept which incorporates commonalities in research findings that emerge across multiple, lowercase new literacies theories (Leu, Kinzer, Coiro, Castek, & Henry, 2013). Leu (2010) articulates that the theory of lowercase new literacies typically share four common elements:

    1. New Literacies include the new skills, strategies, dispositions, and social practices that are required by new technologies for information and communication.

    2. New Literacies are central to full participation in a global community.

    3. New Literacies regularly change as their defining technologies change.

    4. New Literacies are multifaceted and our understanding of them benefits from multiple points of view (as cited in Baker, 2010, p. x).

5. *new literacies* – the lowercase theories that explore specific areas that define the larger theory which may include semiotics, specific contexts, special populations or teachers, alternative frameworks, varying sociocultural perspectives, multiliteracies, and cognitive processes (Leu, 2010).

Chapter 2

Introduction

In Chapter 2, the theoretical framework that connects to this study is examined. In addition, the literature on this topic will be discussed. The theoretical framework for this study focuses on cognitive learning theories and Kintsch's (1988) construction-integration model of comprehension. The literature concerning the components of reading online will be reviewed first. Next, new literacies and strategies for online reading success will be discussed. Then, the role of metacognition in online reading will be examined. Lastly, the concept of developmental education and students enrolled in those courses will be discussed.

Theoretical Framework

Cognitive Learning Theory is concerned with ways individuals learn and how people store, organize, and retrieve information from individually created schema (Grider, 1993). In contrast, the Construction-Integration (CI) Model (Kintsch, 1988) of Comprehension theorizes that knowledge is made up of concepts, or propositions, which are interconnected and build upon prior knowledge. In Cognitive Learning Theory, the emphasis is on background knowledge influencing and enabling new knowledge acquisition. Schemata store information into long-term memory and create a structure or framework for new information to be added and to be understood based on previous schemata (Grider, 1993). Kintsch's (1988) CI Model of Comprehension recognizes the importance of background knowledge but emphasizes that the text itself is enough from which to derive meaning.

Cognitive Learning Theory has evolved since its early beginnings with

philosophers like Plato and Descartes. By the 20th century, the theory encompassed the ideas that "individuals develop cognitive maps of the environment that formulate the basis for perceptions and expectations" (Grider, 1993, p. 8). For readers of print, a type of cognitive map forms to assist the individuals in storing, organizing, and retrieving information based on that linear form. Kintsch (1988) proposes that "the words and phrases that make up a discourse are the raw material from which a mental representation of the meaning of that discourse is constructed" (p. 180). This mental representation is not tied only to background knowledge; it is tied to the text, knowledge about language, and general knowledge, and connecting propositions through referential, causal, logical, or other related means (Kintsch & Rawson, 2005).

Cognitive theory and outside stimuli. According to Cognitive Theory, stimuli outside of the text can change the cognitive framework; likewise, mental representations of text in the CI Model are dependent on the text itself, so if a student reading on a digital platform must also account for a text's relevance and credibility, then there is a break in constructing coherence in the framework and or the textbase. Though most readers learn to read in a linear fashion with print, much of the online reading that students engage in with a digital device requires additional working memory to navigate through the text. The environmental stimuli require our internal structures to shift with the reading process (Cavanaugh et al., 2016). Hayles (2010) articulates that reading on digital platforms puts a strain on schema framework since cognitive loads must also be used for navigation and evaluative functions while simultaneously reading the text:

> For retention of more complex matters, the contents of working memory must be transferred to long-term memory, preferably with repetitions to facilitate the

> integration of the new material with existing knowledge schemas. The small distractions involved with hypertext and Web reading—clicking on links, navigating a page, scrolling down or up, and so on—increase the cognitive load on working memory and thereby reduce the amount of new material it can hold (p. 68).

Essentially, the act of navigating while reading on digital platforms requires decision making which takes up more cognitive focus than, say, the turning of a printed page.

Print texts have fewer distracting stimuli than online texts, where there are moving graphics and hypertext that break up the common textual thread. Online text is often presented in fractured, short snippets, so the readers have to consciously make the connections between textual elements without a pre-established pattern or signaling devices which are indicated by structural features like headings, outlines, or summaries (Kintsch & Rawson, 2005).

Combatting distractors and comprehension. Reading comprehension is essentially making meaning from a text. The Cognitive Learning Theory and the Construction Integration Model of Comprehension both focus on a reader's purpose for reading as well as a reader's process. In Grider's (1993) summation, according to Cognitive Learning theory, "one's ability to learn stems from the way one perceives, organizes, stores, and retrieves information" (p. 14). Kintsch (1998), however, looks at comprehension as a multi-layered process including both background knowledge but mostly the text itself for constructing meaning. Both theories focus on the cognitive map that is formed, but Cognitive Learning Theory emphasizes how background knowledge influences and enables new knowledge acquisition while the CI model emphasizes the

construction of meaning through the text itself, meaning not only the words and images but also the text's layout and structure. Both theories informed this study through student reading and metacognitive strategy use.

Comprehension processes are "partly automatic and partly strategic," (van den Broek et al., 2012) and the strategic components must be learned and practiced so that they become more automatic (p. 317). Students need to develop automaticity with their comprehension processes because it can make them more efficient readers and more adept at combatting distractors. In addition, readers must develop the ability to regulate these comprehension processes to reflect the differences between deep attention reading and hyper attention reading as they relate to reading online.

Different strategies are employed so that reading comprehension, analysis, and synthesis are effective. These strategies are most effectively used when the reader can discern where attention is needed and then put that attention towards the structural elements of a text that will aid in comprehension (van den Broek et al., 2012).

For this study, it is important to use both a Cognitive Learning Theory and a CI Model lens. Hyper reading and hyper attention are better suited for online reading because it provides numerous competing stimuli with nonlinear constructed text and media. Students need to develop schemata to process this information effectively so that they are critically engaging with texts. Instruction in new literacies strategies can provide tools for students to navigate the structural complexity of online reading. The Internet is a crucial component for solving complex problems, and students must develop the critical thinking skills to effectively navigate online texts. Kintsch and Rawson (2005) assert that "deep understanding always goes beyond the text in non-trivial ways, requiring the

construction of meaning, not just passive absorption of information" (p. 221). Examining how readers are affected by learning new literacies strategies will incorporate elements of information processing and retrieval that are essential to Cognitive Learning Theory and the CI Model.

Review of the Literature

This review of the literature examines the differences between reading on digital devices and reading in print, new literacies and strategies to navigate online texts, and perceptions of students in developmental reading courses regarding the use of strategies to monitor reading.

Components of reading online. Throughout history there have been significant shifts in learning—from the oral tradition to the written tradition. Presently, there is also a shift, albeit less drastic than the former, from print reading to reading on digital devices. Reading online facilitates endless pursuits of knowledge. The key is that reading online is often done because of a need to solve a problem or answer a question, and when it is a complex problem or a complicated question, one has to determine where to begin and end in the pursuit. The actual medium of a digital platform can sometimes hinder the deep attention needed to solve complex problems and answer complicated questions. Leu et al. (2014) argue that digital devices are not structured in a way that facilitates deep reading as readily as print. Though online reading does offer the chance to synthesize information across varying media and platforms (video, picture, text, and interactive elements), a reader must devote cognitive focus to constructing knowledge while simultaneously navigating online, so there are multiple tasks and texts that fragment a reader's attention. As demonstrated by the prolific rise of fake news and profit-driven search results, online

reading is often structured in a way that does not always reinforce the same critical thinking skills that are developed through deep attention reading.

These components of medium, reading path, attention style, and strategy use contribute to the complexity of reading online. According to Wolf and Barzillai (2009), readers often have not developed the types of comprehension-monitoring skills or the self-awareness to successfully navigate the Internet. Other research supports this idea that online reading requires "navigating search engines and disparate Web site structures" while also requiring readers to manage "negotiating multiple modes of information" (Coiro, 2011b, p. 109). Readers must have metacognitive awareness to manage these processes to engage in critical thinking.

Deep reading and hyper reading. The brain's plasticity allows it to develop new circuits (Wolf, 2008). Reading can influence this circuitry (Wolf, 2008; Wolf & Barzillai, 2009). Two attention styles emerge when discussing reading: deep attention and hyper attention. Deep attention has been defined as a cognitive style that requires concentrating on a single task for extended periods of time while ignoring distractors. Deep attention is preferential for a single information stream and extended focus times (Hayles, 2007). Deep reading requires deep attention because it includes "the array of sophisticated processes that propel comprehension and that include inferential and deductive reasoning, analogical skills, critical analysis, reflection, and insight" (Wolf & Barzillai, 2009, p. 33). Hyper attention and hyper reading, however, utilize different cognitive styles. Hyper attention is defined by quickly changing focus among different tasks while navigating multiple information streams with lots of stimulation (Hayles, 2007). Hyper reading is more closely linked to extensive multitasking and information processing of digital media

that requires participation through quick communication (Wolf & Barzillai, 2009). The reading medium impacts the cognitive framework--an important concept when investigating student strategy use with digital platforms.

Each attention style influences the brain's plasticity differently. The brain is able to make new connections and has "no one programmed reading circuit," but it is influenced by structures of language and writing systems (Wolf & Barzillai, 2009). The students that are entering college now typically have grown up in a media-saturated environment, so their reading processes may be different than previous students because the reading path of writing systems and languages structured online is often less linear than print. In printed text, the text construction is often linearly uniform and stable with multiple layers of thought that require a reader's undivided attention to deeply comprehend what is being communicated (Wolf & Barzillai, 2009). This need for complete attention is also demonstrated in longer printed text that requires synthesis of information over several pages. Research on college students' reading habits and practices is limited, but several studies show that the development of complex thinking and deep reading tasks are not conducive to digital instruments that include constant interruptions and distractions (Cavanaugh et al., 2016; Hayles, 2007; Mokhtari et al., 2009; Wolf & Barzillai, 2009).

