EXPLORING DIGITAL AND PRINT TEXT EXPERIENCES OF ADOLESCENT

READERS

by

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DEDICATION

This dissertation is dedicated to my family and friends who supported me throughout the doctoral process. To my husband, Jeff, and my son, Robbie, for their patience and support. It is also dedicated to the memory of my grandmother for always believing in me, and to my colleagues for listening to my ideas and providing feedback. Thank you for believing in me and supporting me.

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ABSTRACT

Digital and print texts, as well as the efficiency of reader engagement with them, have long been of interest in scholarly literature. Most of the studies undertaken in this connection seek to compare reader comprehension of these two text media. But what are the lived experiences of reading digital versus print? And how do those who are still expected to be growing in their reading skills experience immersion and distraction in either medium? This study utilizes a hermeneutic phenomenological approach to investigate high school students' experiences of digital texts in order to examine how their experiences with digital texts differ from experiences with traditional print media. The students in this study all had experiences with reading both printed and digital texts in the classroom environment and had been exposed to purposeful instruction in digital literacy. Two rounds of data collection took place; a total of 22 adolescents were interviewed virtually and asked about their reading experiences involving both print and digital texts. Experiences with printed texts were often more emotional and more connected with the sense of smell. Digital texts were associated with a more deliberate focus, as well as a greater variety of distractions, many of which are connected with the device itself, such as notifications. While experiences with printed reading materials were more likely to be described as immersive, students also described experiences with digital texts, often shorter ones, having immersive characteristics. Recommendations include providing materials for adolescent students in a variety of formats and genres, as well as comfortable and private reading locations and time for adolescents to enjoy reading. By

connecting with and living out positive reading experiences, adolescents can improve

their reading skills and become lifelong learners because they are lifelong readers.

Keywords: digital texts, reading, phenomenology.

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CHAPTER ONE: INTRODUCTION

"How can I tell what I think till I see what I say?" – E.M. Forster

"Never trust anyone who has not brought a book with them." – Lemony Snicket

Digital texts are an integral part of modern literacy (Burke & Rowsell, 2008; Ross et al., 2017). However, scholars question whether digital texts are inherently different from print texts and whether readers process them differently (Baron, 2017; Ben-Yehudah & Eshet-Alkalai, 2014; Fesel et al., 2018; Mangen, 2008; Ong, 2013; Shapiro & Niederhauser, 2004; Wolf et al., 2009). This in turn leads scholars to question whether one medium is superior or inferior to the other (Eshet-Alkalai & Amichai-Hamburger, 2004, Eshet-Alkalai & Chajut, 2010; Eshet-Alkalai & Geri, 2007; Kang et al., 2009; Noyes & Garland, 2008). A wide range of literature focuses exclusively on the issue of functional superiority or inferiority of these two media forms (Ben-Yehudah & Eshet-Alkalai, 2014; Eshet-Alkalai & Amichai-Hamburger, 2004, Eshet-Alkalai & Chajut, 2010; Eshet-Alkalai & Geri, 2007; Kang et al., 2009; Lauterman & Ackerman, 2013; Noyes & Garland, 2008).

Readers report having different experiences with print and digital texts. For example, some readers prefer the more tactile and sensory experience of print books (Evans, 2017; Loh & Sun, 2019), while others report how digital texts can provide greater variety and make it possible for some readers to increase the amount they read (Dalton & Proctor, 2008; Hillesund, 2010). While readers can sometimes choose whether to read a print or digital version of a text, in educational contexts, students often do not

have a choice (Baron, 2021). Further, as digital technology becomes more prevalent, it is likely that students will encounter, by either choice or necessity, more digital texts (Cull, 2011; Thoms & Poole, 2017).

There is a large body of literature regarding the efficacy of digital reading, but many of the studies have conflicting conclusions, ranging from a comprehension deficit related to digital text processing to how reading tasks can be modified so that digital experiences are comparable to print (Annand, 2008; Dillon, 1992; Eshet-Alkali & Amichai-Hamburger, 2004; Fesel et al., 2018; Rouet et al., 1996). Additionally, much of the literature focuses on very specific data points, particularly reading comprehension of digital and/or hyperlinked texts compared to print as measured by a small number of multiple choice items (Hassaskhah et al., 2014; Just & Carpenter, 1980; Lauterman & Ackerman, 2013; Shapiro & Niederhauser, 2004; Schugar et al., 2011). This study takes a different approach, focusing not on the factors perceived to immediately affect attention or comprehension, but looking at readers' experience with digital and print texts, in an effort to understand what is important to *them*.

Statement of the Problem

Literacy has traditionally been defined as "the ability to read and write" print media (Rintaningrum, 2009, p. 3). Literacy skills are critical for participation in nearly every career, as well as in a democratic society (Hultin & Westman, 2013). During the last two decades, though, new definitions of literacy have emerged with the growth of information and communication technology (Livingstone, 2004). The increasing presence of digital technologies is requiring mastery of a new set of literacy skills, commonly referred to as digital literacy. Digital texts are becoming more common, and the skills that

are required for reading digital texts are both similar to and different from those required to read and comprehend print texts (Rowsell, 2014). Digital texts may require additional cognitive processing related to navigation and evaluation, but both print and digital texts require similar decoding and comprehension skills. Aviram and Eshet-Alkalai (2006) defined digital literacy as the "cognitive skills [required] to perform and solve problems in digital environments" (p. 1).

Advanced reading ability is a necessary educational outcome. According to Coiro and Dobler (2007), "proficient readers actively construct meaning using a small set of powerful reading comprehension strategies" (p. 214). Advanced readers also utilize active reading skills such as highlighting and annotating (Schugar et al., 2011). In-depth knowledge of student experiences of reading is a key component of understanding and supporting this outcome. Reading for pleasure and independent reading also are key components of advanced reading ability in students (Clark & Rumbold, 2006; Krashen, 2003). Students who read for pleasure and are engaged readers are more likely to be proficient readers (Cull, 2011; Sullivan & Brown, 2015) and this also needs further exploration and support. Higher level thinking skills (e.g., evaluating digital materials and processing multimedia) are an indispensable component of the educational process (Eshet-Alkalai & Chajut, 2010). Research suggests that these skills may best be supported by printed texts (Kaufman & Flanagan, 2016). For instance, Kaufman and Flanagan (2016) found, in a randomized study with 81 participants, that digital readers had an "inferior performance on inference-focused items" (p. 2773). Other studies have conflicting findings. For example, Dyson and Haselgrove (2000) found in their study involving 24 university students that digital texts may actually better support rapid

reading in order to acquire concrete knowledge. Both print and digital reading activities are necessary to support developing readers with diverse interests and preferences and differing levels of access to print and digital texts (Loh & Sun, 2019), although their specific roles in literacy acquisition are still being explored. For example, students are more likely to read books recommended by peers, both in traditional printed formats and via technology through social websites such as Goodreads, and although older adolescents read less, they are more likely to read online and electronic articles and texts than younger children (Loh & Sun, 2019).

<u>Affordances</u>

Some studies report that the physical experience of digital reading causes more strain and fatigue than reading printed materials (Johnston & Salaz, 2019; Kang et al., 2009), although this is not a universal finding (Siegenthaler et al., 2012). There is considerable research that seeks to understand how to optimize digital reading practices with current technology (Aaltonen et al., 2011; Ben-Yehudah & Eshet-Alkalai, 2014; Bus et al., 2015; Dalton & Proctor, 2007; Ross et al., 2017; Thoms & Poole, 2017). Many print texts are available in traditional bound manuscript, or codex form, which is well-suited for holding, bookmarking, and viewing. Digital texts can be accessed and viewed on a variety of devices, including a desktop or mobile computer, a tablet, a smartphone, or an e-reader, and each of these provides a different experience for the reader (Flatworld Solutions, 2020). One commonly-expressed concern regarding digital reading is that ergonomically, many computers are a poor substitute for the codex form and can be uncomfortable to view, but digital texts can be viewed on an e-reader device approximately the same size and weight as a book (Merga, 2015). Specialized e-reader

devices produce high quality rendering of text that more closely simulates the experience of reading printed materials (Siegenthaler et al., 2012). Additionally, many readers tend to report a preference for either print or digital texts, often dependent upon the genre or length of the text (Annand, 2008; Buzzetto-More et al., 2007; Chang & Ley, 2006; Cull, 2011; Hassaskhah et al., 2014; Taipale, 2014).

<u>Constraints</u>

Many studies report that distracting digital affordances such as hypertext and text scrolling are to blame for shallower reading and a resulting comprehension loss (Dobler, 2015; Hillesund, 2010; Rose, 2011; Shapiro & Niederhauser, 2004), but other studies report that users with more digital text experience are better able to navigate digital texts than those relatively new to the form (Baek & Monaghan, 2013; Fesel et al., 2018; Kaman & Ertem, 2018). Some see value in texts that can be marked up and annotated by using pencils, highlighters, and sticky notes, while others see value in digital highlighters, hypertext access to dictionaries, adjustable font sizes, and search features available for digital texts (Ben-Yehudah & Eshet-Alkalai, 2014; Dalton & Proctor, 2007). According to Dalton and Proctor (2007), "the flexibility of digital text makes it possible to redefine the concept of readability by manipulating the access supports," which provides tools that allow students to focus on the text, even when they might otherwise be having related difficulties (p. 425). Certainly, these features can be beneficial to the readers of digital texts (Larson, 2010), but they can also be distracting and have been blamed for a superficial level of reading, and they also require additional teaching support (Burrell & Trushell, 1997; Mangen et al., 2013; Sutherland-Smith, 2002). Studies with younger students, some of whom have reading difficulties, indicate that readers can benefit from

affordances such as the in-text availability of definitions and pronunciations of words available in the text, although readers can also be distracted by an overabundance of such options (Dalton & Proctor, 2007; Dillon, 1992).

Definitions

The essential components of reading that are the focus of this study are the reader, the text, and the nature of the relationship between the two. Nonessential elements of this reading experience that vary are things such as the presence or absence of a desk, the digital or print nature of the text, and reading comprehension measurements. Print reading refers to an engagement with text that is read and held in a traditional printed medium, typically in book or magazine formats, while digital reading refers to an engagement with text that is reproduced digitally and read on a screen, often a computer or a mobile device such as a phone. Digital texts are most commonly read on a device such as a computer or a mobile phone, backlit devices that are navigated either with a touch screen or with a mouse/trackpad. Digital texts can also be read on a dedicated reader such as a Kindle; these devices more closely resemble the experience of reading a printed book but are less common. The purpose of the reading task, either academic or personal, is also an important aspect of the reading experience. For the purposes of this study, the format of the text is an essential element of the reading experience, and the definition of reading is an engagement with text; this definition includes both printed and digital texts but excludes audiobooks. The participants of this study generally defined reading as happening only when there was a text present in front of the reader, although some students mentioned listening to audiobooks without a physical copy of the text,

although the thinking and dreaming that happens during and after reading may also be part of the reading experience.

Readers of digital and print texts have different lived experiences, and this dissertation makes the case that their experiences provide valuable insight for educators and others. In today's digital climate, sometimes readers can choose whether to read the print or the digital text, and other times readers are assigned a specific medium, such as with typical classroom reading assignments. When the ability to obtain printed texts is a challenge, such as in remote areas of the developing world or during a global pandemic, sometimes digital texts are the only choice. Students should be supported in developing habits and strategies so as to best enhance their reading experiences with both digital and print texts in a variety of genres and for different purposes.

<u>Nuance</u>

Nuance is important, both in reading and in the study of reading and experiences. For the purposes of this study, reading is an activity that involves making meaning from text, but there are many different types of reading experiences. Readers read differently for different purposes, and materials of different lengths or genres, or presented in a different format, are experienced differently. According to Just and Carpenter (1980), "Reading varies as a function of who is reading, what they are reading, and why they are reading it" (350). Students do not experience classic texts the same way that they might read a graphic novel or even another type of academic text, and a document read on a screen in a crowded classroom is experienced differently than a weighty novel read in a soft chair in a quiet room.

The type of device used in reading digital text also has a significant impact on the experience of reading. Kindles and other dedicated e-readers provide an experience that is more similar to reading a printed book; the device is approximately the same weight and size, and easy to hold in one hand. Computers and laptops, on the other hand, are a very different tactile experience. I have seen students change the display settings of their Chromebook so that the text displays in a portrait format and then prop the Chromebook sideways on their desk to read. That would appear to be a suboptimal reading experience, especially when compared to other experiences of being curled in a chair or stretched out on a couch. Reading on a desktop device generally requires sitting upright in a chair, and laptops are too heavy to read comfortably in a lounging position.

The text presentation is also an important factor in the reading experience. A text in pdf format that provides an electronic image of the text, websites, novels, encyclopedias, and Kindle books are each unique in their presentation and formatting, and these differences are part of the larger reading experience. A pdf is typically a reproduction of a printed version of the text and may be most useful for applications in which the pagination is critical, such as for research texts, while a Kindle book may provide a reading experience more similar to that of a narrative book. Websites often contain distinctive formatting and layouts, such as hyperlinks and sidebars, and in the earlier days of research about online reading, these features were perceived as distracting (Burrell & Trushell, 1997; Mangen, 2008; Wolf et al., 2009). Informational text such as encyclopedias may contain images and other types of formatting that are not often present in narrative text such as novels and short stories.

For the purposes of this study, all of these types of reading material and devices were included in the initial parameters except for multimedia and audio content and no judgment was made regarding quality of length. However, students nearly always spoke of novels, academic texts, and articles, and they nearly always read them in book form, on their phone, or on a computer. Additionally, despite the pressures of assessment scores and any relationship between an enjoyment of reading and scores on reading assessments, students were asked to think only about their reading experiences without any consideration of scores on standardized tests.

Purpose of Study

The purpose of this study is to examine how adolescent readers experience digital texts and to determine how that experience is different from or similar to their experience with printed texts. This study focuses on the lived experiences of adolescent readers in different types of everyday reading tasks (e.g., reading essays or stories for school, reading a novel for pleasure), including immersive reading, which is any reading experience which engages multiple senses and fully absorbs the attention of the reader..