Opportunities for interruptions and distractions abound when reading online. Students, having grown up in a media-saturated environment, may or may not be aware of their propensity toward hyper attention, the limitations of such a cognitive framework or the strategies needed to fully comprehend texts when reading online.

***Reading comprehension online and offline*.** Because of the directionality of printed English, the language is read linearly: left to right and top to bottom. Even when the same texts from print are displayed on a screen for readers, the readers have to change their processes. Navigation fosters this change. Mangen, Walgermo, and Bronnick (2012) gave two groups of participants two different types of texts. One group read text in print and the other group read texts online. Researchers found that the group that read texts in print performed better on a reading comprehension test than participants who read the same texts in a PDF form online. Their research could not pinpoint exactly why there was this discrepancy; Mangen et al. (2012) inferred that the poorer performance could be linked to having to scroll through the text (Mangen et al., 2012). Their research suggests that navigation structures like using hypertext can create increased cognitive processing demands and distracts readers from comprehension (Mangen et al., 2012).

This interruption with hypertext changes a reader's focus. When readers move from print to online there is a shift in what it means to read; readers are driven by a question or pre-established purpose so that reading becomes a task to find information rather than contemplate and understand it (Baron, 2015). Similarly, a study by Nielsen (2011) with the Nielsen Norman Group demonstrates that the average web page visit lasts less than one minute. Loh and Kanai (2015) explain that cognitive resources must be utilized in other ways that detract from the devotion of those resources to deeper processing. Other research also reiterates this assertion about reading online and notes that uninterrupted online reading requires sustained attention, and readers are not immune from their attention straying to distractors (Wieczorek et al., 2014).

Beyond the distractors in online reading, research also shows that screen navigation affects reading comprehension (Wieczorek et al., 2014; Young, 2014). Young (2014) found that screen navigation had a psychological impact on readers by causing them to feel impatient when scrolling during online reading. This impatience is linked to the fact that when reading online readers do not have a specific starting point and end in apparent view like when reading in print. When considering the deep focus needed at the collegiate level, it becomes problematic when textbooks are read on digital platforms. Screen navigation for common online reading platforms such as e-texts at the collegiate level varies significantly.

E-textbooks. As more colleges move towards use of e-textbooks and more online texts, research is needed to examine how students engage with e-texts and how e-texts affect comprehension. Existing research often provides contradictory results on user preference and ways students engage with the texts, such as the use of annotations. Rockinson-Szapkiw, Courduff, Carter, and Bennet (2013) conducted a study that found e-textbook users were more likely to take notes and more likely to read word for word than those using a print textbook. Their research also found that students who used the e-textbooks had higher levels of affective and psychomotor learning, but there was not a difference in final grades or comprehension directly tied to the e-textbooks. In Vandenhoek's (2013) study, he found the opposite regarding notetaking and annotating. He asserted that 74% of participants preferred paper reading and 87% highlighted or underlined while reading compared to just 29% of participants highlighting or underlining on digital texts (Vandenhoek, 2013). This or any instruction in annotating may be influenced by the ease of use on the digital platform and the type of text being

read. Students use their metacognition and other reading strategies when determining when to take notes and what to annotate, but they are also influenced by the reading medium.

New literacies. Literacy as Leu et al. (2013) assert is *deictic*, in that its meaning fluctuates as the context in which it occurs changes. It is improbable that a definition of new literacies will ever be coined because what is new is continuously changing. There are eight defining principles of the uppercase theory of New Literacies which encompasses commonalities found in the lowercase new literacies theories:

1. The Internet is this generation's defining technology for literacy and learning within our global community.
2. The Internet and related technologies require additional new literacies to fully access their potential.
3. New Literacies are deictic.
4. New literacies are multiple, multimodal, and multifaceted.
5. Critical literacies are central to new literacies.
6. New forms of strategic knowledge are required with new literacies.
7. New social practices are a central element of New Literacies.
8. Teachers become more important, though their roles change, within new literacy classrooms. (Leu et al., 2013, p. 1158).

These eight principles can help guide educators in the classroom. For the purpose of this study, research will focus on principles five and six: "critical literacies are central to new literacies" and "new forms of strategic knowledge are required with new literacies." Within this study of new literacies, it is crucial to consider that online and offline reading

comprehension are not isomorphic; skills and strategies are needed that pertain to each type of reading process (Leu et al., 2013). Research by White (2016) makes a similar claim that students need to be equipped with tools to not only comprehend what they read but also evaluate and navigate the digital space (p. 421). It is clear that research calls for this explicit instruction of strategies for reading online, but it is less clear how students learning new literacies strategies are affected.

Student learning and new literacies strategies. Central to teaching critical literacies and new forms of strategic knowledge is the understanding of what skilled readers do when reading online. Coiro (2011a) finds that successful online reading requires "both similar and more complex applications of (a) prior knowledge sources, (b) inferential reasoning strategies, and (c) self-regulated reading processes" (p. 357). Though these three reading processes seem important when reading print, they are applied differently with new literacies. Students are able to locate information to enhance their background knowledge on a topic, but they also must simultaneously critically evaluate the relevance and reliability of their findings. Students must have a system for making inferences not only across varying texts but also multimedia platforms while critically evaluating the relevance and reliability of their sources. Self-regulation, when engaging with new literacies, requires additional skills beyond the typical active reading strategies of rereading, annotating, and questioning because students are constructing their reading paths in a digital space. They must be able to navigate through breaks in their reading paths in the form of hypertext and outside stimuli that may appear on a digital device.

Teachers often use modeling to demonstrate how students can begin to critically

engage with a text to develop more forms of strategic knowledge. This method can be used when engaging students with new literacies (Lapp, Moss, and Rowsell, 2012). Strategies such as "close reading" are applicable to new literacies and are supported by the CI model of comprehension that requires study of the text itself to create a textbase for comprehension. Pape (2015) also notes that close reading requires readers to find the meaning within a text rather than being prompted by guiding questions. When students engage in close reading with new literacies, they can use technology to help express their ideas and demonstrate how they are engaging with that text.

Attention to one's metacognition and interactions with text can also support readers' strategy development. Using a program such as a screencast, which records a reader's screen so that the reader's navigation choices are visible, could provide insight to educators and students themselves about how students are engaging with digital text. This can inform a teacher of ways students construct their textual paths, also enabling students to evaluate their own choices and strategy use. Screencasting software such as Screencast-o-matic also records audio so students can articulate their processes. White (2016) found that students can use screencasting to reflect upon their metacognition. A key component of new literacies is that the reader employs critical reading strategies while creating a reading path based on a purpose and or goal (Cho & Afflerbach, 2015). Understanding how students create their paths when reading online and helping students to be cognizant of their strategies when engaging in new literacies can help to better inform classroom instruction.

Metacognition and reading purpose. One common factor between reading online and reading in print is the concept of metacognition and its influence on how

effectively a student reads. Linderholm and Wilde (2010) investigated how a student's perception about reading processing matched his or her actual comprehension. Though their research included texts that ranged from 400 to 600 words, their findings are an important contribution to the discussion of deep reading (Linderholm & Wilde, 2010). They found that readers employ different strategies when reading for entertainment or for study purposes. Though readers' beliefs about their own performances vary based on the purpose for reading, the actual comprehension scores did not (Linderholm & Wilde, 2010). Students' perceptions of multitasking and reading effectiveness, whether it is online or offline, did not align with their actual achievement (Mokhtari et al., 2009).

Another study (Nadelson et al., 2013) tied to students' perceptions as readers involved students categorizing what type of texts they associated with the concept of reading. Students ranked printed materials as interactions with forms of reading but did not consider online blogs/wikis/newsfeeds as forms of reading (Nadelson et al., 2013). Though students perceive that varying strategies are needed when reading in print and when reading online, the study did not determine whether students employed these strategies when reading online and in print.

Successful readers employ metacognitive strategies when reading online and when reading print. This can also be seen when students move from reading for entertainment and reading for academic purposes. A study of high school students found that good readers employ metacognitive strategies to monitor comprehension during information seeking and social entertainment reading activities (Lee and Wu, 2013). Research by Boudreaux (2016) further supports that student-reported use of strategies differs when reading online and reading print. Their reading is also influenced by text

type and the type of reading required of students; for instance, reading for analysis or reading for entertainment and superficial comprehension. Rosenblatt (2013) describes this as the efferent-aesthetic continuum. As a reader transacts with texts, he or she is creating meaning that is influenced by the individual's efferent stance, or meaning that is to be extracted and retained, and the aesthetic stance, or the qualities of the feelings and emotions from that are conjured from the text (Rosenblatt, 2013). Nevertheless, research is limited in examining the relationship between metacognitive strategies employed in deep reading compared with hyper reading. It is not clear if struggling readers attempt to apply the same print reading strategies to reading online.

Identifying how and why students employ strategies is a complicated process. It is equally important to consider what students think about when they employ reading strategies in print and online. Minguela et al. (2015) did investigate, with 15 and 16-year-old participants, metacognitive strategies with deep reading comprehension. Their research found that students have difficulty reaching deep comprehension of a text but have less difficulty understanding a text superficially. They surmised that better readers used strategies with more flexibility than their counterparts (Minguela et al., 2015). Thompson (2013) also found that though students may be immersed in technology, they still need scaffolding to achieve competence with digital platforms that are less familiar to them or that are used in a different manner than what students already comfortably use for set purposes. Students must learn to use a range of technology tools to "exploit the full potential of the web" (Thompson, 2013, p. 23). When applying these findings to the proposed study, it is important to consider that developmental readers may face

challenges with metacognitive strategies in general, so it will be important to examine their use in reading online texts.