Reading is an experiential activity, and this study explores the lived experience. This study seeks to explore both the reader's experience and attitude toward the reading experience, and how that "reflects the process by which we gain" further, often vicarious forms of "experience" (Iser, 1972, p. 295). Important phenomenological studies in the experience of reading print books have been undertaken in the field of literary criticism and elsewhere. Readers describe how the book disappears when they read, becomes part of their own existence. As Poulet (1969) puts it, "the book is no longer a material reality. It … become[s] a series of words, of images, of ideas which in their turn begin to exist

… [in] my innermost self" (p. 54; see also: Rose, 2011). Given that reading print text can be such a personal experience, how do digital texts alter that experience? Is it a less private experience? Is there some "essential" dimension to reading or being a reader that is unchanged by the medium through which this reading occurs? The purpose of this study is to investigate and reflect upon the experience of digital and print reading with the aim of allowing educators and others to identify common structures of experience and support adolescent readers. Phenomenological investigation also produces results, ones that can also be used to enrich the educational practice of others, including teachers and others who work with adolescent readers. This study seeks to illuminate the experience of digital and print text reading so as to provide depth and nuance to the understanding of this key educational phenomenon.

Chapter Summary

Because reading and texts are important facets of our culture, it is important to understand the background and history of reading as well as current reading practices. Contemporary digital texts are both similar to and different from traditional printed and bound texts, and an in-depth understanding of how adolescents experience these similarities and differences is germane for those who wish to support adolescent readers. Although reading and reading practices are well-studied, there is often a focus on comprehension and assessment. In order for educators and others to make informed decisions about how to help adolescents engage productively with the various text types that they experience, this study provides depth of understanding about the experiences of a small number of individuals.

The experiences of this small sample of students are not meant to generalize to other populations, but instead to provide insight about the lifeworld of these adolescents and others like them and provide a rich account of their reading experiences. The small sample and personal style of data collection allow for an in-depth interpretivist examination and thick description of adolescent reading experiences so as to support those who work with similar developing readers. Educators, parents, and families who work with young people can gain valuable insight into adolescent reading behaviors.

CHAPTER TWO: LITERATURE REVIEW

In order to understand the context of this experiential study, some background information on the importance of reading, text affordances and cognitive issues, contemporary literacy, and prior phenomenological studies of reading is germane. As an ordinary activity practiced both in education and in everyday life, it is easy to overlook the importance of reading, especially for adolescents. As a cultural activity, the practice of reading has changed as society has changed, shifting and changing as digital technology has become more common (Liu, 2005).

Today, young readers are more likely to be exposed to different forms of media, including social media and online videos (Clark & Teravainen-Goff, 2020). These different forms of media influence and are influenced by contemporary literacy practices (Gee, 2010). This chapter explores the importance of reading, the history of reading, the sociocultural nature of literacy, the artifacts and affordances available to readers, the cognitive load required of reading, both contemporary and digital literacy, and current studies of reading experiences. The information is organized so that readers gain background knowledge about the significance of reading and information about how reading is processed and experienced by readers before moving into studies of both print and digital literacy, as well as phenomenological studies of reading experiences.

A wide range of studies have looked at how print and digital media affect reading comprehension, often by administering reading comprehension assessments to a sample of university students (Ackerman & Goldsmith, 2008; Ben-Yedudah & Eshet-Alkalai,

2014; Hassaskhah et al., 2014). Other studies focus on the reading experiences of children, but often these studies are still based on short reading comprehension assessments and do not examine the reading experience itself (Chen & Chen, 2014; Coiro & Dobler, 2007; Fesel et al., 2018). Finally, an examination of prior phenomenological studies illustrates the different approaches that have been taken to explore the experiential worlds of readers and the gaps in the literature, demonstrating a need for further research in this area (Evans, 2017; Iser, 1972; Hunsberger, 1982; Mangen, 2010; Poulet, 1969; Rose, 2011; Rowsell, 2014).

Importance

Reading is a cultural activity which both causes and reflects changes in the larger culture (Cull, 2011; Gee, 2010). For instance, in medieval times the literacy rate was around 20% (Eskelson, 2021), reflecting the values of a primarily oral society in which reading and writing had little value. Since the last part of the seventeenth century, in Western society reading has assumed a growing societal importance which has accompanied an increase in both global trade and the accessibility of books. The increase in literacy has also been accompanied by economic progress and the expansion of vocational training and higher education (Eskelson, 2021). Books became less expensive and more common, leading to higher literacy rates and a more educated workforce (Eskelson, 2021). As reading practices shift in response to changing technologies, educators and families must also adapt how they support readers of all ages.

According to current research, children and teens are reading less than ever before (Ducharme, 2018; Ferguson, 2020; Clark & Teravainen-Goff, 2020; Twenge et al., 2019) and overall literacy is declining among young people (Clark & Teravainen-Goff, 2020;

Rideout & Robb, 2019). According to the Kids and Family Reading Report (Scholastic, 2019), the biggest drop in reading frequency occurs in the third grade, with only 35% of nine-year olds reading frequently compared to 57% of eight-year olds. This same research shows that when they *do* read, young people prefer doing extended reading in print and that comprehension is higher using this medium than with screen-based technologies (Baron, 2015; Berglund et al., 2004; Duncan et al., 2016; Evans, 2017; Clark & Teravainen-Goff, 2020; Loh & Sun, 2019; Monk & Remenyi, 2004). A minority of teens are regular readers (Rideout & Robb, 2019; Ducharme, 2018; Ferguson, 2020; Hillesund, 2010), and teens who read prefer printed texts (Clark & Teravainen-Goff, 2020; Loh & Sun, 2019).

Social media and web browsing often consist of reading and composing short texts, but engagement with extended texts is shown to be necessary for developing literacy skills (Duncan et al., 2016, p. 209; Liu, 2012). In their study of 1,230 British students between the ages of 12 and 18, Duncan and colleagues (2016) found that older students spend more time reading shorter texts, such as magazine articles, social media, and web pages, than longer texts such as books. The availability of digital texts, as well as contemporary demands on young people's time, have contributed to a decline in engaged reading commonly seen with extended texts. Young people are consuming more digital materials than ever before, partly because these texts tend to be shorter and readily available, but time spent reading textbooks and extended fiction books in printed form, was identified as the strongest predictor of reading comprehension (Duncan et al., 2016, p. 17, 22). However, as already indicated, students who said that they do not enjoy reading are more likely to read shorter texts such as those prevalent in social media (Loh

& Sun, 2016, p. 676). This may be the case because digital texts are easily accessible and readily available, but they also invite distractions which may impact the ability to comprehend the material (Wolf et al., 2009).

Many researchers argue that digital text experiences provide for a more distracting experience than comparable experiences with traditional printed books (Baron, 2015; Evans, 2017; Purcell et al., 2012). A multitude of digital buttons, links, and choices, in addition to distractions related to the reading device and its online capabilities, can make readers of digital texts feel as if they spend more time skimming and as if they are "distracted more easily" while reading digital texts (Dobler, 2015). A lack of sustained attention can also result in a dearth of the deep processing necessary to engage with extended reading tasks (Baron, 2017; Fingal, 2020; Hillesund, 2010; Liu, 2005; Shapiro & Niederhauser, 2004). For instance, students reading digital texts spend less time on digital reading tasks and make fewer marks in digital texts (Baron, 2017). They also read online text more quickly (Fingal, 2020) and spend more time browsing and scanning and less time in concentrated reading (Liu, 2005). Additionally, students tend to overestimate their ability to multitask and frequently engage in other digital activities such as reading social media or checking notifications while reading digital texts, preventing them from a full comprehension of the text (Duncan et al., 2012; Taneja et al., 2015).

More research is needed in this area to explore the experience of reading for adolescent readers, especially the conditions specific to extended text experiences which correlate positively with both reading ability and the amount of time that teens spend reading. If educators and others are to nurture both love of reading and a habit of reading,

especially long-form texts, it is important to understand how young readers become engaged in sustained reading of such texts and how those positive experiences can be sustained and enhanced.

History

The book, as a way of "containing" and circulating text, has reigned supreme in Western culture from the Middle Ages at least to sometime in the 20th century (Fischer, 2004). The advent of printing made it possible to obtain relatively inexpensive copies of texts, and both reading and writing became more common, even outside of the worlds of the church and academia (Fischer, 2004, pp. 107-109). Literacy became a valuable skill for advancing in the new economies of the last two hundred years. In fact, the Industrial Revolution was a turning point for global literacy; it was a "direct result of literacy: that is, of reading" and established a "literary revolution" (Fischer, 2004, p. 255). By the end of the nineteenth century, many European countries had achieved close to universal literacy (Fischer, 2004).

Just as the book and popular literacy have a history, one that spans centuries, the development of digital reading also has a history, albeit one confined largely to the last 50 years or so. According to Freiberger and Swaine (1984), the mass-produced personal computer became available in the late 1970s, making it possible for readers both to compose and to read texts on digital displays. The unwieldy nature of early electronic devices made it unlikely, however, that a significant number of readers would accept early digital texts (Fischer, 2004; Nielsen, 2010). When the Internet became more widely available in the early 1990s (Leiner et al., 2009), more people were able to take advantage of online reading opportunities, but Internet access was still somewhat limited

and readers were unlikely to have a personal electronic reading device. With the advent of affordable and portable tablets such as Apple's iPad in 2010 (Gregersen, 2021), increased access to Internet-connected devices such as smartphones (Smith, 2013), and the rising popularity of social media platforms (Flew, 2017), digital reading became commonplace. Such use extends to children and youth, and today's adolescents have increasingly been exposed to a variety of digital texts from a young age.

Digital texts are both like and unlike print texts: they can in theory convey the same material and information, but in practice, the changes in format and presentation both add to and detract from the reading experience. In sum, digital technology and digital texts are relatively new, but they are making a difference in how reading is experienced. Historically, printed texts have undergone many changes and the experience also appears to have changed, albeit slowly. Because of rapid technological changes and the fact that digital technologies can be experienced in so many different ways, it is important for educators to know how best to support young readers as they navigate both print and digital reading for themselves.

Today's educational model focuses on performance, including assessment scores. Students and teachers are evaluated based on regularly administered assessments, including comprehension tests, and this surely impacts the ways in which students and teachers think about reading. In fact, for students, digital reading tasks are often associated with reading assessments (Ackerman & Goldsmith, 2008; Ben-Yehudah & Eshet-Alkalai, 2014; Christ et al., 2019; Coiro & Dobler, 2007; Hassaskhah et al., 2014; Schugar et al., 2011).

Context

The context of this study is one in which adolescent reading is highly politicized. Politicians and the general public frequently express opinions about standardized assessments and assessment scores (Allington, 2002) and assigned reading material (Bowers, 1982), and there are ever-changing guidelines for effective literacy instruction in US public schools in the US (Au, 1997). In many areas, school districts, administrators, and teachers are either rewarded or punished based on assessment scores (Mehrens, 2002). Students are caught in the middle, and often their own motivations for reading are the last to be considered. When educators consider their own reading instruction practices, they may not perceive the relationship between the love of personal reading and test scores, between positive reading experiences and academic reading achievement (Edmondson & Shannon, 2002). Teachers may not have enough classroom time for recreational reading, or it may be prohibited by school or district policites (Edmondson & Shannon, 2002). Additionally, educators may be relying upon earlier research, such as early studies that found that hypertext was distracting (Rouet et al., 1996) and that digital texts were inherently inferior (Dillon, 1992), and they may not know how to support adolescent readers in reading both print and digital texts.

According to James Gee (2010), literature can be read differently for different purposes. Readers, especially ones lacking family and school support for personal reading, may be discouraged by the uncomfortable or difficult reading experiences presented in school (Francis & Hallam, 2000). A Shakespeare text does not present the same reading experience as a graphic novel, but especially in secondary school, students may be required to read the former without being exposed to more approachable texts

(Creel, 2015). Although test makers acknowledge that academic genres can be more challenging to comprehend (McNamara et al., 2012) and less engaging, standardized reading assessments fail to take into account the reading weaknesses and strengths of a diverse adolescent population (Gee, 2010). Context is important for developing readers, but these assessments are only designed to assess current skill level, not to create a future positive relationship with reading.

Literacy

Literacy is sociocultural in nature, and literacy experts emphasize that reading practices should be explored from a contextualized, experiential standpoint (Gee, 2010). The move from orality to a culture of reading and writing is accompanied by significant cultural changes that tend to orient cultural values around written artifacts rather than oral performances (Ong, 2013). Ong speculates that the current trend towards digital media production and consumption is precipitating a similar shift from textual media to multimedia combinations. He famously describes this in terms of "secondary orality," as a renewed emphasis on acts and performances of communication rather than on communicative artifacts (p. 11). However, whether this shift can today be traced in the myriad performances and multimedia "distractions" shared on YouTube, TikTok and other multi-media providers remains beyond the scope of this study, but it may be involved in making digital readers less engaged, thus lowering comprehension.

From a socio-economic perspective, literacy is likely to accompany low unemployment, higher earnings, positive health outcomes, and greater participation in society overall (Cull, 2011). It therefore stands to reason that expanding opportunities to read by increasing engagement with digital text may result in improvements in these and

other areas. In general, those who lack literacy skills experience fewer societal rewards (Stanovich & Cunningham, 1992). In order to ensure that all citizens have access to the same opportunities, students should be encouraged to engage with both print and digital texts and develop their abilities to read and process various forms of communication.

Both literacy and access to current news and events are key for full participation in contemporary society. News stories that in recent years were read in printed newspapers are now more likely to be read online and on social media websites (Newman et al., 2015). In a Reuters study of global media trends based on a sample of more than 50,000 individuals, young people, in particular, indicated that they are much more likely to access the news online (64%) than in print (6%) (Newman et al., 2015). Digital texts can be used to share up-to-the-minute information or news with readers internationally (Boone & Higgins, 2003), and exposure to different news sources and formats is necessary to ensure that all citizens can effectively participate both in their communities and globally.

Barton and Lee (2013) state that technology and innovation have radically affected all areas of life, including language. Written language is constantly evolving in today's digital environment (e.g. via new abbreviations and emoticons) and contemporary young people are involved in a variety of reading activities which may be more or less effective at supporting literacy development. These activities are relevant to contemporary practices, and some sources show that these activities are connected to success with traditional definitions of literacy.

Digital Literacy

Research has begun to show that experience with digital tools and texts improves skills commonly referred to as digital literacy as well as the reading experience (Eshet-Alkalai & Chajut, 2010; Ross et al., 2017). According to Eshet-Alkali and Amichai-Hamburger (2004), digital literacy "includes a large variety of complex skills such as cognitive, motoric, sociological, and emotional that users need to have in order to use digital environments effectively" (p. 421). Digital literacy is also a set of skills that involves processing materials in complex ways, and readers of both print and digital texts must be critical and analytical throughout the reading task (Aviram & Eshet-Alkalai, 2006; Eshet-Alkalai, 2004). Readers of digital texts must be able to read and construct knowledge from graphic materials and nonlinear, hyperlinked texts; content and image conventions tend to differ between print and digital formats. Additionally, digital texts often raise questions of the origin or provenance of the information provided; print texts are likely to have gone through an extensive editing and publishing process which gives more credibility to the claims and data presented. Digital texts are likely to require additional evaluation and analysis skills to determine both relevance and validity (Eshet-Alkalai & Geri, 2007), which can be difficult for less experienced readers.

Digital literacy can be interpreted as a kind of information literacy, another valuable skill that is needed to participate in modern society (Saranto & Hovenga, 2004). Reading tasks which appear to be engaging and simplistic may require digital literacy skills that younger readers may not have mastered yet, and some readers may be easily misled by biased or false information online. Readers who are less familiar with digital texts are likely to find themselves at a disadvantage when they are undergoing the

processes of becoming and remaining literate both in specific subject areas and in the larger society (Cull, 2011).

Artifacts & Affordances

Much research has been done in the area of the affordances involved in reading, both print and digital, but many of the studies seem to prematurely conclude either that the affordances of digital texts are inferior or superior to those of printed texts (Ben-Yehudah & Eshet-Alkalai, 2014; Burke & Rowsell, 2008; Chen & Chen, 2014; Christ et al., 2019; Dalton & Proctor, 2007; Dalton & Proctor, 2008; Taipale, 2014). Affordances include material and functional characteristics of books versus digital texts that can support readers in various ways. Other studies conclude that print and digital reading experiences are similar and that observed differences may reflect user's familiarity with the device and digital and print texts (Taipale, 2014). One study of observed reading behavior demonstrated that readers read at a similar rate on a tablet, e-ink device, or print book (Siegenthaler et al., 2012). For this study, researchers used eye-tracking devices to measure reading speeds of twelve young adult participants, and it was found that with slight variations, reading rates were similar across devices, with e-ink devices showing more similar results to paper books than tablets (Siegenthaler et al., 2012). While reading speeds are often similar across media, there are also other differences that may impact the reader's experience with the different texts.

As both a tactile and sensory experience, engagement with printed books is different: their texture, smell, and weight, and other qualities are valued by bibliophiles and young readers. Books today are commonly printed on paper, which can be folded, torn, written upon, highlighted, or otherwise altered. Paper has very specific qualities

which can make it ideal as a medium for text, although some paper may degrade over time, thus destroying the text and any record left by a reader. Paper is often inexpensive, and it can be written upon with various tools. However, paper texts are also vulnerable to flame, pests, and water, and they suffer from deterioration with use and the passage of time (Barrow & Sproull, 1959).

Digital texts have their own qualities that can affect a reader's experience. Digital texts do not benefit from the acquisition of an age-related patina or odor, but e-books and e-readers offer some physical conveniences for readers. E-readers can be both lightweight and portable, unlike the textbooks and sizable reference works that they increasingly replace (Aaltonen et al., 2011). E-readers can store and display reference materials such as encyclopedias, in addition to digital textbooks and other reading materials (Heider et al., 2009). Digital books are also searchable, allowing for a kind of reading that is able to quickly identify relevant passages, or glean from a work an impression of its treatment of a given topic or term, no matter how obscure. E-books can be both downloaded and shared wirelessly via the Internet, which is of particular value to travelers and distance learning teachers or students (Aaltonen et al., 2011).

Annotation tools are available to readers of both print and digital texts. Readers who are accustomed to being able to highlight and mark up a paper book by hand can benefit from annotation tools offered by e-readers and software (Taipale, 2014). Traditional annotation tools such as pens, pencils, highlighters, and sticky notes have long been used along with other active reading strategies, and similar tools are available for readers of digital texts (Thoms & Poole, 2017). Readers can use a variety of tools to mark digital texts, including specialized pens or styli and keyboards (Schilit et al., 1998).

Overall, print and digital affordances are marked by differences and represent trade offs to readers. Each of the formats has a unique set of affordances to support readers. The physical artifact, however, is very different. Printed texts are often in the form of a book, a vessel which readers are accustomed to and which offers a tactile experience. Digital texts are often read on devices such as mobile phones or computers, backlit devices which do not necessarily inspire readers to curl up and immerse themselves.

Comprehension

Literacy is one of the most heavily studied concepts in education, with differences in application at every level from kindergarten through university. Numerous studies of print- and digital-text literacy show that factors such as age or experience with digital platforms are significant when comparing print and digital reading performance (Ben-Yehudah & Eshet-Alkalai, 2014; Eshet-Alkalai & Chajut, 2010; Eshet-Alkailai & Geri, 2007).

Research shows that reading using electronic devices is a distinct experience, dissimilar in many ways to print reading (Mangen & Kuiken, 2014). Readers can have difficulty remembering the chronology of narratives or have difficulty becoming immersed in a text, perhaps related to the lack of tactile and sensory feedback from the text itself (Mangen & Kuiken, 2014; Mangen et al., 2013; Mangen et al., 2019). In one study, 72 tenth grade students in Norway were assigned to read either print or digital versions of short stories, and students randomly assigned to read the print version "scored significantly better on the reading comprehension test" (Mangen et al., 2013, p. 61). A dissonance between the text itself and the physical container, such as an e-reader or

computer, can be responsible for a feeling of dislocation felt by readers of digital texts. Readers are physically separated from their texts by keyboards or mice, unable to directly experience the tactile sensation of a book, or physically turn pages (Mangen, 2008).

A lack of deep engagement may be responsible for a difference in comprehension observed between readers of digital texts and readers of print texts. Students are more likely to multitask while reading digital texts. In a survey which sampled more than 400 university students, Baron (2017) found that digital texts were more distracting and that concentration was more difficult than with print. Digital texts are both filled with multimedia sources of information and sources of endless diversion. In addition to links, embedded videos, and multimedia, digital readers can be distracted by software options. menus, and notifications, as well as the hardware itself and a multitude of interface options such as keyboards, mice, and buttons. Distracted readers may be less likely to be able to recall details from a reading selection or may recall specific aspects of the reading task incorrectly.

In their study involving adult students, Hassaskhah and colleagues (2014) found that reading comprehension is higher when reading printed materials than when reading online, and another study showed that teens who read printed materials regularly are more skilled at comprehension (Duncan et al., 2016). One Singapore study found that secondary students ages 12 to 16 even enjoy the tactile experience of holding and turning the pages of printed books (Loh & Sun, 2016). This general preference for printed books is corroborated by studies of youth in undergraduate and other educational programs: students who enjoy reading read more, and printed books are associated with a more

pleasurable experience, especially for sustained reading (Baron, 2015; Evans, 2017; Sun, 2014).

In another study, Ben-Yehudah and Eshet-Alkalai (2014) studied 93 undergraduate students in Israel who had been given academic texts in either print or digital format. Participants were given a demographic questionnaire, a baseline text comprehension test, and a text-comprehension task, and researchers concluded that participants who read printed texts had better comprehension.

Other studies, such as Chen and Chen's (2014) quasi-experimental study of 53 Grade 5 students in Taiwan, found little or no comprehension difference between print and digital reading formats. Chen and Chen (2014) found that the use of reading strategies improved both direct and inferential comprehension and that the comprehension gap observed in earlier studies (Carr, 2010; Liu, 2005) could be narrowed or eliminated with the use of approaches such as online collaborative reading.

In addition to readers gaining more familiarity with digital texts, these types of texts are also becoming more user-friendly, which likely affects the ability of readers to comprehend them. In 1992, Dillon found that electronic texts were awkward to navigate, but later, Dalton and Proctor (2007, 2008) found that digital texts can support struggling readers and diverse learners. Other studies have found that comprehension is similar between the two formats, or even superior for digital reading tasks (Ackerman & Goldsmith, 2008, 2011; Chen & Chen, 2014; Eshet-Alkalai & Geri, 2007; Fesel et al., 2018; Schugar et al., 2011).

Some studies found that differences in comprehension between print and digital materials can be overcome with various strategies, including having more experience

with the task or the reading device (Lauterman & Ackerman, 2013). Lauterman and Ackerman (2013) provided a variety of texts to 80 undergraduate students to measure the effectiveness of digital texts for reading comprehension, and they found that as students gained familiarity with the process of digital reading, their performance on comprehension tests improved. Learning how to operate a device or navigate an unfamiliar reading task while simultaneously trying to learn new content adds to the cognitive load of the reading task, which can negatively impact comprehension and reading performance (Noyes & Garland, 2008; Ross et al., 2017). Less experienced digital readers also benefit from explicit instruction about how to navigate and process digital texts (Azevedo & Jacobson, 2008).

In their study of 80 Israeli eleventh grade and third year college students, Eshet-Alkalai and Geri (2007) found that differences in comprehension between print and digital reading varied with age and academic context. Subjects assigned to read print and digital formats of news items scored similarly when asked to identify elements of the text or summarize the article, but when participants were grouped separately by age, the results showed that high school readers scored significantly better when reading a digital version of the text, while college students performed better when reading the print format. As stated before, it may be that readers who have experience with a particular reading technology are more likely to be able to benefit from its use, while inexperienced readers or users of a particular technology are more likely to be distracted and unfocused. More research is needed in this area to study how accumulated experience using a particular reading technology affects the reading experience in the present.

Cognitive Load

There is some evidence to suggest that digital texts are read and processed differently than printed texts, possibly because of different types of text structures or the differing cognitive load required of a reader navigating a digital text (Coiro & Dobler, 2007; Cull, 2011). For example, Coiro and Dobler's (2007) qualitative study of 11 sixth-grade students revealed that online texts required students to employ comprehension strategies that they did not use when they read print texts, including more complex inferential skills. Readers of online texts, in particular, are more likely to spend time clicking and scrolling than readers of print texts (Coiro & Dobler, 2007). Text scrolling increases the cognitive load of a reading task and disrupts natural reading eye movements, thereby placing a greater demand on a reader's ability to remember and recall during the reading process (Shapiro & Niederhauser, 2004). Coiro and Dobler (2007) concluded that online texts required "a process of self-directed text construction that may explain the additional complexities of online reading comprehension" (p. 215).

Readers may prefer reading different types of texts in either printed or digital form, indicating an awareness of processing differences and illustrating an aspect of how readers can benefit from the ability to self-regulate their reading experience (Martinez et al., 2019). Shorter texts and news materials are likely to be preferred in digital form, perhaps to accommodate a rapid news cycle in which text must be rapidly disseminated before it is no longer relevant (Taipale, 2014). Longer texts are preferred in a print version (Taipale, 2014), perhaps because of potential screen fatigue or the limited amount of text that can be displayed simultaneously on a digital screen. There is also evidence that digital technology can impair brain function and have other negative effects such as

technology addiction that may present additional challenges to readers of digital texts (Small et al., 2020). In addition, symptoms such as obesity and headaches have been linked to digital media and screens, and there may be "a negative impact on [children's] physical, social, and cognitive developments" (Alyoubi et al., 2020, p. 85).

The distractions, navigation challenges, and evaluation tasks in digital environments are associated with greater cognitive load and may result in readers preferring print texts (Eshet-Alkalai & Geri, 2007; Fesel et al., 2018; Noyes & Garland, 2008; Wolf et al., 2009). Digital reading requires a different skill set in terms of navigation, as well as opening up possibilities for distractions that can be disruptive to the reading process, and readers who have limited experience with digital reading may be less likely to read with facility.

Other researchers are investigating whether or not digital texts are equivalent to printed texts for academic assessment purposes (Noyes & Garland, 2008). Because digital versions of assessments can be more easily and rapidly administered, evaluated, and revised, it may make sense to undertake assessments in this form. In one study that used a multiple-choice assessment to measure reading differences between print and digital texts, readers who were given more structured experiences in terms of having a fixed amount of time scored similarly in digital and print formats, but readers who were given less structure and had unlimited time performed more poorly when reading on-screen than participants who read printed texts (Ackerman & Goldsmith, 2011). Seventy adult Hebrew-speaking undergraduates participated in the study, which concluded that readers of digital texts were unable to effectively self-regulate their use of the amount of reading time needed when compared to readers of printed texts. Participants were given

texts to read on either LCD and CRT displays or printed versions, as well as annotation tools that could be used to mark the texts. Readers scored similarly on comprehension items when given a limited amount of time, seven minutes, in which to read and mark each text. When readers were able to manage their own study time within a larger 90 minute window of time, reading comprehension performance was lower for readers of digital texts. Digital readers were more likely to mark their texts than print readers, but the frequency of annotations did not correlate with the study media. Ackerman and Goldsmith (2011) concluded that in the context of assessments, reading on-screen could be equivalent to reading printed texts, but that self-regulation of study time negatively affected the performance of readers of digital texts.