Developmental reading and college readers. Many college courses require students to utilize the Internet in some capacity. Without an emphasis on specific strategies or standards in the Common Core State Standards curriculum at the K-12 level, students often do not receive explicit instruction, scaffolding, and practice in how to read online. In print text alone, there is a gap in skills and knowledge when comparing college developmental readers with students who meet the reading readiness benchmarks. This gap becomes more complicated when the lack of strategies for reading online are considered. Since reading readiness benchmarks are measured through both print and online measures, it is an area that necessitates further investigation, as it is unclear why this gap in reading achievement exists.

As mentioned in Chapter 1, 40% of students who attend a public four-year college take a remedial course (Community College, 2014). That is a significant portion of students who need extra support in content area courses. Another alarming statistic surrounding developmental education is that at the community college level, only a little over a quarter (28%) of community college students that are enrolled in a developmental college course attain a degree in eight years (Community College, 2014). There are a myriad of reasons why students in developmental courses do not matriculate, but when the ACT (2016) Profile report measures that only 44% of students met ACT college reading readiness benchmark scores, it is necessary to examine the links among reading proficiency, metacognitive strategies, and developmental students. This study looks to address this concern by investigating how developmental readers engage with new

literacies and use strategies to navigate reading on digital platforms.

The limited research that has been done on college students and their reading habits and practices offers some insight into online and offline reading. Mokhtari and colleagues (2009) conducted a study that investigated how college students spent their time and whether time spent in one particular activity affected time spent on other activities. They noted Internet usage as separate from academic and recreational reading, as most of the participants (85%) indicated that participants enjoy the Internet over reading recreationally or academically, and over watching television (Mokhtari et al., 2009). Students may have limited self-awareness as readers moving between print and online reading and are unaware of the conscious choices they need to make to engage effectively with texts.

The general trend among current students is that they are using the Internet and interacting with online text and media more frequently than in the past (Nadelson et al., 2013). Students may interact more frequently with online text because there is a level of cognition needed to fully comprehend and retain information in the traditional print forms of communication which may deter readers from wanting to engage with those types of texts (Nadelson et al., 2013). These research findings imply that students may gravitate towards the hyper attention cognitive style because of the type of cognitive framework that they have developed or because creating a textbase is maybe less difficult with shorter pieces of text. Nadelson and colleagues (2013), however, do not frame their analysis by considering that students may be interacting more frequently with online text because our lives are so saturated by it. Online information seeking is heavily embedded in our society, so students may more frequently interact with online text because this

online reading is often required of them. Thus, their cognitive framework needs to be able to process the abundance of information and stimuli. Students are interacting more with digital texts than with print though the types of interactions they are engaging in on the Internet are unclear.

Chapter 3

Introduction

This chapter explains the qualitative methods used in this study. The research design will be explained including the sampling selection process, data collection processes, and data analysis. The reasons for a qualitative case study are explained prior to the description of the participant selection. Following the participant selection is an explanation of the specific curricular materials used. The data collection methods are defined prior to the data analysis processes.

Methods

This case study focused on the meaning of student experience. Dyson and Genishi (2005) explain that in case studies, "qualitative researchers are interested in the meaning people make of their lives in very particular contexts" (p. 9). Studying how students responded to explicit instruction to new literacy strategies occurred through questionnaires, semi-structured interviews, and recorded think-alouds using screencasting software. This investigation required varied data sources because analyzing how explicit instruction affected students included analyzing metacognitive strategies and students' awareness of their learning. The goal as a researcher is to understand and describe what is happening in the classroom environment (Atieno, 2009). A qualitative method was important to use as I was not comparing groups of students, but rather I was looking at students classified as developmental readers and how they engaged in reading online, along with their self-concepts related to reading (e.g., Atiento, 2009; Dyson & Genishi, 2005).

The case study looked to provide detailed and rich descriptions of the cultural

practices of developmental readers in the classroom. Dyson and Genishi (2005) articulate that "cultural practices" involve everyday events and the values about what is natural to those engaged in the cultural practices (p.7). These cultural practices include reading, technology use, and classroom engagement. How students responded to each of those pieces was examined after the data were collected. For the purpose of this study, the following research questions were investigated:

1. How does explicit instruction in new literacy strategies impact a reader's ability to comprehend texts?
2. How does explicit instruction in new literacy strategies impact a reader's self-concept?

Research Design

This study was conducted at a Historically Black College and University (HBCU) in the Mid-South region. The seven participants were students enrolled in two developmental reading courses. These developmental reading courses were credit-bearing courses unlike typical developmental college courses where students must pass requisite courses prior to enrolling in full credit-bearing courses. All of the participants in the study had taken the course a semester prior to this study and did not pass. A case study allowed me to explore how students felt about reading online, what strategies they actually utilized, and how explicit instruction impacted the students' comprehension and self-concepts.

Developmental reading courses at this institution were taught four days a week with each class lasting 50 minutes. These courses were co-taught by an English faculty member and an instructional counselor from the educational support staff. Two days a week the faculty member taught and the other two days a week the instructional

counselor, or instructor, taught students in the course. The faculty instructor and instructional counselor were frequently in the classroom together but not every day, so the students were familiar with having the researcher in the classroom and meeting with the researcher for intervention sessions outside of the classroom.

The data were collected through questionnaires, semi-structured interviews, and recorded think-alouds. The initial questionnaire was in print format and was administered by a third party in the reading course classroom at the end of class. The semi-structured interviews occurred in individual sessions on campus in an informal office setting. The think-alouds were conducted individually in a campus office on a laptop where students used a screencasting program called Screencast-o-matic. The use of screencasting programs in White's (2016) study "provided teachers…with a window into what particular readers were thinking and doing as they engaged with specific segments of text" (p. 422). This was a crucial element of the study that helped in shaping conclusions about explicit strategy instruction and its effect on students' application of strategies. Anecdotal notes were kept during class of events that may have influenced analysis.

Participant Selection. Participants were undergraduate students in developmental reading courses at an HBCU in the Mid-South region. This university has approximately 1,926 students in undergraduate programs. The fall 2017 cohort consisted of 510 first time freshmen. The fall 2016 first time freshman cohort consisted of 76% first generation college students and 79% self-identified as ethnic minority. Data for the fall 2017 cohort demographic were unavailable. The students enrolled in the developmental reading courses scored 18 or below on the ACT Reading subtest. Two courses were selected purposefully because enrollment in the courses was much smaller in the semester in

which the study was conducted compared to the previous semester. All students participating in the study had failed the course, with the same faculty member and instructional counselor, the previous semester. The study population included seven individuals with one female and six male participants ranging in age between 18 and 22. The study population consisted of seven African-American/Black individuals. All names have been changed, and pseudonyms are used.

This study was conducted with a purposeful sampling of developmental reading students attending an HBCU. Letters of consent were signed by students, and the study followed IRB standards for human research. The participants selected for this research had to be enrolled in a developmental reading course. In the fall of 2016 this university began making the majority of its textbooks for courses available solely online through the Vital Source application called Bookshelf. Though all students at the university must be able to utilize these online texts, students in developmental reading courses were the subjects of this study.

Students in the developmental reading classes were provided information about the study, were asked to provide consent in order to participate, and were notified of their ability to terminate their participation in the study.

Lessons. The research focused on how explicit instruction of strategies for new literacies impacted students. All of the strategies were modeled during one class session and the instructor practiced gradual release of responsibility in the same class session or during a follow up class session depending on class time so that students could have opportunities to practice using the strategies. All strategies were modeled and used with class curriculum which included Chapters 1, 7, and 10 of *Narrative of the Life of*

Frederick Douglass by Frederick Douglass and TaNahesi Coates' *Black Panther: A Nation Under our Feet* issues 1 and 2. All strategies were explained in person and in OneNote, a digital notebook that is part of the Microsoft Office Suite. Some sample videos of the strategies being modeled were created as a resource for students to reference. These were made available to students in the digital notebook. Below the strategies taught to students are detailed.

Strategy 1: establishing purpose and previewing texts. The first strategy taught was establishing purpose for reading and previewing texts. During the class, the instructor presented the strategy as a pre-reading method to aid in comprehension. The strategy was also modeled with the first assigned reading of the semester. Instruction was scaffolded, and opportunities were provided in class for students to practice with immediate feedback. Students were then required to practice this strategy for homework and bring in their questions or statements that helped establish purpose for their assigned reading.

Strategy 2: annotating through close readings. Methods of annotating online texts through close readings and use of OneNote were then taught. The instructor modeled how to conduct a close reading in class and provided a video explanation and demonstration in OneNote. Students practiced the task in class where oral feedback was provided. For extended practice, students had to choose a course text, either Chapter 10 of *The Narrative of the Life of Frederick Douglass* or the article "Slavery and the Origins of Racism" by Lance Selfa to practice the close reading strategy for homework. This extended practice had to be completed using the digital notebook, and the instructor provided written feedback.

Strategy 3: note taking and Cornell notes. The third strategy was note taking methods like the Cornell note system. The strategy was modeled in class by putting the scene titles from *Black Panther: A Nation Under our Feet* issue 1 on the left-hand side and then including first summary information and details about the scene on the right-hand side and then analytical information learned from each scene below that. Students practiced this strategy by completing another scene and then continued the practice as homework. Students had the option of using OneNote to complete the notes or writing in a physical notebook.

Strategy 4: synthesizing information. Students were then taught to synthesize information through concept mapping. This was done in a print format by writing on the classroom whiteboard. Students took their notes from the Cornell method and had to look for common analytical themes and arrange summary information and details by theme from various scenes from the Coates's comic as well as correlating information from previous course materials such Douglass's text and Selfa's article.