Reading Experiences

Phenomenological studies can provide qualitative and situated insight regarding reading experiences that can be beneficial to educational researchers and practitioners. Although quantitative research may tell us about reader comprehension levels, cognitive load and physical affordances, only qualitative investigations offer context needed to understand reading experiences as pleasurable and desirable or as difficult and distracting. Although phenomenological studies are contextually distinct, their findings can often be made relevant to a broader generality through interpretation. It is important to explore other phenomenological studies to situate the current study and its findings, and also to look for patterns and commonalities among readers and their experiences.

Foundational Studies

There are a relatively small number of phenomenological accounts that explore and describe reading experiences, but literary critics Poulet (1969) and Iser (1972)

provide landmark studies of the experience of engaging with print text. They do not focus so much on empirical data gathering, but convincingly describe the process of absorption in print texts as a kind of merging of author and reader. Each of these accounts provides a phenomenological description of physical and mental experiences of reading, and thus provide a foundation for the study reported on in this dissertation.

Poulet (1969) discussed the experiences of both books and reading, asserting that books only take on their full existence in and through the reader. Text, according to Poulet (1969), consists of artifacts and signs exterior to the reader, but the process of reading brings these into our own realm of experience. "A book … asks nothing better than to exist outside itself, or to let you exist in it. … I not only understand but even *feel* what I read … my comprehension becomes intuitive and any feeling proposed to me is immediately assumed by me" (Poulet, 1969, p. 57). The text speaks in and through the reader as the reader becomes immersed in the world of the book.

In Poulet's view, the reader becomes what they are reading. The text displaces the individuality and identity of the reader: "The work lives its own life within me; in a certain sense, it thinks itself, and it even gives itself a meaning within me" (Poulet, 1969, p. 59). Through the text, the author's consciousness is able to communicate directly with the reader, and they "start having a common consciousness" (Poulet, 1969, p. 59). This idea of the reader and author sharing their thoughts and being is important in considering and describing immersive reading as well as in determining how different types of reading affect the reader.

Iser (1972) qualifies Poulet's conclusions about the experience of reading: the text and the consciousness of the author do not entirely over take the awareness and mind of

the reader for Iser. Instead, reader and the text both contribute to something new in a "dynamic process of recreation" (Iser, 1972, p. 293). When the reader is able to control the parameters of the reading experience and make the text part of their own personal experience, "we ourselves … establish the levels of interpretation and switch from one to another" during the process of navigating and understanding the text (Iser, 1972, p. 293). Still, like Poulet, Iser (1972) establishes that the text is absorbed into the reader and also, through a process of interpretation, "the convergence of text and reader brings the literary work into existence" (p. 279). The reader is invited to absorb unfamiliar experiences and become lost in a text: "reading reflects the process by which we gain experience" (Iser, 1972, p. 295). Once read, the text becomes part of the reader and their own lifeworld.

> Text and reader no longer confront each other as object and subject, but instead the "division" takes place within the reader himself. … Every text we read draws a different boundary within our personality, so that the virtual background (the real "me") will take on a different form, according to the theme of the text concerned. (Iser, 1972, pp. 298-299)

These ideas are germane to the current study because they illustrate the relationship between a reader and a text. The relationship is symbiotic; both the reader and the text contribute to the experience.

Hunsberger (1982) examined the experiences of children who encounter academic texts in school, and who he believes may generalize reading difficulties into a general dislike of school and reading. Echoing Poulet and Iser, Hunsberger (1982) emphasizes that reading is a dialogue between reader and text that "requires a certain openness and vulnerability from each participant" (p. 3) and that the curriculum must "invite the child

to enter into a dialogue" (p. 4) with what is read. Active reading, he emphasizes, is a product of a relationship between a reader and a text, and both the reader and the text contribute to the conversation. Although Hunsberger's findings only relate to print text, the necessity of engaging with a text and active reading is still a current issue in literacy studies. Students who do not read for enjoyment are also likely to have difficulty being able to dialogue with a text; they are not able to integrate its images and ideas into their lifeworld.

Hunsberger (1982) and Iser (1972) both emphasize the relationship between a reader and a text, the creation of new knowledge. Hunsberger details experiences with printed curriculum-related reading materials, but with a focus on how such experiences appeared to be most effective when there was a dialogue between the reader and the text. The text must "invite the child to enter into dialogue and hence into learning" (Hunsberger, 1982, p. 4). Iser (1972) described a similar two-way relationship, in which "a literary text must therefore be conceived in such a way that it will engage the reader's imagination" (280). In other words, reading is not a passive experience but an active conversation in which the text and reader "recreate the world it presents" in a "coming together of text and imagination" (Iser, 1972, p. 284).

Educational Research Studies

There are even fewer phenomenological explorations of students' reading experiences in the literature, but much of the existing literature focuses on the experiences of older students. Rose (2011), for example, explores the on-screen reading experiences of university students, describing the limitations of "the windowed page," (p. 519) "glaring in my face all day. … [mirroring] the world around it" and interfering with

the words on the page, "the words I want to read" (p. 520). Screens are encountered as containers which fail to hold the digitized text and are compared unfavorably to a "sensuous" physical page: "I can touch it, smell it and hear it rustling when I turn it" (p. 519). Rose (2011) found that readers implicitly compare digital texts to their printed versions, but the very qualities which make digital texts weightless and impervious to wear and tear also make them resistant to being accessed and inhabited in quite the same way as a physical text. "These texts seem to wear protective shells that make them tamper-proof, preventing me from personalizing or amending them in any way" (Rose, 2011, p. 520). According to Rose (2011), the experience of reading a digital text is akin to skimming over the surface instead of becoming submerged: "I have them, but I cannot own them" (p. 520). The form of a digital text is intangible, not subject to physical ownership or manipulation, while a printed text can be physically entered and handled. Readers can utilize digital texts for the same purposes as printed texts, but their digital form may not invite a reader to become immersed in the same way. Rose's research is pertinent to the current study but because it focuses on the sensuous, tactile nature of the reading experience, characteristics which are important in my study as well.

Evans (2017) presents a rich account of how adolescent students experience printed and digital versions of assigned literature in a classroom setting. Because it parallels both the methodology and topic of the present study (i.e. adolescent reading experiences), it is considered at some length. Evans observed 100 ninth grade students in a large Midwestern high school interacting with both print and digital texts, and she focused her attention on how their experiences reflected the phenomenological existentials of lived space, lived body, lived time, and lived relation. Evans found that

students had different lived experiences of the two formats: for example, students who were assigned digital versions were more likely than print readers to read a text assigned in one class on their iPad in other classes, because their use of the device appeared appropriate to these and other academic contexts. Printed books, which directly advertise their purpose and specialization, were more likely to be experienced in a "calm and comfortable environment" at home, in a pleasant seat or in bed, free of distractions (p. 314). Evans noted that "the places in which [students] read had a significant impact on their experience" (p. 314): the experience of reading a printed text was associated with peace and comfort. Those in "quiet, comfortable spaces seemed to enjoy the printed text more; the format of the text meshed nicely with the space and resulted in a positive experience" (Evans, 2017, p. 314).

Physicality

Students were also affected by the physical experience of reading, through "the ways in which our bodies interact with the world" (Evans, 2017, p. 314). For example, one student said, "I like a print copy of the book because I like to be able to hold a paper book in my hands, and I like to physically turn the page," acknowledging a preference for a tactile experience (Evans, 2017, p. 314). Students reported that they preferred reading print as a lived body experience: "concerns related to comfort and health, such as headaches and eyestrain," were described by students who had previously had a poor experience with digital texts (Evans, 2017, p. 314). Acknowledging a preference for a printed text experience, one student said, "I like a print copy of the book because I like to be able to hold a paper book in my hands, and I like to physically turn the page" (Evans, 2017, p. 314). Students who preferred e-books reported they liked the physical

interactions with the digital texts, noting that they preferred the texture and feel of an

iPad over that of a printed book: "I don't like the texture [of a printed book] and how stiff

it is and how you always have to keep two hands on the book" (Evans, 2017, p. 314,

brackets in original text).

Using devices with touch screens, readers can experience a sensory reading

experience more similar to that of reading printed text and perform actions such as

turning pages or changing font sizes by touching the screen, involving the sense of touch

more than typically associated with reading activities. Of course, reading a printed text

actually involves multiple senses, including the perception of the weight and smell of the

text, but reading is often thought of in purely visual terms. Mangen (2010) posited that

this sensory component of the reading experience may be as critical as the visual element.

This is suggestive of the active reading described by both Iser (1972) and Hunsberger

(1982), when readers become engaged with and drawn into texts. As digital texts become

more common, educators and others will need a better understanding of how readers

experience the differences between digital and print texts so as to better understand how

to support learners.

Lived Time

Evans (2017) also explored how lived time was experienced by the readers in her

study. Readers of digital texts were more likely to experience interruptions to their

experience of lived time than the students who read printed texts, although digital texts

may have been perceived as more convenient: "I was very distracted when I read on

iBooks because it is harder for me to concentrate," one student observed (Evans, 2017, p.

315). Digital devices made for a more distracting reading experience, with intrusions by

notifications, texts, and updates. Referring to the convenience of digital texts for students fitting reading time into their busy academic, athletic, and social lives, Evans concluded that "the spaces themselves were not always appropriate for reading" and that "the students had less successful experiences" with digital texts (p. 314). As already mentioned, students reported that they read digital texts surreptitiously in other classes, but their experiences were shallower, less meaningful. Students also had "memories and fears of technical problems, such as low batteries, glitches, and lost work" that negatively affected digital reading experiences (Evans, 2017, p. 316).

Experience and Inexperience

Students who read printed texts made few comments about the format of the reading, but students who read "the unfamiliar, digital format had a great deal to say about that experience" (Evans, 2017, p. 317). There were students who had more neutral experiences, but those who read digital texts were more likely to express a negative experience. Additionally, Evans felt that her own inexperience with digital texts was also a lived other relationship that negatively impacted the experience for her students: "Although I was excited and open to teaching with the digital text, it was clear to my students that I was also learning with them and that I also experienced frustration with an unfamiliar format" (p. 317). Evans (2017) concluded that more study is necessary, but that offering students a choice of text format and more support in reading digital texts might be helpful.

Contemporary Phenomenology

Similar to Gee (2010), Evans (2017) noted the sociocultural aspects of reading and literacy: student's experiences of reading were affected by the cultural norms and

beliefs of their peers and also by the classroom teacher's perspective. Evans (2017) also noted that the physicality of the reading experience was integral to a student's perception, similar to Loh and Sun's (2019) findings that students preferred the tactile sensation of reading a physical book, especially when reading longer texts. Evans (2017) concluded that experience with the format as well as different contexts for reading influenced the participants' ability of students to be comfortable with print and digital texts. The social element of reading is essential, and like Evans's research, the current study is informed by this awareness of the sociocultural component of literacy (Gee, 2010; Evans, 2017; Loh & Sun, 2019).

Rowsell (2014) employed phenomenology to develop an undertanding of the essence of the reading experience, drawing on observations and interviews with children from Australia, Canada, and the United States nine to fifteen years of age. She focused on the implications of digital reading practices and explored student interactions with various digital texts on iPad tablets. Based on observations of digital reading behaviors, including interactive digital reading practices such as tapping, swiping, changing the font style, or selecting links, Rowsell concluded that social media structures such as Facebook, Instagram, and Twitter, could lead to "a stronger nexus between reading something and responding quickly through writing" (p. 125). Readers are able to read and respond to digital text online, "constructing your own text and phenomenological experience more than traditional linear texts" (Rowsell, 2014, p. 125). According to Iser (1972), reading a print text involves mental acts of co-creation with the author; Rowsell (2014) extends this idea with the observation that online texts involve readers in physical acts of text creation. Rowsell's reasoning is reminiscent of both Iser (1972) and

Hunsberger (1982) in that it draws upon an active relationship between the reader and the text; the reader is not merely drawn into the text, but new knowledge is created when a reader enters a text.

Mangen (2010) also described the phenomenon of young children reading digital materials, with a focus on how those experiences are affecting learning and literacy. In her article about the use of technology, including digital texts, in early childhood education, Mangen (2010) highlighted how reading and learning are both socioculturally situated and phenomenologically embodied (p. 418) and discussed the educational implications of the materiality of digital texts. She concluded that further research is needed about "the potential impact of digital technology on children's learning" to justify the ubiquitous implementation of technology in early learning (Mangen, 2010, p. 415). "There is much ground to be covered and many research questions to be addressed and pursued before we can confidently claim that we are supplying practitioners and politicians with insights from substantial research" (Mangen, 2010, p. 426). This research highlights the need for further exploration of the differences between print and digital reading experiences, especially for young readers.

Phenomenological Tension

Phenomenological studies highlight a tension between the experience of what is read overtaking the subject, of the reader and the text collaboratively creating an experience, and the experience of the text as difficult or alienating–with reading becoming a struggle between attention and distraction. Phenomenological researchers are not entirely in agreement about the relationship between a reader and a text: is the reader pulled into the text; do they create new meaning together; or do the two remain apart and

separate, putting the reader in a position of critical evaluation or even alienation from the text? Rose (2011), for example, describes a digital reading experience as relatively shallow, one in which the reader does not "take ownership" and "hold it in my hands, scribble notes in the margins, underline, highlight, and star important bits" (p. 519). The digital text, which "has no material existence," does not hold the reader's attention the same way as a printed text, where "focus often simply happens without conscious effort" (p. 521). According to Rose (2011), the reader is consistently prevented from immersing themselves in the text, or from becoming one with it.

Evans (2017) also touched upon the immersive experience as being more supported by printed books: students reflected upon the "the satisfying feeling of turning real pages," as well as the comfortable experience of reading a book (pp. 314-315). Mangen and Kuiken (2014) comment on this idea, as well, observing that "how we read is shaped by the technologies with which we read" and that readers of digital texts experience "dislocation within the text and awkwardness in handling their medium" (p. 150). Students reported difficulties related to the digital format that interfered with their experience of the text, such as having difficulty judging the number of pages remaining or being either overwhelmed with or benefitting from screen illumination.

Both print and digital reading experiences have been described as engaging. At times, however, the format of the text appeared to interfere with the process of engagement, and readers were dissatisfied with the digital format. Rowsell (2014), for example, focused on reader's tangible interactions with the screen, such as taps and swipes, and noted that digital texts could be perceived as either engaging or uninteresting, depending upon the nature of the text and the device being used.

Chapter Summary

As shown, studies of comprehension and those comparing outcomes of print or digital text experiences are common, but the literature is divided on the significance of the differences. Phenomenological studies in the era of digital texts are limited, and it is undoubtedly true that print texts offer a deeper and more inviting sensory experience that cannot be duplicated (Mangen, 2008; Mangen et al., 2019), but the research seems to suggest that even when students prefer printed texts, children and adolescents can benefit from experiences with both print and digital formats (Loh & Sun, 2019). As a sociocultural practice, reading experiences are profoundly affected by both the sensory experience itself and the cultural context. Print texts bring together experiences of reading, including visual, tactile, olfactory, and other types of experiences of a particular author or text, that are experienced as generic or interchangeable when read on a device.

As noted by Hunsberger (1982), a reader must be able to locate "the needed silence and gaps" (p. 13) in order to successfully enter a text and engage with its ideas. It may be that only printed texts, with their unique ability to support contemplative long-form reading, have the ability to provide the silence and spaces. The fact that long-form texts are more strongly associated with the printed format is indicative of the relationship between a printed book and an immersive experience. Research suggests that the separation between content and container play a role in maintaining a divide between the reader and a digital text, one that does not exist when a reader becomes immersed in a printed text. This study seeks to more closely examine the relationship between the format of a reading experience, either digital or print, and the quality of that experience for the reader.

CHAPTER THREE: METHOD

This study utilizes a hermeneutic phenomenological design which focuses on and explores the participants' lived experiences in order to better understand how individual readers experience the act of reading. Little research exists that provides depth about how and why adolescent students read outside of an academic setting, especially in terms of how print and digital media might be experienced differently. In order to investigate students' experiences of reading in depth, this study explores first person accounts of reading combined with observational data to provide detail. As previously shown in Chapter 2, current literature provides extensive but often contradictory and inconclusive data about the efficacy of different types of media, and current research frequently focuses on comprehension or some other quantifiable result.

Hermeneutic phenomenological research focuses on "the vivid, concrete, situated, and irreplaceable character of experience" (Friesen & Francis-Poscente, 2008, p. 149). Using this type of research, I utilized the writing process to reflectively analyze the data in multiple cycles in order to accurately uncover the essences of the students' lived experiences (Creswell & Poth, 2017; Giorgi, 1997).

Research Questions

As phenomenological research, this study focuses on particular aspects of the lived experience of individual readers, particularly those involving leisure reading. Through analysis of the experiential accounts of the participants, this study explores the question "What is the experience like?" Utilizing eidetic reduction, which is the process

of organizing experience into patterns, the researcher then seeks to answer, "How do the experiences--specifically print and digital reading--differ?" This phenomenological study seeks to answer the following questions to provide an in-depth of understanding about the reading experiences of adolescents:

- What are adolescent students' experiences of reading print texts?

- What are adolescent students' experiences of reading digital texts?

- How are adolescent students' experiences with digital texts similar to or different from experiences with traditional print texts?

Research Design

To answer the research questions, I will use a qualitative, hermeneutic phenomenological design using interview and observational data. According to Creswell and Poth (2017), "qualitative research is a situated activity that locates the observer in the world" (p. 7). Hermenutic phenomenological research is distinctive from quantitative research and even most qualitative research in that it is more a case of the researcher joining the world of another than of the subject being assimilated to the construct of a study; research is not conducted in an artificial academic environment, but in the everyday world experienced by the research subjects. The researcher makes every effort to access the subject's experienced reality as an observer and listener in order to encounter their perspective and experience of the world. Having gathered multiple experiential perspectives of this kind, the researcher observes patterns and themes, and attempts to interpret the findings from the perspective of the experiencing of the unfolding of time, space, body and relation. Results are analyzed and examined for

shared thematic elements that indicate an underlying commonality below the surface of individual experience.

Qualitative research is based upon foundations of reliability and trustworthiness (Lincoln & Guba, 1985). Trustworthiness is also referred to as credibility, which can be established based on prolonged engagement with the study and its subjects, persistent observation of the phenomenon, and triangulation through the use of different data collection modes (Lincoln & Guba, 1985). Additionally, peer debriefing, whereby the researcher collaborates with a peer, can be used to further ensure credibility (Lincoln & Guba, 1985). A detailed discussion of these techniques can be found below, in the Quality section.

Phenomenology

Hermeneutic phenomenological research is based in a philosophical tradition that emerged in the early 20th century and has since evolved into a research method (Dowling, 2007; Husserl, 2014). According to Merleau-Ponty (2012), phenomenology is "an account of 'lived' space, 'lived' time, and the 'lived' world" as experienced by individuals, and also the commonalities of those experiences (p. lxx). Edmund Husserl is regarded as the father of phenomenology (Dowling, 2007; Groenewald, 2004). Husserl was not interested in the objective existence of things but rather in how an object appears, the perception of the object in consciousness (Groenewald, 2004). As such, phenomenology is concerned with appearance and experience, with the flow and interruption of lived experience, not with objective description of an object or occurrence (Zahavi, 2018).

Intentionality is a key component of the phenomenological research approach; our experience of the world is not objective, but one in which our "perceptions, awareness, and actions are always directed" at something or in some way. We are an active part of the world around us and we co-create our own experiences and meanings in our connection with the world and with others (Friesen, 2021, p. 1). According to Husserl, we perceive "a world of objects with values, a world of goods, a practical world," a lifeworld (as cited in Friesen, 2021, p. l). Our experience and perception always involve "aboutness." They are about something, and thus mean that self and world are always interconnected. This aboutness, this connection, is referred to as intentionality. It does not mean that we "intend" ourselves or something else to be in some way or other in the world. Instead, it refers to the way that our perception and action in the world is always colored, constituted, by the fact that we act, perceive and think within it. Phenomenological research explores conscious physicality and embodied, experiential meanings, such as with a reading or learning experience (Henriksson & Friesen, 2012; Hillesund, 2010).

A phenomenological study "describes the common meaning for several individuals of their lived experiences of a concept or a phenomenon" (Creswell & Poth, 2017, p. 75; Friesen, 2012). Phenomenological research focuses on the commonalities of individual experiences to discover an intersubjective reality. The intersubjective "is a shared reality that is neither predominantly objective *nor* subjective" (Friesen, 2012, p. 41). According to Merleau-Ponty (2012), the intersubjective is the world that we share with others, our shared meanings and experiences, and it both acknowledges and embraces the world as perceived by others. Our ego focuses upon our own personal

experiences, but the intersubjective considers shared experiences and meanings.The intersubjective experience is both individual and collective, an amalgam of shared meaning.

Instead of ignoring or minimizing first-hand subjective experience, phenomenological research relies upon precisely this lifeworld experience (Zahavi, 2018). This type of study stands in opposition to knowledge that is "merely" subjective, in the sense of being arbitrary and capricious (Friesen, 2012). Aspects of reality, perception, and opposites are brought together and contextualized to form new meaning. The researcher attempts to discover the intrinsic nature, or essence, of the experience and the nuances of the participant's lifeworld in order to uncover a larger intersubjective significance (Merleau-Ponty, 2012, p.ixx). The purpose of phenomenological writing is often to explore the relationship between self and world: for the purposes of this study, I explored the personal meanings of digital and print-based reading experiences for students to gain intersubjective knowledge about how young people experience reading.

The focus of this phenomenological study on reading places it next to other phenomenological studies of this activity (Evans, 2017; Hunsberger, 1982; Iser, 1972; Mangen, 2010; Poulet, 1969; Rose, 2011; Rowsell, 2014). Educational research typically focuses on the cognitive processes of reading and reading skills such as decoding and comprehension, as well as reading assessments (e.g. comprehension tests). For example, in their article about the neurobiological foundation of reading comprehension, Landi and colleagues (2013) state, "for accurate reading comprehension, readers must first learn to map letters to their corresponding speech sounds and meaning," (p. 145). In many ways, current research presents a deficit model of reading: "many children who successfully

learn to decode text in early elementary grades begin to struggle in later grades when requirements for reading comprehension become increasingly complex" (McMaster et al., 2015, p. 28).

Although the focus of research about the process of reading is largely based upon studies of comprehension, as mentioned in the above literature review, reading can also be viewed as "a multi-sensory activity, entailing perceptual, cognitive, and motor interactions with whatever is being read" (Mangen, 2008, p. 404). This phenomenological study focuses on how to support readers by examining the experience itself, instead of relying upon traditional external measurements of reading such as comprehension assessments and focusing on what adolescent readers might be lacking.

Hermeneutic Phenomenology

Hermeneutic phenomenology places emphasis on interpretation (van Manen, 2016). The researcher interprets lived experiences through the lens of the participant and attempts to discover the deeper meanings of the experience from that perspective, revealing intersubjectively valid meanings and how those meanings relate to the larger human experience. In order to facilitate this interpretation, the hermeneutic phenomenological researcher utilizes reflexivity and reduction, interconnected parts of the process of phenomenological study explained below, which are explicitly utilized throughout the research and reflection process, often in parallel (Finlay, 2002). In the context of this study, reflective processes were used to promote awareness of adolescent reading experiences that can ultimately inform teaching practice.

<u>Reflexivity</u>

Reflexivity is a process of critical self-examination and of making the researcher's role in the process as transparent as possible (Finlay, 2002). In this study, reflexivity was used to clarify my role in the research process. Reflexivity is about acknowledging the researcher's role as part of the research process, including prior experiences, assumptions, and beliefs. Creswell (2013) defines reflexivity as focusing on the "'presence' of the researchers in the accounts they present," in which the researcher is a "key instrument" in the qualitative research process (p. 45).

Reflexivity is an important way of establishing the quality of phenomenological research, a method "whose qualitative validity and generalizability rest like perhaps no other method on the researcher's and reader's self-awareness and reflexivity" (Friesen, 2021, p. 7). Integrating researcher reflexivity throughout the processes of investigation, writing, and reflection helped to illuminate any preconceived notions that may hamper depth of understanding. Positionality, a statement of the researcher's relationship to the "context and setting of the research," including the ways in which the researcher's identity and experiences intersect with the study, is the principal means of encouraging and practicing researcher reflexivity (Creswell & Poth, 2017, p. 21). As part of the reflexive process, I acknowledged and documented my roles and experiences as a researcher, an instrument, and a reader. Further information about the researcher's role and position in the research process can be found below in the Positionality section and are discussed in relation to the phenomenological reduction, immediately below.

<u>Reduction</u>

Phenomenological reduction, also known as bracketing or the *epoché*, is an attempt to view the experience without the entanglements of preconceptions (Henriksson & Friesen, 2012; van Manen, 2016). I utilized reduction to organize and examine the subjects' experiences, looking for patterns and themes that could be taken to describe an intersubjective reality. There are three principal aspects to phenomenological reduction: skeptical reduction, which seeks to bracket existing scientific and everyday knowledge; the suspension of the natural attitude, "the process of retaining a wonder and openness to the world;" and the eidetic reduction, which seeks to organize the experience into patterns and essences (Finlay, 2008, p.1).

As the bracketing of common informal and academic accounts of the phenomenon, the skeptical reduction requires the researcher to exclude from their interpretations what others have said about reading, and specifically about processes and mechanisms of reading. This reduction should allow the researcher to approach the phenomenon with an open mind, to "focus on the phenomena, on how things appear, on what they mean, and how they matter to us" (Zahavi, 2018, p. 34). A deliberate awareness of commonly held academic beliefs and thoughts regarding reading and literacy allows the researcher to acknowledge and set aside any prior beliefs and thoughts about the phenomenon. As seen in the literature review of the previous chapter, reading is often portrayed as merely a function of comprehension instead of a nuanced experience of enjoyment, immersion, difficulty, distraction and (hopefully, eventually) achievement. This study is more in line with phenomenological accounts such as those by Poulet

(1969), Iser (1972), and Evans (2017), which focus on how individuals experience reading, often in a very physical, embodied manner.

The second type of phenomenological reduction involves the natural attitude, an ordinary and everyday way of being in the world that must be suspended to gain insight into experience in which the researcher goes beyond taken-for-granted understandings. According to Zahavi (2018), "it is by suspending our natural attitude that we discover that there is more to our subjectivity than merely being yet another object in the world" (p. 40). In the context of this study, I must "be aware of past personal experiences relevant to the ongoing experiential encounter or favorite theories leading to comfortable interpretations," but at the same time, I must also ignore "all such temptations and systematically notes and explores the ongoing occurrences as they are unfolding" (Giorgi, 2009, p. 92). In order to accomplish this, I must be deliberate about my participation in the interview experience and my role in "distinguishing the past from the ongoing experience" (Giorgi, 2009, p. 93). My role as an English teacher, as a lifelong and habitual reader, made it necessary for me to consciously differentiate between my own views of reading and reading experiences and those of the students I interviewed.

This study also employs a third type of reduction to compare the reading phenomenon with other phenomena to clarify the necessary or "essential" aspects of the phenomenon being studied. This is known as the *eidetic* reduction, with eidos referring to "essence." Giorgi (2009) describes eidetic reduction as an imaginative procedure in which "a particular object is reduced to its essence" by removing an aspect of the phenomenon "in order to see whether the removal transforms what is presented in an essential way" (pp. 69, 90). This is a philosophical undertaking that explores the

perception of an object or phenomenon without questioning its existence, that looks at a phenomenon simply as it presents itself in order to determine the essential aspects of the phenomenon and to develop an encompassing structure. The eidetic reduction guided me both in classifying and describing the phenomenon of reading as experienced by my students (Giorgi, 2009; Zahavi, 2018).

The scope of the eidetic reduction must be formulated to be most helpful in the context of the investigation, focused on the structure of the phenomenon and taking into account multiple examples that are "generalized so that the general patterns of the phenomenon are understood" (Giorgi, 2009, p. 198). Zahavi (2018) describes eidetic variation as "a demanding and open-ended process" in which the researcher uses their imagination in order to determine "the invariant structures that make up the essence of the object" (p. 45). In order to engage fully with the experiences as described by the study participants, it is critical for me to identify an eidetic structure that describes the essential components of the reading experience.