Strategy 5: Think-aloud. The final strategy was using a think-aloud to examine reading processes and overall strategy use. The instructor demonstrated a think-aloud in class and also recorded a demonstration through a screencast. As homework, students were to watch the recorded think-aloud and were to write down the strategies that the instructor used and compare them with the strategies that they typically use. Students then came into a private office space to record a think-aloud over one scene in *Black Panther: A Nation Under our Feet* issue 2. The researcher was not present in the room during the recording of the think-aloud.

The questionnaires, semi-structured interviews, anecdotal notes on observations, and the screencast provided insight into how students use these strategies to help their comprehension and whether this explicit instruction influenced how students perceive themselves as readers.

Data Collection. Permission was obtained from the university Institutional Review Board (IRB) prior to any data collection. The researcher submitted the purpose and procedures of the research design to the IRB. Once granted permission, the researcher collected informed consent forms from participants. Triangulation was used through the questionnaires, semi-structured interviews, and screencast recordings.

Questionnaires were classified as documents and were analyzed as a nonverbal data stream (Savenye & Robinson, 2005). Students were first given a multiple-choice questionnaire with two open-ended questions that focused on their reading experiences and strategy use for print and digital texts as well as their perceived attention and strategy use when reading in print and on a device. The purpose of the questionnaires was to "represent the diversity of the phenomenon under study" (Jansen, 2010, p. 8). A questionnaire was given prior to explicit strategy instruction for new literacies. Another questionnaire was given after the explicit strategy instruction for new literacies (see APPENDIX A).

The second method of data collection consisted of semi-structured student interviews, which were audio-taped and transcribed. The interviews focused on students' metacognitive awareness while reading print and online. Interviews are a valuable method of data collection. Dyson and Genishi (2005) articulate the researcher's need for interviews as a means to "fill gaps in their data and to hear about what is happening in

participants' own words" (p. 76). It is imperative to get student perspectives and their interpretations of their strategy use while reading. Dyson and Genishi (2005) assert that "the ways people represent and interact about experiences...depend on the contexts--the frameworks for interpretation--that people bring to those experiences" (p. 5). Students bring different experiences with reading and frameworks for understanding linear and nonlinear texts. These interviews provided insight and perspective to data collected through the screencasts. The interview protocol can be found in APPENDIX A.

Observations were an important method for data collection as the observation and corresponding analysis helped the researcher understand participants and "their sense of what's happening, and therefore what's relevant" (Dyson & Genishi, 2005, p. 12). Observations allowed the researcher to become a part of the research setting (Savenye & Robinson, 2005). This third method of data collection required students to use a screencasting program while they engaged in a think-aloud as they read online. The screencasting program allowed the researcher to have an insight on how the explicit instruction of new literacies impacted the student's actual reading process. In addition to the three data sources, anecdotal notes in the classroom were taken to help inform analysis.

Participants self-reported their strategy use and attitudes towards reading online and in print through an open-ended questionnaire prior to specific strategy instruction and completed another questionnaire after specific strategy instruction. The self-reporting helped inform the data analysis. Furthermore, participants were interviewed semi-structurally and informally on their reading experiences online in the developmental reading classroom and outside of it. Member checks were conducted with the screencasts

and other data collection through a researcher-constructed reader profile. Table 1 provides an overview of sources, methods, and analysis of the data collected.

Table 1

Data Collection Sources, Methods, and Analysis

Data Source	**Collection Method**	**Analysis Method**
Open-ended questionnaire	Printed questionnaires administered by third party and collected in the students' reading classroom during the last 20 minutes of class	Open Coding
Screencasts	Students recorded screencasts once. The screencasts occurred after explicit instruction was provided on new literacies. Students created a screencast of a think-aloud as they read online with linear and nonlinear texts.	Process Coding
Interviews	Students will be interviewed regarding their experiences with new literacies. Questions will focus on the metacognitive strategies employed when reading linear and nonlinear texts online.	Open Coding

Data Analysis. Each type of data were analyzed separately while also looking across the data for common themes using the constant comparative method (Saldana, 2010). It was important to move from the descriptions and student articulations to consider "the social meaning or importance of what's happening" (Dyson & Genishi, 2005, p. 85). The questionnaire data were analyzed using Open Coding. This coding method is useful as there are a variety of data forms, and it can "alert the researcher that more data are needed to support and build an emerging theory" (Saldana, 2010, p. 82). For the screencasts, the videos were analyzed through Process Coding using gerunds. The interviews were analyzed using Open Coding with the constant comparative method.

Triangulation was used to compare and cross-check the multiple sources of data. This triangulation helped ensure trustworthiness as this study was conducted through an interpretive-constructivist lens. Another way that the researcher ensured trustworthiness was through respondent validation that Merriam (2009) describes as "feedback on your emerging findings from some of the people that you interviewed" (p. 217). The initial questionnaire provided insight to emerging themes. The interviews and screencasts helped ascertain and delineate themes and patterns. A final questionnaire was added to the theme and pattern analysis. The data were cross-checked and respondent validation was provided to students through member checks of the interviews and screencasts.

Chapter 4

Results

This case study of seven readers in a developmental reading course was driven by investigations into new literacy strategies and their relationship to a reader's comprehension and self-concept. Data were collected through questionnaires, interviews, and think-alouds. Students in two sections of a developmental reading course were selected to provide insight into under-prepared readers. This chapter will discuss the data collected and the concluded results.

The Setting

All of the student participants were college freshmen whose ages ranged from 18 to 19 and who also self-identified as African American. All participants had previously failed a developmental reading course. The research was conducted at an HBCU in the Mid South region with an undergraduate enrollment of approximately 1,926 students. The participants were all enrolled in a credit-bearing developmental reading course taught by a faculty member and an instructional counselor from the educational support staff. Classes were 50 minutes and met four times a week with the faculty member teaching two class sessions and the instructional counselor teaching two class sessions. The courses used the following texts: *Narrative of the Life of Frederick Douglass* by Frederick Douglass, "Slavery and the Origins of Racism" by Lance Selfa, and *Black Panther: a Nation Under our Feet* issues 1 and 2 by Ta-Nehisi Coates. All texts were available online.

Data Collection

A case study was chosen because the research focused on students and their experiences in a reading classroom along with their engagement in reading. A case study was an appropriate method for this study because the focus was to try to understand a reader's understanding of self and processes used (Dyson & Genish, 2005). Two research questions helped guide this qualitative study:

1. How does explicit instruction in new literacy strategies impact a reader's ability to comprehend texts?
2. How does explicit instruction in new literacy strategies impact a reader's self-concept?

Questionnaires. The questionnaires were administered in print form by a third party at the end of class sessions led by the instructional counselor. Not all participants were present in class on the days questionnaires were administered, so both the pre-instruction and post-instruction questionnaire were administered at least twice during the same week. The questionnaires consisted of five multiple-choice questions where participants could select multiple answers and also had space to add additional responses (APPENDIX A). Each of the tables contains information from the questionnaire administered prior to explicit instruction in new literacies strategies and the questionnaire administered after explicit instruction. Results from the multiple-choice questionnaire are in the Tables below. Numbers in the tables indicate the number of respondents that chose the option. Table 2 includes participant responses to questions about reading online and reading in print:

1. Imagine that you are doing some research online and you do a Google search and visit a few websites. How do you help yourself understand what you have read on different websites? (Choose all that apply).

2. Imagine that you are reading something in print (a physical copy in your hands) and you don't really understand what you just read. What do you do to help yourself?

Table 2

Student Reading Strategies and Comprehension

	Pre-Instruction		Post-Instruction	
Reading Strategies Used	Print	Online	Print	Online
Asking for help	5	4	4	3
Stopping reading	3	5	2	1
Annotating	4	2	5	4
Taking notes	3	7	5	4
Rereading	7	6	7	5
Total:	22	24	23	17

In response to the questions "Mark all of the ways that you prefer to read things like books or long articles" and "Mark all of the ways that you prefer to read short things like a web page, a discussion post, or short articles," students responded that they prefer reading long and/or short texts in different formats. Table 3 shares these results.

Table 3

Student Preferences for Reading Platforms

Preferred Reading Platforms	Pre-Instruction		Post-Instruction	
	Long Texts	Short Texts	Long Texts	Short Texts
Computer	2	3	4	5
Tablet	3	3	4	4
Phone	2	3	2	5
Print	7	5	7	4
Total:	14	14	17	18

Table 4 shares the results from the question "Think about when you have to read something and take it very seriously. You have to really focus on what you are reading to understand it. What do you do to focus your attention and think deeply about what you are reading? (Choose all that apply)."

Table 4

Student Strategies for Focusing while Reading

Strategies for Focusing while Reading	Pre-Instruction Selections	Post -Instruction Selections
Reading out loud	5	6
Annotating the reading	3	2
Establishing a purpose	4	3
Going to a quiet place	7	4
Silencing phone notifications	4	3
Total:	23	18

The questionnaires also contained two open-ended questions. In the pre-instruction questionnaire, participants were asked “How do you feel about your reading skills?” and “What reading strategies do you use to make sure you comprehend what you read?”. The post-instruction questionnaire also asked participants “How do you feel about your reading skills, but the second open-ended question was worded slightly differently and was written as “What are some ways that you use your reading strategies in your college classes?”.

Pre-instruction questionnaire. The participants’ open-ended responses for the question “How do you feel about your reading skills?” included the following responses in Table 5.

Table 5

Pre-Instruction Feelings About Reading Skills

Responses
I under stand most of the content I read but at times I stumble with understanding
I feel that my reading skill is poor because I do not read alot and it takes me more time to comprehend what I'm reading
My reading skills are pretty perplex, I reread at least 5 times to gain an understanding.
I don't read a lot and maybe that's why I have to reread a lot of stories because my skill level is not where it suppose to be
I feel like my reading skills could be better
I feel like I have good reading skills but I have room to improve and I'm still learning new things every day
I feel that my reading skills could be better; I could show more interest in what I'm reading

Note. All responses are written exactly as the participants wrote them. No changes have been made to the grammar or mechanics.