Throughout the coding and analysis processes, I utilized reduction to help clarify the commonalities and differences among the reading experiences. I also employed a reflective process of writing and note-taking both to support the analysis process and also to make the process unambiguous for the audit trail. A phenomenological study seeks to determine both the truth for an individual as well as a larger truth that can be recognized as more general. This determination focuses on particularities, but through this focus, the researcher can develop interpretations that are more general.

Context

This study was mainly conducted at a large, suburban traditional high school during the academic year following the worldwide COVID-19 outbreak. The community in which this study is set has experienced rapid population growth as people have left nearby urban settings for more affordable housing, and many of the students in this community have grown up in other urban areas nearby. The community has a diverse population, including individuals and families of differing socio-economic and ethnic backgrounds. Students returned to school only virtually in August after having been out of school since March, and as in many school districts across the country, classes were facilitated via a distance learning model for K-12 students. For the second part of the data collection, adults who live in or near this community were contacted to request permission for their children to participate in the study, so the adolescents interviewed for the second part of the study were part of the same community.

The students in the first part of this study were enrolled in a standard grade level English Language Arts course required of all students, either English 10 or English 11. The majority of students in any particular course are enrolled entirely based on age, as students are generally socially promoted with other same-age students in this school district. It is possible for a younger student to be retained with the recommendation and approval of the teacher, parent, and administration, but in high school, students are promoted to the next grade and enrolled in grade-level courses even if they are credit deficient. Students typically are able to recover the credits before graduation, often through online coursework, but they are promoted regardless of whether or not they are on-track for graduation.

In March of 2020, this school and others were closed by order of the Governor of California, Gavin Newsom, and kindergarten through university classes were subsequently delivered online (State of California, 2020). When it became necessary to pivot to online instruction at the beginning of the pandemic, students in this district were already accustomed to using technology for daily learning activities and had experience with reading digital texts; in previous years, all students had been provided with devices for both home and classroom use, and during the initial study period, all students had been provided with a device to use at home. Instruction was delivered virtually for the 2020-2021 school year due to the pandemic, although traditional instruction was expected to resume for the following school year. This affected both the reading done by the students during the first phase of the study, as students were more likely to be assigned digital reading assignments during distance learning, as well as data gathering for this study. During the initial phase of the study, all class sessions, interviews, and observations were conducted virtually using the Google Meet platform while students were at home in a context that was both school and home during the pandemic and while participating in distance learning.

Students participated in their course work and in this study from home, using a variety of both district-provided and personal devices, primarily Chromebooks and other personal computers. At the time of this study, students had diverse experiences with digital texts; teachers in the school district had been using technology to deliver instruction and assign digital reading tasks for several years. However, some teachers continued to rely mostly on print materials in the classroom, and some students had recently transferred in from other districts.

Sample of the Study

This study utilizes a small, nonrandom convenience sample of high school students at a traditional high school during the COVID-related school closures of 2020 who have been exposed to digital texts in an instructional setting, as well as a smaller, convenience snowball sample of adolescents consisting of the children of friends and colleagues personally known to me and who live in the same community. The students at this school have been using classroom Chromebooks for several years and have utilized online textbooks, in addition to other digital reading materials, in many of their classes. The district has adopted a Common Sense Media digital literacy curriculum to provide instruction in different aspects of online safety, including cyberbullying, privacy and security, and media literacy. Modules for this curriculum include media balance and well-being, privacy and security, digital footprint and identity, relationships and communication, cyberbullying, and media literacy starting in kindergarten. At the high school level, cyberbullying and privacy are addressed, at least periodically, but it is unclear which lessons are implemented at the elementary level and due to the increasing demands on instructional time, it is possible that not all classrooms implement the digital literacy curriculum. An awareness of media literacy, in particular, is pertinent to this study and would help students to navigate online text. A majority of the students also have access to mobile devices, such as cellular phones, that could be used to read digital texts outside of class. All students are identified in this study with pseudonyms that correspond with the gender that they presented during the interviews. No students in this study identified in either the classroom environment or during the interview process as transgender or nonbinary. Four students were selected to interview a second time, Mary,

Mollie, Rodney, and Arthur, based on the detail contained in their accounts, and specific passages were chosen for inclusion in this study as the ones that were the most descriptive of their reading experiences and to support thematic analysis (van Manen, 2016, p. 69).

The participants in the first phase of the study in the fall of 2020 were a convenience sample of students enrolled in five English Language Arts classes serving students in grades ten and eleven. An additional three students were interviewed in the fall of 2022 as part of the second phase of the study in order to gather more information about adolescent reading behavior after the resumption of in person learning. All of the students had prior experience with digital technology and digital text through the school district's technology initiatives that provided students with devices at home and in the classroom beginning in the second grade, except for one who was a recent transfer from a private school. She indicated that all of the work done at the private school was paper-based and that technology was not used. None of the students mentioned having any experience with e-readers, although the student who had previously attended private school, Mary, mentioned that she reads on a Fire tablet on occasion. The students in this group had not been enrolled in self-selected Honors or Advanced Placement courses for their English course requirement, and some of the students included in this study were either English Language Learners or Special Education students.

This study took place in one suburban community in California with a high school enrollment of approximately 3,000 students. The community has experienced rapid growth over the past two decades and currently has a population of approximately 45,000, which is served by seven elementary schools, two middle schools, one

comprehensive high school, one alternative high school, one adult school, and one independent study school. The school district, which serves kindergarten through adult students, has made digital technology a part of the instructional focus, and students from second through twelfth grade use Chromebooks daily in their classes to complete reading and writing tasks. Students who do not have a device or Internet access at home are able to borrow a Chromebook and a hotspot that broadcasts wireless Internet access to finish assignments or access online reading assignments. Additionally, all recent textbook adoptions have been accompanied by online interactive textbook versions as well as a printed consumable version that students can write on and remove pages from. In my experience, most teachers used the printed consumable versions of the textbooks whenever possible, although that has been challenging at times, due to late and disorganized textbook deliveries. In my classroom, students generally used the interactive online version of the textbook in the classroom and kept the printed texts at home. The online versions of the texts often have features such as audio tracks, selectable text that can be annotated, digital activities, and video resources.

Participation was requested of the entire group of approximately 150 students by sending e-mail and app-based communications on the ParentSquare platform to both parents and students (see Appendix A); 33 of the parents responded to these communications and granted permission to interview and study their students. From this nonrandom group, all students were contacted and an interview was scheduled for each. Approximately one-third of the students who were contacted for interviews failed to attend the interview sessions, and 19 students were interviewed. Of the students who were able to participate in scheduled interviews, interview material was selected for

inclusion in this study based on the richness of the accounts and because the interviews

provided a depth of detail for analysis (Creswell & Poth, 2017). Each of the interviews

was repeatedly read and coded, and material was selected for further analysis based on its

representation of thematic patterns or particular depth of imagery or insight. To avoid an

appearance of researcher bias, material was selected with the help of a collaborator and

which best represented a spectrum of reading behaviors.

All students who were enrolled in classes with the researcher and their parents

were contacted to participate in the study, and all students had an equal chance of

participating. Students and parents were contacted who represented diverse gender

identities, racial and ethnic groups, and who either received special education services or

who were identified as English language learners. All students whose parents responded

to the request for consent were contacted for interviews, and all interviews were

considered without regard to student identity during the research process.

For the second part of the study, I contacted friends and colleagues and asked

them for permission to interview their adolescent children. I was able to gain permission

to interview three adolescents as part of this second sample. The children whom I

interviewed were between the ages of 14 and 17, both male and female, and members of

the same community as the earlier sample (see Table 1 and Table 2). As a whole, the

students in this community are diverse; the students in the second sample largely

reflected this diversity but may have been of a higher socioeconomic status due to the

fact that their parents were personally and professionally known to me. I did not collect

economic data for the study participants, however, so I cannot say for certain that there

was a difference in their socioeconomic status. The three adolescents interviewed in the

second sample were the children of school district employees, and they were all involved

in extracurricular activities, as well; it was difficult both to find students available for

interviews and to schedule the interviews around their busy schedules.

Table 1   **Participant Demographics**

		n	%
Gender			
Female		7	32
Male		15	68
Ethnicity			
White, not Hispanic or Latino		10	45
Hispanic or Latino		11	50
Black or African American		1	5
Educational Status			
Special Education		2	10
English Language Learner		1	5

Table 2   **Participant Notes with Pseudonyms**

Phase 1- Fall 2020			
Pseudonym	Grade	Dates of Interviews	Notes

Pseudonym	Grade	Dates of Interviews	Notes
Tom	10th	9/23/2020	enjoys descriptive books and imagining
Dallas	10th	9/29/2020	reads more print texts, dislikes digital
Abraham	10th	10/29/2020	feels digital reading is distracting
Jana	10th	10/6/2020	stopped reading in 7th grade
Morgan	10th	10/2/2020	does not often finish books
Rodney	11th	10/2/2020,	enjoys reading articles in digital format
Mary	11th	10/13/2020*	cruise ship, transfer from private school
Orlando	11th	9/29/2020,	reads news and social media digitally
Iris	11th	10/13/2020*	digital is easier, reads less now w/ music
Antonio	11th	10/14/2020	feels digital texts distracting, video games
Cassie	11th	9/30/2020	reads Bible, quiet bedroom with music
Marc	11th	10/29/2020	AP student and Academic Decathlon
Ron	10th	10/2/2020	prefers digital, distracted
Arthur	10th	9/25/2020	prefers nonfiction, likes audiobooks
Collin	10th	9/30/2020	interviewed outside, doesn't read for fun
Eric	10th	10/2/2020,	rather watch or listen to stories, sleepy
Sid	10th	10/27/2020*	doesn't enjoy reading
Albert	10th	10/25/2020	reads print under tree, calm music
Molly	10th	10/16/2020	AP classes, bilingual program, reader
		10/20/2020	*these four students were selected for a second interview on a different date
		10/27/2020	
		10/2/2020,	
		10/30/2020*	

Phase 2- Fall 2022			
Mike	9th	9/19/2022	print, doesn't read much anymore, athlete
Page	10th	9/13/2022	prefers print, reads digital as well
Simon	12th	9/12/2022	downloads comics on phone

The virtual interviews conducted for the study were arguably more conducive to gaining productive phenomenological data than traditional in-person interviews in several ways, including the fact that the modified instructional schedule adopted by the school district during distance learning allowed time for students to meet with the researcher and have extended conversations during the regular school day, after classes had concluded for most students, without strict scheduling. It was also possible to record the interviews relatively unobtrusively; students had already become accustomed to meeting virtually and having their daily virtual class sessions recorded. At the same time, the interviews were conducted remotely of students in their homes and/or rooms, and outside of any institutional environment. This might have lent greater intimacy, individuality, and informality to the interviews, qualities which are desirable for phenomenological interviews. The researcher was also able to use a district-purchased technology platform called GoGuardian to observe screen activity for students using supported technology, likely providing richer depth of insight into student reading behavior.

The interviews for the second phase of the study were also conducted virtually, after I contacted and set up the virtual interviews with the participants' parents. The students in the second phase of the study were not known to me personally, and I had never worked with them before in a classroom setting or any other context. There were three adolescents interviewed for the second phase of the study and none were interviewed a second time. Second phase interviews were more difficult to schedule due to the demands of after-school activities and sports, as well as more rigorous course schedules.

Data Collection

Institutional Review Board approval was obtained in June of 2020 to conduct the initial phase of the study in which I interviewed 19 adolescents, and soon after the initial approval, the original parameters of the study were modified to encompass the virtual nature of school in the fall of 2020 due to pandemic conditions. In September through October of 2020, parents and guardians were contacted via email with the informed consent documentation. Because of a low initial response rate, parents and guardians were again emailed, and messages were also sent out via the ParentSquare platform that the school district uses for parent communication. For the second phase of the study, I obtained Institutional Review Board approval for a modification of my original study in September of 2022. I contacted friends and colleagues to request permission to interview their children, and permission was obtained to interview an additional three adolescents.

I collected both observational and interview data from the participants, as well as observations of the students' interactions with assigned texts. Students were observed in the virtual classroom setting while they read both print and digital texts to complete a variety of academic tasks. I paid particular attention, as far as it is possible in a virtual setting, to observe reading practices and strategies, including posture and movement, annotation, and text navigation (e.g., scrolling, tapping, turning pages) and I took brief notes to record observations during the instructional period. In the virtual setting, it was difficult to observe posture and movement since most students had their cameras off, but this was compensated, in part, by the ability to observe on-screen behavior such as text navigation using GoGuardian for students. The websites used by the students often capture annotations, and I was able to make detailed observations of annotation behavior.

For instance, the high school students use online textbooks that allow the students to underline and circle online text, and also to type comments to accompany any marked sections. All annotations are visible both to the student and to the classroom teacher.

Throughout the observational phase of the study, I conducted semi-structured interviews with the students and asked them about their experiences reading both print and digital texts (see Appendix C). Students were not given any specific guidance about where they were to locate themselves during the virtual interviews, but most of the students appeared to log in and participate in the online interviews from their bedrooms, with the exception of one student who appeared to be logged in outdoors from his phone. During the interviews, I asked students to reflect on class assignments and personal reading that they had completed using both digital and print media. Interviews were conducted and recorded using the Google Meet platform, and automatic transcriptions were captured using the Google Meet Transcripts extension (see Appendix D). I reviewed the transcriptions throughout and again at the conclusion of the interview phase, comparing them to video recordings of the interviews to ensure accuracy. At times, the automatic transcriptions proved to be inaccurate, especially when there were other sources of noise or when students spoke quickly, and corrections were made to the transcripts to reflect what was actually spoken in the interview. Observational data enhanced the interview data and provided greater depth and insight.