Table 6 includes the responses to the question "What reading strategies do you use to make sure you comprehend what you read?".

Table 6

Pre-Instruction Reading Strategies Used

Responses
For words I don't know I look them up either in a dictionary or online/google
I take notes and reread what I do not understand.
I go back and reread it until I comprehend it.
I reread the parts that didn't sound right to me. Sometimes I even take notes and go over it if I missed anything
Strategees like rereading, looking back, making sure I miss nothing from the reading.
I go back and reread and I also take notes to show someone so they can also help me understand it.
I reread the passage, I read outloud, and I go to a place like my room to where I can be alone.

Note. All responses are written exactly as the participants wrote them. No changes have been made to the grammar or mechanics.

Post-instruction questionnaire. The participants' open-ended responses for the question "How do you feel about your reading skills?" included the following responses in Table 7.

Table 7

Post-Instruction Feelings About Reading Skills

Responses
I feel like I have good reading skills but there's things I could work on to become a better reader.
Poor, not where it should be.
I feel that my reading skills are great, I just need to use them more often
My reading skills are pretty basic, I do as others do so that I can comprehend it.
My reading skills arent bad but I can improve them
I feel as if I can improve on my reading speed and comprehension.
My reading skill are not good enough, I want to read without stopping.

Note. All responses are written exactly as the participants wrote them. No changes have been made to the grammar or mechanics.

Table 8 includes responses to the question, "What are some ways that you use your reading strategies in your college classes?"

Table 8

Post-Instruction Reading Strategies Used

Responses
I annotate what I'm reading, I take notes on it, I reread when I'm confused, and I ask for help when I have trouble understanding what I'm reading.
With everyday work.
When we are reading a book and class I write question that can help me understand what I'm reading.
I reread whatever i'm reading and as I go I stop and take notes.
I reread, ask myself questions, and take notes
I ask a lot of questions and stay ingaged. I also try to take important notes.
I try to drag a couple of words so I can look at the next sentence so I know what to say; Also I use my finger to follow along.

Note. All responses are written exactly as the participants wrote them. No changes have been made to the grammar or mechanics.

Interviews. Several themes emerged from the interviews that related to a reader's strategy use and self-concept. One theme included the categories of self-awareness, application, and comprehension. Readers that had more confidence in their abilities typically discussed engaging in reading with a self-awareness for strategy use and for a strategy's impact on comprehension which was not demonstrated by readers who were less confident. For instance, when responding to questions related to reading strategies such as "What strategies do you use when you read online? Anything different than if you were reading in print?" Participants Andre, Daja, and Michael provided specific strategies beyond rereading:

Andre: *Um, if I don't have my notebook, I'll put up a Word thing and type my notes on that. Then, I send them to myself and then write them down.*

Daja: *I try to take notes and try to highlight stuff, so like if I want to go back and look at it again I can. If I have my notebook with me, I'll write them out. If I use like Bookshelf the app, I add notes*.

Michael: *Well, since the first day I came back this semester, you said write the questions down, so I start with questions first and then I read one chapter and see what that talks about and then go to the next chapter.*

Andre, Daja, and Michael also viewed themselves differently as readers. When asked "How do you feel about your reading at the college level?" or "How do you feel about your reading skills?", they responded by reflecting on their growth.

Andre: *I think I got better from last semester to this semester because I take a lot more notes this semester. Last semester, I would just read and think I was going to remember everything. In math I take notes, but it's different. And, psychology I take notes over things that I know is going to be on the test. I know some things aren't important.*

Daja: *I feel like I'm becoming a better reader because in like high school if you were to go around and read aloud, I wouldn't really do it because I'd be scared I would mess up. But now, it's just like when I read it I understand it. In class, I actually like talking about the book some cuz I couldn't understand it at first.*

Michael: *I was all over the place last semester. I didn't know what I was doing.*

Participants Kyle, Rashad, Charles, and Malik did not provide specific strategies besides rereading when answering the question "What strategies do you use when you read online? Anything different than if you were reading in print?"

Kyle: *I just try to get done reading it, and then, if I don't understand something, well, if I'm reading a passage, I'll go back and re-read, but with the comic it's pretty easy and boom-boom. Straight forward. Pretty easy.*

Rashad: *Um, nah. Not really.*

Charles: *I reread it a couple times. Then I go put the book down and try to like go over it and memorize the whole scene*.

Malik: *Actually, I do less when I'm reading online.*

Kyle, Rashad, and Charles also perceived themselves negatively as readers. Malik attributed to his difficulties in the course to access to a computer.

Kyle: *Terrible. Awful. Cuz I always been very bad.*

Rashad: *I still need work. I don't really like English for real for real. I just know you gotta do it just to get by. Some lesson of life.*

Malik: *My reading skills aren't bad. I really don't have a problem with reading it online, but it's just me getting to a computer*.

Charles: *Bad. Terrible. Because I don't read like I should because it's so much that I gotta catch up on. So much that I didn't learn. I don't read like I should. I never been a big fan of reading. It just. I never liked the class. English. I hate the word English.*

These more confident readers, in particular Daja and Andre, could speak more specifically about their reading processes and the strategies that they typically employed

and noted where there were still areas in which they struggled. In addition, these readers talked confidently about their ability to move between print and digital spaces. When asked questions such as "How do you feel about having to read your textbooks online?" or "Do you use any of the highlighting or annotating features?" Andre and Daja gave examples of how they engage while reading online:

> Andre: *I like it better than reading the actual book. I prefer to read on my laptop and not my phone because I get very distracted. I just type up into a Word document and then write it out later.*
>
> Daja: *It's hard. I feel like if I had a hard copy it would be easier. Like I know with The Hate U Give or Frederick Douglass online I didn't really read it because I'd get distracted on my phone. With a hard copy, you actually have it. Sometimes I'll listen to it while I read the book.*
>
> Michael: *I'm just now getting into it* [highlighting and annotating features].

Though Daja mentioned her preference for print, she also indicated strategies to help her understand when reading online such as taking notes, highlighting, and listening to the audiobook.

Readers who were less confident often were missing a strategy application when discussing reading comprehension. They may be aware that their comprehension falters, but they did not have a method for self-correcting or did not use a strategy to self-correct. For instance, when asked "How do you feel about having to read your textbooks online?" or "Do you use any of the highlighting or annotating features?", Charles, Rashad, and Kyle reacted negatively to reading online. When asked about using highlighting or annotating features, Charles said that he takes notes, and Malik noted that he only takes

notes when the whole class is taking notes. Rashad and Kyle do not use any highlighting or annotating features when reading online.

> Kyle: (audibly sighs) *I don't like it. I prefer to read a book because I like touching. When you're on there [Internet]it's like damn, bro, where's it at? Scroll through like forty different times. I don't know how to use Blackboard for real. Let alone Bookshelf.*
>
> Rashad: *I mean it's better because you can pull it up fast. But then sometimes your Internet be lagging or like I mean I feel it's better. Then, I feel we should go old fashioned sometimes too. So, like, it's just how we was taught.*

Another set of themes that emerged was included the categories of engagement, community, and application. Students spoke of reading as communal experiences in high school where they often had a whole class reading and where the text was discussed extensively in class and work was completed in groups. When there was a break in comprehension, readers could discuss with their peers or talk about the overall meaning rather than self-correcting while reading. When asked about their high school experiences and using reading strategies, several of the participants discussed the communal nature of their classroom reading.

> Charles: *Yeah, we talked about reading strategies, but the problem was, well, what we was reading wasn't as long. And the selection of how like the words are different and how long it is.*
>
> Michael: *Read. Do this and do that. But we did everything in a group. We didn't do nothing individually. We couldn't do stuff by ourselves. So, they basically babysit us.*

Rashad: *I mean my high school, me personally, I feel like they didn't teach me nothing. Getting nothing ready. No college readiness but that was the main thing they would preach is college this and college that.*

Participants also expressed that application of strategies was done as a group such as taking notes if the whole class is taking notes or using a study guide to complete an assignment related to reading rather than using their own questioning to drive their purpose for reading. When students talked about the texts they enjoyed reading, it was often related to communal experiences or personal interests. For example, Malik mentioned taking notes only when it was as a class.

Daja: *I liked it like we had an activity on it. Like questions we had to come up with, and then in a group, we chose the best ones out of it and put it on the board. Like discussion questions*.

Kyle: *I am way more engaged when I'm reading in terms of stuff that actually catches my eye. School is forced, and I have no interest*.

Rashad: *I like Frederick Douglass, but I just feel like it wasn't appealing to me. With the comic, I'm not a superhero, but I can feel like a superhero.*

Think-aloud. The think-alouds were conducted over the course of three days in a private office setting on a laptop using a screen cast program. The text used was the third scene of *Black Panther: A Nation Under our Feet* issue 2. The average amount of time that participants spent producing a think-aloud was approximately six minutes. In Table 9, the data collected from the think-alouds is presented.

Table 9

Think-Alouds and Strategy Usage

	Preview	Notes	Question	Reread	Analyze	Summary	Synthesize
Daja			1	3	1	1	1
Andre	1		1	1	2		
Michael	2		1	2	2	1	2
Kyle		1		2	1	1	
Rashad	1	1		4		3	
Charles			2	1	1	2	
Malik			1		3		1

Note. Kyle completed the think-aloud twice. He initially quit in the middle of the first recording. His second recording continues from where he left off in the first.