Data Analysis

The interview transcriptions were examined and coded for recurring themes and patterns. As part of the coding process, I used word processing software, specifically Google Docs, to code the data in multiple cycles, focusing on chunking units of data that communicate meaning (Chenail, 2012; Elliott, 2018). For example, a few words might be chosen to code for a thematic meaning, or a particular word using a specific color code (see Appendix F). In other cases, I coded a sentence or more as an example of a thematic element (see Appendix G). I also wrote notes and memos using both Google Docs and Google Sheets throughout the process, documenting the journey as part of the audit trail described below in the Quality section so that the steps can be retraced and decision points re-examined. The formal process of coding was used in conjunction with a research journal; this helped me identify my own thinking patterns as well as provide a record of how the data were analyzed. According to Birks and colleagues (2008), "memoing permits exploration of the various pathways along which qualitative research will lead, while permitting the researcher to remain true to the data and the studied world from which it is generated" (p. 74).

Coding

Interview data were coded in multiple cycles, each with a different focus. Coding is a recursive process in which the researcher continually reviews the data and identifies new connections and patterns. Coding cycles can help identify key findings in qualitative data because they engage the researcher in systematically differentiated, active tasks of reading, reviewing, and identifying patterns in the data. These patterns and connections are identified as part of "an interactive process where you move from the small level to

the big level and back" so that the researcher can gain insight and see emerging

"possibilities or problems" (Mod-U, 2016). The interview transcriptions were repeatedly

reviewed and analyzed and further themes were recognized throughout the process.

First Cycle Coding

During the first cycle, codes were identified that capture recurring themes and

motifs in a process of low-level grouping. According to Saldaña, "Most First Cycle

methods are fairly simple and direct" (Saldaña, 2021, p. 58). First cycle coding

encompasses subcategories such as those of a grammatical, elemental, affective, literary

and linguistic, exploratory, or procedural nature (Saldaña, 2021). During the first cycle,

the researcher chooses the coding methods that best suit the particular study, and may

decide to implement one or several coding methods (Saldaña, 2021). In this study, for

example, patterns of sensory details during students' reading experiences were coded in a

low-level grouping (Saldaña, 2021). Codes that indicate an embodied reading experience

were applied, as well as those having to do with the other "existential dimensions"

identified by Merleau-Ponty above: 'lived' space, 'lived' time, and the 'lived' world"

(2012, p. lxx) .

In the first coding cycle, I focused on identifying common themes and patterns in

the data, such as common temporal and spatial patterns in reading or reading locations. I

also used a priori codes in the first cycle code for reading genre, particularly fiction or

nonfiction, the use of print, digital, or audio reading materials, as well as for the use of

music while reading. I utilized both a priori and emergent codes in order to allow me to

focus my analysis and also to expand my awareness of themes and patterns. I used the

annotation features of Google Docs throughout the coding process to create memos, as

well as the option to create tables within Google Docs to create visualizations of the data (see Appendix E).

First cycle coding revealed details and patterns about students' experiences of reading both print and digital texts to begin answering the first two research questions and provide details about adolescent experiences of reading (Table 3). First cycle coding techniques also emphasized the situated character of the reading experience, and its connection with ambience and mood:

Table 3   Alignment of Research Questions to Data Analysis

Research Questions	Data	Data Analysis
In a digital world, what are adolescent students' experiences of reading print texts?	interview transcripts and observation	first and second cycle coding, skeptical reduction and natural attitude
What are adolescent students' experiences of reading digital texts?		
How are students' experiences with digital texts similar to or different from experiences with traditional print texts?	comparative thematization (via second and subsequent coding cycles)	eidetic variation/ reduction

During this stage of the process and while bracketing for both everyday and theoretical understandings, I added notes and highlighted sections of text, and I created tables of coded texts from the transcripts that organize the data into thematic patterns. I also periodically reviewed the recorded interviews to check for inflections or any other data that might have been missed in the transcripts. I kept extensive notes and comments

throughout the research process, as well as a reflective journal to help document and reflect upon the process and "make visible to the reader the constructed nature of research outcomes (Ortlipp, 2008, p. 695). A reflective journal allowed me to reflect upon personal biases, as well as to document the research process in order to ensure the quality of the research.

<u>Second and Subsequent Cycle Coding</u>

During second cycle pattern coding, first cycle codes were reviewed to ensure that they accurately reflected the characteristics of the students' reading experiences (Saldaña, 2021). The data were analyzed in a semistructured two-step process, with the ongoing discovery of patterns leading to a deeper understanding and further analysis. In this approach and utilizing the eidetic reduction, "analyzing the data for themes, using different approaches to examine the information, and considering the guides for reflection should yield an explicit structure of the meaning of the lived experience" or its essence (Creswell & Poth, 2017, p. 195). Initial codes were grouped into thematic categories, categories were compared to determine similarities and differences among the experiences as well as among the individual categories, and then the data were recoded to reflect new understandings revealed in the course of the process. During second cycle coding, the focus was on eidetic reduction, revealing and comparing patterns and determining similarities and differences between print and digital reading, and imaginatively extending that understanding and applying it to educational practice (see Table 2). The eidetic reduction was used to develop a structure for constructing meaning from the data that could be used to support adolescent readers.

Emergent codes were used during the second cycle of the coding process to identify patterns, and their use was continued and expanded in subsequent coding cycles. At this stage, short descriptive passages ("anecdotes," van Manen, 2016) were chosen that illustrate the thematic elements that stood out during the coding process. Chosen anecdotes were "trimmed of all extraneous, possibly interesting but irrelevant aspects of the stories" in order to provide the most focus (van Manen, 2016, p. 69). As "vividly particular presentation[s] of a singular incident that [are] intended to stand out" (Friesen, 2012, p. 48), these short passages serve as a mode of "thick description" and consequently support identification and transferability.

During this coding stage, I also identified anecdotes that illustrated key aspects of the reading experience, including absorption and engagement. I coded the examples of these patterns, as well as details related to the existentialism of space, time, body, and relation, as well as any reading and non-reading behaviors. As I coded, I added the examples that I identified to my notes and journaled about the significance of what the students had to say about the themes and patterns that I had identified. As part of this process, I utilized the eidetic reduction both to compare and contrast adolescent experience with digital versus printed material, as well as to develop an "essential structure" of reading that underlies both types of reading.

Quality

Qualitative research has its own standards for quality that are more suited to its own character than traditional criteria used in quantitative research. Trustworthiness refers to how a researcher "persuade[s] his or her audiences (including self) that the findings of an inquiry are worth paying attention to" (Lincoln & Guba, 1985, p. 290) and

relates also to research ethics (Creswell & Poth, 2017). Quality quantitative research depends upon having a solid research design, thorough descriptions focused upon the participants' views, and an ethical approach (Creswell, 2013).

The validity of traditional research also replies upon how the inquiry applies to other contexts, also known as its applicability or transferability (Lincoln & Guba, 1985). The research setting in which phenomenological researchers conduct their research is unique, and the extent to which the findings apply to other contexts must be established by future researchers (Creswell & Poth, 2017; Lincoln & Guba, 1985). The qualitative researcher establishes that the study has validity in its unique context. The context of this particular study and its subjects is described above, in the Sample of the Study section; more context is provided in the discussion chapter.

Credibility

In order to establish the relevance and significance of the findings, the research process must be credible (Lincoln & Guba, 1985). In qualitative research, the qualities of internal and external validity are replaced with credibility as a standard (Lincoln & Guba, 1985). The elements of a qualitative study must come together in such a way as to produce believable results. Creswell and Poth (2017) describe this as expressing a reality that "embod[ies] a fleshed out, embodied sense of lived experience" that seems true (p. 278). Because "reality" in the case of phenomenological research is understood as being "intersubjective" in nature, this embodied sense is best confirmed through readers' sensitivity to their feelings, experiential recollections and reflections in reading a phenomenological study. According to Lincoln and Guba (1985), there are several activities undertaken in conjunction during the research process that produce credible

findings, including prolonged engagement, persistent observation, triangulation, and peer debriefing.

Credibility is established in this study first through the establishment of prolonged engagement and persistent observation in which "the investigator [is] involved with a site sufficiently long to detect and take account of distortions" (Lincoln & Guba, 1985, p. 302). Prolonged engagement and persistent observation are practiced in order to identify and address preconceptions. Persistent observation is also an essential component of establishing credibility in the research process in order "to identify those characteristics and elements in the situation that are most relevant" and to provide depth (Lincoln & Guba, 1985, p. 304).

According to Lincoln and Guba (1985), "the period of prolonged engagement is intended to provide the investigator an opportunity to build trust" (p. 303). As their classroom teacher, I spent several hours per week with the students who participated in this study, reading and discussing reading. I also worked closely with the students and their parents to support learning and growth while monitoring and documenting progress on a daily basis. Additionally, students who needed extra support outside of the scheduled class period were able to work with me virtually in the afternoon, after classes were over for the day. Interviews were conducted more than a month into the school year, after I had worked with the students for several weeks, in order to allow time for students to build confidence and trust. Students were observed on-screen and using the GoGuardian and Google Meet platforms while reading during class time throughout the study period in order to identify patterns and themes in classroom reading behavior to add

both breadth and depth to the interview transcripts and explore the most important aspects of the reading experience.

Another technique for establishing credibility is triangulation, which is "the use of multiple *sources*, *methods*, *investigators*, and *theories"* to validate the data (Lincoln and Guba, 1985, p. 305). Interview and observational data were compared in this study and used both to establish trustworthiness and confirm the results (Lincoln & Guba, 1985). Students were observed during class reading activities to gain insight into their reading and annotation patterns. Observations of student reading behavior and their work on open-ended comprehension and analysis tasks based on class readings were used to provide additional awareness. Observations were persistent and continued throughout the semester, and the interview experience was enriched with details about how students interacted with assigned reading tasks. Additionally, observational data and interviews were compared with a third source of data, student work patterns, to provide further depth and insight.

Peer debriefing is a valuable method for establishing credibility. According to Lincoln and Guba (1985), peer debriefing is "the process of exposing oneself to a disinterested peer . . . for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit" (p. 308). The purpose of this debriefing is to help illuminate the processes of investigating the data and testing hypotheses (Lincoln & Guba, 1985). Throughout the study period, I collaborated with my peers and discussed my findings "to ensure that the conclusions . . . were indeed grounded in the data" (Creswell & Poth, 2017, p. 381). I shared my reflections and findings with colleagues at my site who have similar students and who helped clarify my thinking and conclusions

during the analysis process, as well as with research colleagues in my university cohort who provided feedback about the process itself. My colleagues helped me interpret the data as I completed successive revisions and both questioned and solidified my own thought process as I worked through the coding and analysis processes.

<u>Transferability</u>

In qualitative research, *transferability* allows for generalizations between studies with similar contexts when valid comparisons can be made between populations (Lincoln & Guba, 1985). The final validation of this criterion can only be undertaken by future researchers who wish to establish contextual similarity. However, the researcher can assist in this process by providing rich descriptive data: "the responsibility of the original investigator ends in providing sufficient descriptive data to make such similarity judgments possible" (Lincoln & Guba, 1985, p. 198). To assist future research in this area and make transferability possible, I used thick description throughout the analysis process, including detailed descriptions of the participant sample (Lincoln & Guba, 1985; Ponterotto, 2006; Tracy & Hinrichs, 2017). Thick description refers to "the researcher's task of both describing and interpreting observed social action (or behavior) within its particular context" (Ponterotto, 2006, p. 543) and was used in the form of anecdotes in this study to provide rich detail that allows the reader to reach their own conclusions about how students experience reading (Tracy & Hinrichs, 2017). Thick description is key to the quality of qualitative research because it "leads readers to a sense of verisimilitude, wherein they [i.e. readers of the research] can cognitively and emotively 'place' themselves within the research context" (Ponterotto, 2006, p. 543).

Following van Manen's (2016) description of the anecdote–"a certain kind of narrative with a point"–short accounts were selected and trimmed from the interview and observational data to convey a specific idea and support thematic analysis (p. 69). In this study, thickly descriptive anecotes are used to provide detailed and accurate descriptions, complex analyses, and rich conclusions. Specifically, descriptive paragraphs are accompanied by sections of researcher interpretation. This interpretation, in turn, utilizes the four aforementioned existential categories–space, time, body and relation for guidance and structure.

<u>Confirmability</u>

Another of the criteria for establishing the quality of the study process is confirmability, defined by Lincoln and Guba (1985) as "the extent to which the data and interpretations of the study are grounded in events rather than the inquirer's personal constructions" (p. 324). It is in conjunction with confirmability that the three forms of reduction–skeptical, eidetic and the suspension of the natural attitude–come into play. However, in contemporary qualitative research more broadly, the main technique for establishing confirmability is an audit trail, which is a record of research materials and notes that readers and others can follow (Lincoln & Guba, 1985). In order to enhance the neutraility and confirmability of my study results, I maintained written records throughout the process that document both the steps taken and my reflections. I observed my students throughout the study period and kept detailed notes and journals about their reading practices that can provide further depth about the experiences discussed in the interview transcripts; these notes and journals are included in the final research product as an appendix to allow other readers to evaluate the confirmability of my results.

Confirmability will be further enhanced through the explication of the researcher's own biases and assumptions through a process of reflexive analysis that is described above in the Reflexivity section (Creswell & Poth, 2017). This particular activity can be seen specifically as supporting both the skeptical reduction and the suspension of the natural attitude required by the phenomenological method. I journaled about my involvement with reading, with my students, and how my own experiences were similar to and different from those of my students. Throughout both the interviews and the observations, I practiced reflexivity by journaling about my role in the process, including any preconceived notions that I hold. This reflective process allowed me to illuminate prior understandings and become more aware, acknowledging my own roles as both reader and teacher.