Strategy use varied among participants. The most frequently used reading strategy was rereading. Summarizing was not a focus of the new literacies strategies, and students employed it along with rereading when there was a break in comprehension. Establishing a purpose for reading or previewing a text, synthesizing, and notetaking were the three least employed strategies. An example of how each strategy was used is below.

Previewing:

Michael: *Okay, before I start reading I always scroll through the pages to see what questions can I come up with that will help me understand this better*.

Andre: *So, I'm guessing next issue will be getting into them probably fighting or, maybe this isn't even happening because she is a witch and in his head. There's a lot of theories.*

Note taking:

Rashad: *So I'm taking notes as I'm reading* (after the first thought bubble in the scene)

Questioning:

Charles: *What is that? Is that Zenzi? Is that Tetu?*

Charles: *Where did her power come from? I don't understand why she has powers. Where did she get them from?*

Malik: *Is that what people think about him?*

Rereading:

Daja: read through the first page in the scene stops and says *Okay* and scrolls back to the top of the scene and begins rereading. *Okay, so that's Black Panther thinking*. (The thought bubbles are squares with black backgrounds as opposed the speech bubbles that are ovals with white backgrounds).

Kyle: *That don't make no sense*. Scrolls up. *Oh, I scrolled too far*.

Analyzing:

Malik: *It looks like he's breaking in somewhere and beating the guards. He's telling them some wisdom that his uncle brought to him.*

Andre: *He's trying to convince the people he's a good person.*

Kyle: read "I loved him. But I wish he'd told me not just of the power of kings, but of the might of **the people.**" *Oh. That's going to be useful. Let me grab my paper*.

Summarizing:

Rashad: What the text said: "I believed his happiness a mask for intrigue and scheme. Only with the crown upon my head did I come to understand". What Rashad read: *I believed his happiness a mask for inruled and only with the crown upon my head I come to understand. So, when he was king he knew he was destined to be king*.

Synthesizing:

Daja: *At this point it look like he's fighting through her minions just to get to her because he's still trying to get to her. He's finally got her. All his people are there under her control.*

Michael: *So basically on the first issue she had his people turn on him, so I'm guessing he found her and now is going to stop her.*

Two participants had difficulty navigating the digital platform. Kyle began recording the think-aloud and quit after a few minutes. Kyle expressed that the computer kept freezing; he came in on another day, without prompting, and wanted to complete the think-aloud again. Upon viewing the think-aloud after it was recorded, the researcher noted that Kyle did not know how to scroll through the online comic by using the up and down arrows that are used to navigate a webpage. Instead, Kyle was using the scrolling marker index to try to move between scenes. By navigating in this manner, it was difficult to land on a particular panel in the comic or a specific section of the scene. This is what he meant by "kept freezing." Charles did not know that refreshing a web page or exiting the page and reopening the page could assist in viewing the text on a digital platform.

The think-alouds also revealed that most of the participants struggled with the vocabulary of the text and very few demonstrated fluency while reading. These were not included in the scope of the research study. Several participants stated that they did not need to take notes because they said they understood everything that they were reading.

Member checks. Reader profiles were constructed based on the data from

questionnaires, interview, and think-aloud. The reader profiles focused on a participant's strategy use and self-concept. Below are the reader profiles that were provided to each of the participants.

Reader Profile: Daja

Participant prefers reading in print but often reads on the phone and is not really bothered by having to read online because the reader feels that her skills have improved since the first semester of college. Though the reader was not taught specific reading strategies in high school, she feels that she is becoming more confident in her reading skills and in discussing texts in class. While reading on a digital device, the student demonstrated reading strategies such as rereading, summarizing portions of the text, questioning, and inferring. The reader often takes notes and tries to highlight the text and feels comfortable using the Bookshelf app. The reader feels that she does not always need to take notes when reading the comic because it is easier to read than other texts. The participant appreciates when there are discussion questions or an activity related to the reading as it provides focus or guidance on the assigned texts. The participant uses metacognitive skills and understands when to employ reading or study strategies for different types of reading. On average, the participant spends about an hour or two a day reading for school.

Reader Profile: Andre

Participant does not have a specific preference for reading in print or online and feels comfortable reading on digital devices. The reader is confident in his reading abilities and feels that his high school provided him with many similar

opportunities to work on his reading skills that are required for success at the college level. Though the reader can engage confidently on digital devices, he prefers reading on a computer than on a phone for school work because he can be easily distracted by his phone. While reading on a digital device, the student demonstrated using the strategies of previewing, rereading, questioning, and analyzing. The reader partakes in personal reading of materials like articles which is a newer area for his personal interests. The reader believes he has improved from last semester and takes more notes on texts. The participant uses metacognitive skills and understands when to employ reading or study strategies for different types of reading. On average, the participant spends about two hours a day reading for school.

Reader Profile: Michael

Participant prefers reading in print but feels somewhat comfortable reading online. The reader is more confident in his reading skills from last semester and actively engages in the reading material. The reader does not really like reading and most of the reader's high school experiences involved group work or reading together as an entire class with not many opportunities for individual practice outside of the classroom. The reader has developed an interest in reading about African American history since coming to college. The reader prefers to have print texts so that he can write and annotate the text. The reader sometimes has difficulty focusing and being motivated to read something when he does not have a lot of interest in it, but he uses strategies like reading in chunks and taking breaks to help his focus. The reader applies the reading strategies that have been

taught this semester and while reading on a digital device demonstrated previewing, questioning, rereading, inferring, synthesizing, and summarizing. The participant uses metacognitive skills and is improving upon knowing when to use different strategies. The participant spends about an hour a day reading for school.

Reader Profile: Kyle

Participant prefers reading in print and does not feel comfortable reading online. The reader often gets frustrated when using different digital programs while reading online. The participant enjoys reading about his interests and texts that are exciting and full of adventure. The reader sometimes has difficulty finding motivation and interest in reading texts for school. Often, he views reading as a task to be completed so that he can move on to his interests. The participant really enjoys music and tries to make connections to reading strategies through rhythm and voice. The participant lacks confidence in his reading abilities and feels that he did not get the preparation for college that was needed in high school. While reading on a digital device, the student employed strategies such as rereading, inferring, and note-taking. The reader needs instruction in using different digital platforms. The participant needs practice using metacognitive skills and employing varying reading strategies because he is sometimes rushed and does not have patience for the reading task. The participant spends about two minutes a day reading for school.

Reader Profile: Rashad

Participant does not have a specific preference for reading in print or online and feels that his reading skills need some improving. The participant feels that

though his high school emphasized college and career readiness, they did not provide the tools he needs to be successful in college. The participant does not like English and does not like reading. Outside of class, the reader engages in reading when using social media apps and the ESPN app. Most of the reading spent during the day is on social media and with texts, so the reader feels he reads around 12 hours a day. While reading for school, the reader sometimes takes notes and does not use the highlighting or annotating features on his e-textbooks. He feels that reading for school is harder and that he tries to make sure he does not miss any points while reading. While reading on a digital device, the student employed strategies such as rereading, summarizing, note taking, and predicting. The reader often tries to put what he is reading into his own words. The participant needs practice using metacognitive skills and employing varying readying strategies so that he is spending more time analyzing what he is reading.

Reader Profile: Charles

Participant prefers reading in print and does not generally like reading. The reader does like that he can type notes when reading online and often uses programs like Google Docs. The reader does not feel very confident in his reading skills when it comes to reading long texts. The participant feels that the reading he had to do in high school was over mostly short texts and that it did not prepare him for reading long texts like those that are required in college. The reader expresses concern that there is much he did not learn or skills he did not develop in high school and that he is playing catch up now in college. He feels that he does not read like he should to improve his skills. While reading online, the participant demonstrated

reading strategies such as questioning, rereading, and inferring. The participant needs practice using metacognitive skills and knowing when to employ certain reading strategies so that he can spend more focus on analyzing the text. The participant spends between 45 minutes and two hours reading for school a day.

Reader Profile: Malik

Participant does not have a specific preference for reading in print or online and feels confident in his reading skills. The participant expressed difficulty in reading online due to lack of access to a computer. The reader says he does not have a problem reading online and enjoys reading texts that are interesting to him. The participant described his high school experience as one where he was taught mostly the basics to reading and writing such as summarizing a text and that he was not taught specific strategies to use. The reader typically takes notes in a physical notebook. While reading on a digital device, the student demonstrated the strategies of questioning, inferring, and synthesizing. The participant has expressed that he does not reread when reading online, and he did not demonstrate that strategy while reading on the digital device. The participant uses some metacognitive skills but needs to spend more time focusing on analyzing a text and writing out his thoughts. The participant spends about an hour a day reading for school.

The member checks helped validate the findings as students were able to provide feedback on the triangulation and interpretation of the data collected. Participants agreed that these were accurate portrayals of their reader self-concept and strategy use.

Chapter 5

Discussion

The purpose of this chapter is to discuss the results and implications from the collected data. Limitations of the study are also discussed as well as recommendations for future research and practice.

Review of the Results

This case study focused on developmental readers and their experience in a college reading course where new literacies strategies were explicitly taught.

Research question 1: How does explicit instruction in new literacy strategies impact a reader's ability to comprehend texts?

After analyzing the data collected, the link between strategy use, metacognition, and comprehension is even clearer. The students that were more successful on class assignments actively engaged in thinking about strategy use and applying it when lapses in comprehension occurred. This was true for Daja, Andre, and Michael. Rashad, Charles, Malik, and Kyle may be aware that they are sometimes unsuccessful at comprehending texts, but do not use specific strategies beyond rereading to assist in their understanding. The study was conducted over the course of six weeks and that was not enough time for most students to independently use the strategies while reading.

After instruction, participants on the questionnaire elected the reading strategy of annotating both online and in print more than before instruction. Participants elected to take notes more when reading in print than reading online; using rereading as a preferred strategy remained nearly the same for print and online reading. Two of the strategies listed on the questionnaire were asking for help and stopping reading. Though there was

minimal change in the strategy of asking for help, there was a decrease in the number of students choosing stopping reading as a tactic. This demonstrates that students may be less likely to abandon what they are reading online; however, it is unclear whether they employ a strategy to help them comprehend reading when they choose not to stop reading.

The questionnaire also focused on student preference for reading platforms. There were not any significant changes between the pre-instruction questionnaire and post-instruction questionnaire. Print was still the unanimously preferred platform for reading long texts. Interviews supported the questionnaire, and the preference for print was often related to accessibility to the text and ability to engage with the text during course discussions as not all participants had laptops, tablets, and or smart phones to engage with digital texts for classes.

Participants were asked about strategies they use to help them focus while reading, and the majority of students selected reading out loud as a strategy for focusing over reading strategies such as annotating or establishing a purpose for reading. Baron (2015) notes that reading on a digital platform often becomes about completing a task rather than deeply understanding and thinking about ideas. The readers were not altering their purposes for reading in the think-alouds beyond completing the task of reading, which Wolf and Barzillai (2009) indicate is characteristic of hyper reading. This lack of reading strategy use for focusing was demonstrated during the recorded think-aloud as most students read to comprehend and not to analyze or synthesize the meaning of the comic's particular scene to the larger issue as a whole text. Though a specific purpose for reading was not provided to participants, participants are aware through classroom

exercises that course expectations require students to critically analyze any text that is read. Both the faculty member and instructor set clear expectations and guidelines that reading only to understand what happened and not relate one's understanding to larger themes is inadequate at the college level. The strategies of setting a purpose and previewing a text were explicitly taught so that students can direct their analysis beyond plot comprehension.

Participants spent an average of six minutes completing their think-aloud and a majority of the strategy use during the think-aloud was rereading and summarizing. The majority of students did not engage in taking notes, applying synthesis, or analyzing the text. Many engaged in surface level readings of the text, and this shallow reading approach emerged in the questionnaires and interviews as they spoke about reading as a task to be completed or understanding "what" happened in a text and not analyzing "why". Hayles (2007) articulates that this hyper attention is often better suited for digital mediums; while completing the think-aloud, students had to compete with other stimuli such as popups and digital navigating through the web page. It is unclear if the students had to read the text in print that they would employ more strategies related to synthesis and analysis.

Research question 2: How does explicit instruction in new literacy strategies impact a reader's self-concept.

Prior to instruction, the participants' questionnaire responses demonstrated that the readers perceived themselves as needing improvement and showed awareness of their skills which are not at the necessary level for successful comprehension. Four participants described their reading as "poor," "not where it suppose [sic] to be," and

twice with “could be better.” One participant responded that he or she understood most of the content read and one said he or she had good reading skills. None of the participants’ responses moved to higher order reading skills and focused only on understanding and comprehension. Their responses on the pre-instruction questionnaire focused on their skill deficiencies and a need for growth such as “I feel that my reading skill is poor…it takes me more time to comprehend what I’m reading” or “My skill level is not where it suppose [sic] to be.”

Responses included their interpretation of what influenced their lack of reading success such as reading infrequently, not being engaged with reading, and lack of sustained reading. For example, one participant said “I feel that my reading skill is poor because I do not read alot” and another stated “I feel that my reading skills could be better; I could show more interest in what I’m reading.” The responses included discussion of strategy use such as rereading, taking notes, and reading out loud. The responses included comments on reading comprehension such as making sure they were “not missing anything” and making sure the text “sounds right” rather than being able to apply, infer, or synthesize material.

Participants discussed their deficiencies and the realizations that they were unprepared for the requirements of college reading during their interviews. Rashad said “I still need work,” and Kyle described himself as “Terrible. Awful.” This may also be impacted by students’ having failed the course in the previous semester.

The post-instruction questionnaire revealed that the majority of participants viewed themselves more positively but also with the realization that they had areas needing improvement. Two students said their reading skills were “poor, not where it

should be" or "not good enough." The majority of participants' responses demonstrated that they perceived themselves as capable readers but that they wanted to focus on improvement with responses such as "I feel like I have good reading skills but there's things I could work on to become a better reader," "I feel that my reading skills are great, I just need to use them more often," "My reading skills aren't bad but I can improve them," and "I feel as if I can improve on my reading speed and comprehension." Each of those statements were followed up with a statement about growth. Some of the responses denoted that participants believed they had poor skills that are not at the college level and did not include a goal for improving. Regarding strategy use, participants overwhelmingly said they reread and take notes while reading as shown in Table 2.

Students that were the most confident in their reading abilities like Daja and Andre could discuss their metacognitive strategies in the interviews and also demonstrated strategy employment to monitor their comprehension as they were reading in the think-aloud. Furthermore, in interviews, the more confident readers were able to note a difference in how they read for school and read for entertainment. Daja commented on the differences in reading for school and reading for entertainment: "If it's for school, I take it more seriously. With social media I'm just skimming through it." When she needs to take it seriously, she said, "I take out my notebook. I try to understand what I'm reading. Try to focus and be in a quiet place." Andre also said "I definitely read differently. I read stuff for entertainment—I read just to read it. I'm not gonna remember it. When I read stuff for school, I'm expected to remember so I take notes and stuff." In comparison, a less successful reader such as Charles said "No, I read the same."

The less successful readers also expressed that they had difficulty focusing when reading for school. Charles said “I can’t read nothin’ boring cuz it’s like my mind wander off, and it’s hard to stay focused.” Kyle who struggled with navigating the digital platform added, “It’s hard. I don’t like doing this. I don’t. No, I just don’t read it. Like if my interest isn’t in it, I’m not going to read. I’m not going to lie.” During the interviews, they did not add any strategies that they may use to help them become focused or more engaged.

The themes that emerged from the interviews were related to a student’s self-awareness, strategy use, and comprehension. The more confident readers were able to discuss their reading strategy use and its impact on comprehension more specifically than other readers who discussed not being successful at reading but could not provide the critical self-reflection for why that might be and generally performed poorly in the classroom.

Another set of themes that emerged from the interviews was one of engagement, community, and its impact on applying reading strategies. Daja, Michael, and Rashad spoke of completing whole class readings or group work in high school to help them understand what they were reading, but they often noted that this did not prepare them for the requirements of college classrooms. Malik discussed that he would use reading strategies like notetaking or synthesis if it were related to a classroom activity or if it were part of a whole class activity but often did not employ these strategies on their own.

During the member checks, the participants did not have any suggestions for changes to the reader profiles. They said that these were accurate and described them as readers.

Additional findings

Several students had difficulty navigating the digital platform during the think-aloud and demonstrated impatience with the online reading. Issues with scrolling and screen navigation were apparent in for Charles and Kyle. Though all students in the course are taught how to navigate the digital platforms such as Bookshelf and Blackboard at the beginning of the semester over the course of two days, not all participants demonstrated transfer of this instruction. The researcher typically brought a laptop to class and reviewed accessing and navigating Blackboard and the online website for the comic, but students may have had difficulty navigating these platforms as they vary between phones and computers.

Class attendance may have also impacted student strategy use and self-perception. Andre and Michael missed two class sessions, but they also met with the instructor individually to review class content. Daja missed one class session but had weekly meetings with the instructor to work on course materials and overall reading and writing skills. Malik missed seven class sessions. Charles and Kyle missed two class sessions, and Rashad missed three class sessions.

The think-aloud revealed that the majority of participants struggled with reading fluency and had difficulty understanding new vocabulary words in context. For instance, during the think-aloud, Rashad stopped reading after each text bubble in the comic and attempted to put each thought bubble into his own words. This interrupted his ability to read uninterrupted. Other readers such as Kyle and Charles had difficulty navigating on the laptop, so their reading was interrupted due to navigation issues. The majority of participants struggled pronouncing the words *mystique*, *proverb*, *stead*, *diminished*, and

trifle. Summarizing was a reading strategy that was not explicitly taught but one that the majority of students employed during the think-aloud. This may be due to the reading platform. In a comic, the text itself is somewhat fragmented into different panels, and students have to examine the illustrations as well as the text. When reading online, readers have to scroll up and down to review previous panels and read the text fluidly, so summarizing could help students recall information from different panels of the text. The summarizing was often used to recall information about the text but not to be used to engage more deeply with the text.

Recommendations

Students need explicit instruction in reading on digital platforms, including learning how to navigate, how to problem solve when there are errors in the digital platform, and how to read for critical purposes rather than superficial understanding. Engaging in new literacies strategies twice a week for six weeks was not enough time for all students to develop self-regulatory reading processes to aid in their comprehension. Students are lacking the skills to utilize features of digital platforms, which could help with their understanding of skills such as scrolling, digital note-taking, and basic Internet navigation. Furthermore, critical reading requires varying strategy use. Students need to engage in reading and understanding their tactics for before, during, and after reading to be successful at the college level. Instructing students on how to develop critical thinking questions as a pre-reading strategy is needed. Formulating a purpose for reading that moves beyond recall of information can help students employ additional strategies during and after reading.

Students need opportunities for more extensive guided practice and more opportunities for self-reflection on their regulatory processes while reading. Participants were often instructed explicitly over the course of one or two course sessions though the strategies were modeled more frequently. Practice in class ranged from 20-30 minutes once or twice a week with extended practice in the form of homework at least once a week.

Implications

Screencasting is a valuable tool for not only teachers but also readers. Instructors can increase their understanding of a student's reading process and strategies that are employed to help look for patterns of when there is a break in understanding or when students self-regulate their reading. Conducting a think-aloud at the beginning and end of semester courses can help instructors evaluate a student's growth. Furthermore, students can utilize a think-aloud screencast to self-reflect and examine their metacognitive strategies. Screencasts are a valuable tool for investigating the online reading process and strategy use.

This study revealed the need to assist students in their digital navigation processes and strategy uses. Though students may be growing up in a digital age, they do not intuitively know the most efficient or effective ways for engaging with digital platforms so that they can critically evaluating the content. There are so many distractors with digital platforms whether it is with scrolling or interruptions like push notifications that it is imperative students create strategies to assist in focusing on specific tasks while also being able to problem solving technical issues.

Explicit instruction in reading, analyzing, and synthesizing content online is essential, but so is explicit instruction in navigation and digital platform engagement. Students that are not familiar with or cannot overcome platform navigation will struggle with comprehension. When a student's focus is on scrolling or finding the text, he or she cannot devote the energy needed to critically analyze content.

In addition to new literacies strategies, students need to have study strategies to further their levels of comprehension. Students need to analyze and synthesize reading materials though their understanding of comprehension may be simply to recall information. Strategies like analyzing and synthesizing information can be practiced in reviewing one's reading and not just in the reading process itself. More practice in analyzing and synthesizing material after reading may be beneficial and help students engage in these strategies while reading.

Limitations

While several useful findings came from this study, there were also limitations. The instructor as researcher could be seen as a limitation in that the proximity may have shaded interpretations. The limited number of participants was due to decreased enrollment in this course itself, yet the number of participants may also be seen as a limitation. Due to the small number of participants and the nature of this case study, the findings are not generalizable to larger, more diverse populations. The study was conducted over the course of six weeks, and such a short time frame has an impact on the results. Conducting this over the course of an entire semester would provide more evidence for strategy use and reader self-concept.

Conclusion

Students who enter college underprepared in reading often face significant challenges, and those enrolled in a developmental college course are less likely to graduate than those not enrolled in a developmental college course. In colleges where e-textbooks and online reading is a general requirement, students need to have the strategies to navigate various reading platforms and engage in critical thinking practices. The purpose of this study was to examine how explicitly teaching new literacies strategies impacted a reader's ability to comprehend texts and how it affected a reader's self-concept. Overall, it is unclear to what extent students employed new strategies, but it is clearer that students with better confidence as readers used metacognitive strategies and applied reading strategies as it related to their purpose for reading to aid in comprehension.

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APPENDIX A

Questionnaire Form (Pre-Instruction)

Q1 Mark all of the ways that you prefer to read things like **books** or **long articles.**

- ☐ In print (a physical copy in your hands)
- ☐ On a phone
- ☐ On a tablet
- ☐ On a computer
- ☐ Other: _____

Q2 Mark all of the ways that you prefer to read short things like **a web page, a discussion post**, or **short articles**.

- ☐ In print (a physical copy in your hands)
- ☐ On a phone
- ☐ On a tablet
- ☐ On a computer
- ☐ Other: _____

Q3 Imagine that you are doing some research online and you do a Google search and visit a few websites. How do you help yourself understand what you have read on different websites? (Choose all that apply)

- ☐ I reread parts that are confusing.
- ☐ I take notes on what I am reading.
- ☐ I annotate online as I read.
- ☐ I use a different webpage if it's too hard to read.
- ☐ I ask someone for help.
- ☐ Other: _____

Q4 Imagine that you are reading something in print (a physical copy in your hands) and you don't really understand what you just read. What do you do to help yourself? (Choose all that apply)

- ☐ I reread parts that are confusing.
- ☐ I take notes on what I am reading.
- ☐ I annotate as I read.
- ☐ I stop reading if it's too hard to read.
- ☐ I ask someone for help.
- ☐ Other: _____

Q5 Think about when you have to read something and take it very seriously. You have to really focus on what you are reading to understand it. What do you do to focus your attention and think deeply about what you are reading? (Choose all that apply)

- ☐ I silence notifications on my phone.
- ☐ I go to a quiet place.
- ☐ I set a goal or a purpose for why I'm reading.
- ☐ I annotate what I'm reading.
- ☐ I read out loud.
- ☐ Other: _____

Q6 How do you feel about your reading skills?

_____

_____

_____

_____

_____

Q7 What reading strategies do you use to make sure you comprehend what you read?

_____

_____

_____

_____

_____

Questionnaire Form (Post-Instruction)

Q1 Mark all of the ways that you prefer to read things like **books** or **long articles.**

- ☐ In print (a physical copy in your hands)
- ☐ On a phone
- ☐ On a tablet
- ☐ On a computer
- ☐ Other: _____

Q2 Mark all of the ways that you prefer to read short things like **a web page, a discussion post**, or **short articles**.

- ☐ In print (a physical copy in your hands)
- ☐ On a phone
- ☐ On a tablet
- ☐ On a computer
- ☐ Other: _____

Q3 Imagine that you are doing some research online and you do a Google search and visit a few websites. How do you help yourself understand what you have read on different websites? (Choose all that apply)

- ☐ I reread parts that are confusing.
- ☐ I take notes on what I am reading.
- ☐ I annotate online as I read.
- ☐ I use a different webpage if it's too hard to read.
- ☐ I ask someone for help.
- ☐ Other strategies: _____

Q4 Imagine that you are reading something in print (a physical copy in your hands) and you don't really understand what you just read. What do you do to help yourself? (Choose all that apply)

- ☐ I reread parts that are confusing.
- ☐ I take notes on what I am reading.
- ☐ I annotate as I read.
- ☐ I stop reading if it's too hard to read.
- ☐ I ask someone for help.
- ☐ Other strategies: _____

Q5 Think about when you have to read something and take it very seriously. You have to really focus on what you are reading to understand it. What do you do to focus your attention and think deeply about what you are reading? (Choose all that apply)

- ☐ I silence notifications on my phone.
- ☐ I go to a quiet place.
- ☐ I set a goal or a purpose for why I'm reading.
- ☐ I annotate what I'm reading.
- ☐ I read out loud.
- ☐ Other strategies: _____

Q6 How do you feel about your reading skills?

_____

_____

_____

_____

_____

Q7 What are some ways that you use your reading strategies in your college classes?

_____

_____

_____

_____

Interview Protocol Form

Interview Protocol Form

Project: Reading students and new literacy instruction

Date:_____

Time:_____

Location:_____

Interviewer:_____

Interviewee:_____

Consent form signed: _____

Notes to interviewee:

Protocol:

I would like to record our conversation today to help make sure the note-taking process is accurate and reliable. Please sign the waiver form. Only the researcher on this project will have access to the tapes. The recordings will be deleted and no digital copy will remain.

To participate, you must sign a form to meet the university's human subject requirements. This form states that: (1) all your information will be confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm.

Thank you for agreeing to participate.

This interview will not last longer than one hour.

Introduction:

You have been selected to speak with me today because you are someone who has a lot to share about reading, technology, and your classroom experiences on campus. This research project focuses on how students in reading classes use strategies when reading online and in print. It provides me with an opportunity to get your perspective on the topics mentioned above. This study in no way evaluates, critiques, or grades your responses, perspectives, and participation. Instead, it is a chance for me to learn about how you feel, think, and react to reading, technology, and the classroom.

1. What types of things do you like to read?
2. How would you describe the type of reading you expect to do in college?
3. What strategies do you use when you read online?
4. Did your high school teachers show you different strategies and ways to read your texts for different classes? How do you feel about that?
5. How do you feel about having to read your textbooks online?
6. How do you feel about your reading at the college level?
7. How would you describe most of the reading that you do during the day? Where does it occur? What kinds of things are you reading?
8. Do you have an easy time focusing when you have to read for your classes?
9. Do you feel like you read differently when it's stuff for school or when it's stuff for entertainment?
10. About how much time a day do you spend reading?
11. Do you use your e-textbooks for your classes?
    a. Do you use the highlighting and annotating features?
    b. What strategies do you use the most when you are reading?

Informed Consent Document

INFORMED CONSENT DOCUMENT

Project Title: Reading Strategies for New Literacies
Investigator: Kristine Wilson, English Instructional Counselor, Accelerated Learning Program, ACE Student Center Room 110
Email: kristine.wilson@kysu.edu
Phone: 502-597-5678

You are being asked to participate in a project conducted through Western Kentucky University and Kentucky State University. The University requires that you give your signed agreement to participate in this project.

You must be 18 years old or older to participate in this research study.
The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. **Nature and Purpose of the Project:**

You have been selected to participate because you are someone who has a lot to share about reading, technology, and your classroom experiences on campus. This research project focuses on how students in reading classes use strategies when reading online and in print. It provides me with an opportunity to get your perspective on the topics mentioned above. This study in no way evaluates, critiques, or grades your responses, perspectives, and participation. Instead, it is a chance for me to learn about how you feel, think, and react to reading, technology, and the classroom.

2. **Explanation of Procedures:**

At the beginning of the study, you will be asked to fill out a questionnaire about your reading habits and strategies. Towards the end of the study, you will be asked to fill out a similar questionnaire about any new reading habits and strategies you might have started using over the course of the study. The questionnaires will take less than 30 minutes to complete. Throughout the study, you may periodically (no more than three times) be asked to do an informal interview lasting no more than one hour per interview. In addition, you will be observed informally during normal class time in the classroom and computer lab. At the end of the study, you may also be asked to submit an audio-visual recording of your reading habits and strategies in a specific private setting.

3. **Discomfort and Risks:**
There are no known risks to participating in this study. Taking part in this study is completely voluntary. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all.

4. **Benefits:**
The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will progress research on reading strategies and new literacies.

5. **Confidentiality:**
Individuals from the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

6. **Refusal/Withdrawal:**

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

_____ _____
Signature of Participant Date

_____ _____
Witness Date

- I agree to the audio/video recording of the research. ***(Initial here)*** _____