I also utilized journaling, reflected upon my personal connections with the students' experiences, and relied upon the thematic interrelatedness and patterns established in the interviews. In order to establish camaraderie and a less formal relationship with each of the student subjects, I shared details of my own personal reading experiences, but I was also careful to keep the focus of each interview on the phenomenon of reading as experienced by the students. I systematically recorded my thoughts through journaling and memoing, and in this way worked to suspend my own beliefs about the importance of reading in order to minimize the impact of existing bias and past personal experiences and to see things as perceived by the study participants as much as possible. In this way, both natural-scientific preconceptions and everyday practical and pedagogical understandings were identified and set aside–as a part of the skeptical and phenomenological attitudes to be cultivated in and through phenomenology.

Positionality

Before presenting the findings, and in the spirit of self-reflexivity, I acknowledge that as an English teacher who reads both print and digital texts, I am professionally and personally oriented favorably towards reading and its value in education. Most of my leisure reading is done in a digital format; I have a number of Kindle devices that are readily available so that I can pick up reading wherever I happen to be, and I greatly enjoy the convenience and ease of reading digital texts. As an avid reader, teacher, and parent, I value personal reading experiences and see these as having considerable value. Reading is of benefit for its own sake; I do not believe that certain types of reading material are inherently more valuable than other types, although as a teacher and literature major, I value exposure to certain genres, authors, and titles in an academic setting. In fact, I purchased and read 214 romance novels one summer while I was in middle school. They were extremely formulaic and not particularly well-written, but I got a lot of reading done that summer. I was an avid reader even before I began kindergarten, and my entire family reads together as well. I am an English and language arts teacher with a consistent focus on reading and supporting young readers. When I am able, within the demands of a school schedule, district curriculum, and mandatory assessments, I support students in selecting their own reading materials and reading for pleasure. Additionally, my spouse and I read to our young son even before he was born, and our love for reading helped him to become a proficient reader at a young age. Reading and books have been integral to my role as an educator with over 20 years of classroom experience, and this background has also informed how I interact with young people. I have a solid belief in the importance of reading as a lifelong practice and encourage all

students to develop their own reading tastes aside from assigned reading and to read as frequently as possible.

In my own leisure and work, I use various texts daily, and I select either print or digital versions based on the nature and availability of the particular text. I have tended to purchase and use print versions of materials that I use in the classroom, either as a student or as a teacher. I highlight and annotate extensively in instructional materials and other professional texts, and I even mark in district-owned materials, but always with pencil. Lately, I have begun to transition to using digital materials for both teaching and learning, and I find being able to access my texts and marks from different locations, online, to be very helpful. During the process of researching and writing this dissertation, digital texts were often more convenient for me to read and review, and I even scanned and uploaded a methodology text that I had purchased so that I could access it from various locations. I also appreciate that digital texts are searchable so that after I have read and marked a text, I can quickly locate specific sections. I have a number of devices at home that I can use to read digital texts, but I typically use a computer when reading nonfiction for learning or teaching online, while I use an e-ink Kindle for nearly all of my leisure reading. My son has his own Kindle and his own selection of e-books for his personal use, and he has read both print and digital materials since he was three years old.

As a teacher, however, I need further understanding of how young people engage with both print and digital texts in the context of a digital world. In the emerging digital landscape, in which digital texts are increasingly common and easy to access, it is necessary to know more about how both print and digital reading experiences affect the developing habits of adolescent readers. In order to best support effective classroom

literature and writing instruction, I wish to learn more about how adolescents experience reading in order to better understand how to best support developing readers.

I have been careful to interpret students' experiences with these lenses in mind and to make an effort to evaluate students' experiences from their own perspectives. I also have a particular image of a home and family experience that supports and extends the reading experience for young readers, and throughout the study period, I gained a new perspective on other types of reading practices and environments. My positionality brings with it certain biases, which I guarded against using techniques such as journaling and memoing--focused through the skeptical reduction and the suspension of the natural attitude. At the same time, this position gives me awareness of and heightened sensitivity to matters of reading, distraction and adolescent reader experiences and struggles that might not be available to other researchers. This study helped me to gain further understanding of how different family and home environments interrelate with experiences of both reading and non-reading.

Possible Limitations of the Study

As stated above, this study is limited by my dual roles as a teacher and researcher. Utilizing the techniques to enhance the quality of qualitative research set forth by Lincoln and Guba (1985), I worked to minimize these limitations, but they still remain limitations. Despite my efforts to maintain impartiality, it is certain that my dual roles as both researcher and classroom teacher affected the selection of specific anecdotes and my interpretation of them. As mentioned, I utilized extensive writing, reflection, and drafting to attempt to minimize the effects of my dual roles to the greatest extent possible.

Some students may have been uncomfortable disclosing their lack of reading enjoyment or time spent reading, but this type of issue was addressed through efforts to inform and ensure them of the separation of my two roles–and that their responses would in no way impact my evaluation of their achievement. Participants were interviewed more than once in order to build a stronger relationship and gain deeper insight into the details and meanings of their reading experiences. A power differential may have been a limitation with the first sample, as I was their classroom English Language Arts teacher at the time of the study. It is possible that the differing nature of the first sample and the second sample may also have contributed to differences in the level of comfort felt by students when disclosing their reading habits and experiences; I was the classroom teacher for the first group, but relatively unknown to the adolescents in the second group.

Timeline

The study took place in two phases: the first phase was during the fall of the 2020 school year (see Figure 1), and the second phase during the fall of 2022 (see Figure 2). IRB approval was granted in June of 2020 (see Appendix B). Parents and students were contacted and invited to participate in the study during the first six weeks of the school year, from August through the beginning of October 2020, and the interviews were scheduled during the middle part of the academic semester from September through October 2020. The interviews took place during the school day, virtually, and the data were analyzed throughout the semester. Each of the interviews was examined multiple times during this time period in order to gain more insight into the lived experiences of the study participants. The first phase interviews, transcription, and first cycle coding took place within a single academic semester, from September through November of

2020. Second cycle coding began at the conclusion of the first review of the data and continued for the remainder of the semester, ending in December 2020. Sampling began in September and continued through November. Generalization and analysis began during second cycle coding in November and continued through December, 2020.

The second phase of data collection was more compressed, with IRB approval being granted in September of 2022. Parents were contacted in September and given the consent documents, and the interviews took place in September of 2022. First cycle coding and sampling both took place in September through November, and second cycle coding took place in November and December, 2022. Final generalization and analysis took place concurrently, in November and December of 2022.

First Cycle Coding   **Second Cycle Coding**

1	2	3	4	5
Fall 2020 *(September-October, 2020)*	**Fall 2020** *(September-December 2020)*	**Fall 2020 - Spring 2021** *(September 2020- May 2021)*	**Fall 2020 - Spring 2021** *(December 2020- May 2021)*	**Spring - Fall 2021** *(January-December 2021)*

Data Gathering   **Sampling**   **Generalization and Analysis**

Figure 1   **Research and Analysis Timeline- Phase 1**

First Cycle Coding   **Second Cycle Coding**

1	2	3	4	5
September 2022	September-November 2022	September-November 2022	November- December 2022	November- December 2022

Data Gathering   **Sampling**   **Generalization and Analysis**

Figure 2   **Research and Analysis Timeline- Phase 2 and Final Analysis**

Chapter Summary

In order to explore adolescent experiences of reading both print and digital texts, this study utilizes a qualitative hermeneutic phenomenological design. This study heavily relies upon interview data, but I also analyzed other data, including virtual observations. Observations of classroom behavior, often observed as screen-based actions using Go-Guardian, as well as students' behavior during the interviews, were used to enrich the interview data. Observational data are not explicitly referenced in this dissertation, but rather used to add context to students' accounts. The data were analyzed recursively in a two cycle coding process in order to determine underlying themes and patterns.

As a qualitative phenomenological study, this study seeks to explore the phenomenon of reading as a lived experience, identifying common meanings from the perspectives of the adolescent readers. In order to focus on the experiences of the students, the researcher utilized a reflective journal and explicitly acknowledged and examined any prior experiences and beliefs that played a role in the qualitative research process. The researcher also utilized phenomenological reduction (in three forms: natural attitude, skeptical, and eidetic) in order to approach the phenomenon with an open mind and minimize the effects of existing personal bias regarding reading and previous knowledge of the academic aspects of reading for adolescents.

For the study, I interviewed a nonrandom sample of students who represent a diverse range of backgrounds, and the bulk of the research data came from interviews held virtually in two phases: over a six week period of time in the fall of 2020, from September through October, and during September of 2022. Transcripts were analyzed as part of the coding process to identify thematic patterns and descriptive anecdotes. The

data were collected in two phases, and data collection and analysis took place

concurrently.

CHAPTER FOUR: FINDINGS

This chapter presents the findings of my research, based upon my analysis of the interview transcripts. I started the coding process while I was still conducting interviews, beginning with a priori coding for experiences that were specifically about either print or digital reading or about reading experiences that were specific to a particular genre. I also analyzed the transcripts following Merleau-Ponty's categories of time, space, and body, being attentive to matters of attention and relation (between the reader and the text, the reader and the medium, and the reader and others). It is these aspects that together can be said to constitute the experiential lifeworld—"a world of objects with values, a world of goods, a practical world," as Husserl notes (as cited in Friesen, 2021, p. l).

The next step involved a second cycle of coding, as well as a process of free imaginative variation in the form of the eidetic reduction in order to compare and contrast contexts and experiences in print and digital reading. In addition to the 19 interviews that I had already conducted and begun to analyze and in consultation with my faculty advisor, I selected four of the students whose experiences were related with particular depth and richness to contact for a second interview: Molly, Mary, Arthur, and Rodney. In the last phase of data gathering, I interviewed three additional adolescents and coded their interview transcripts in a process similar to that used with the first group. The second group was required to be of adolescents that were not known to me in a classroom setting due to modified IRB guidelines. Possibly because of their busy schedules, students in the second phase were less descriptive about their reading experiences, and so

all but one of the short passages selected for inclusion in this dissertation came from the first phase of interviews.

Although I have been teaching for decades, speaking with students about reading and about their reading habits and experiences was surprisingly eye-opening. When I first became a teacher, I was idealistic and set out to engage each reader with the perfect book selection. Over the years, I have learned that few secondary students read by choice, and that many students would rather do almost anything else. But my time with students in the course of this study helped give this general impression a great deal more nuance. I was able to learn more about why students stopped reading, or why they read less or more than when they were younger. I was able to talk with students–both my own and those in other schools and classes–about what they enjoy reading and why. I was also surprised by the criteria that students use to choose to read either digital or printed materials.

Research Questions

This phenomenological study seeks to answer the following questions:

- What are adolescent students' experiences of reading print texts?

- What are adolescent students' experiences of reading digital texts?

- How are students' experiences with digital texts similar to or different from experiences with traditional print texts?

In order to answer these questions, I asked students to tell me about their reading habits and experiences. Some students were uncomfortable talking about reading, but many of the students seemed to be willing and even enthusiastic. Others elaborated on their experiences extensively, even apologizing for talking so much and thanking me for

my time. Students described print and digital reading experiences to me about both assigned reading for school and also personal reading. They described experiences with digital texts that we had read in class or that they had read for other classes, print texts that they had read for school in previous years, and both digital and print texts that they had read in their leisure time or for independent reading in elementary school. Short passages and quotes from the student interviews are identified using pseudonyms, and the dates the interviews took place are noted in parentheses. Students highlighted in this chapter are the ones that were the most descriptive.

The students with whom I spoke were often very opinionated about what they prefer to read in terms of format and genre. More students said they preferred print than digital texts, but some students indicated a preference for both formats at different times during the interview or for certain types of text to be in a digital format and other genres to be in print. Some of the students also indicated that they had become disengaged from reading, seldom or never reading in their free time, and others had developed strategies for completing assigned reading tasks with as little reading as possible by watching videos, looking up the answers online, copying from other students, listening to an audio version of the text, or using the search function on their device to locate the answer without reading the text. Some elementary and secondary teachers support nonreading behavior by utilizing web-based videos as "texts" that support students in developing their abilities to analyze and synthesize but do not require any actual reading of text. Finally, some students told me that reading was part of how they are preparing for college or for the future; even if reading was not a preferred activity for those students, they read in order to become more proficient or expand their knowledge. In many cases, students

related details of their reading experiences directly related to the existential lifeworlds of space, time, body, and relation.

Recursive coding and analysis revealed patterns, including an overall tendency for distracted reading and non-reading to be more closely associated in students' experiences with digital texts than those in print. Students who described themselves as being deeply absorbed in reading experiences were nearly always engaged with print texts. Students who described digital reading experiences were more likely to report that they were distracted while reading. Additionally, students who read digital texts often read shorter texts such as articles, while students who read printed texts often had more experiences with longer texts, such as novels. However, as a phenomenologist, I was primarily interested in the nature and the quality of these different experiences, and much of this chapter is devoted to this question of "how."

This chapter is organized through a constant comparison of print and digital experiences, exploring these with reference to the existential dimensions of space, time, body, and relation. Utilizing the analyses of Mangen, Iser, and Poulet, in this chapter, the world of fiction in particular is viewed as having the potential not only to absorb the reader, but also allow them to participate, to various degrees, in fictive experiences. Like experience in general, these fictitious or vicarious experiences also open up experiential lifeworlds of their own. Again, in fictional (and usually print) text reading, these appear to exist in tension with the world outside of the text. After exploring these worlds and relations, the tension between absorption and distraction, reading and non-reading will be examined.

Print vs. Digital

This analysis begins with two rather different accounts by two adolescents, Tom and Dallas, both of whom were interviewed in the first phase. I begin with Dallas, who describes his experience of reading a print book in his bedroom:

> There was this one time, like, a year or two ago when it was raining…and I was reading this ..book because I was obsessed with the series. I could smell the pizza… Pizza, the climate and everything. I was able to sense that, like, I could smell the pizza how they describe it. I can feel the air from people playing and stuff. I would have noticed… And my parents would go to check on me, I would never, like, I wouldn't notice, I would just stay reading because I'm so into it…. (09.29.2020)

Reading a book series in print is something that Dallas says he has engaged in as a kind of "obsession." This reading experience is also something deeply sensual for him: He mentions that it was raining, and that he could smell things–"pizza, the climate… everything" (09.29.2020). He says he can smell these things because of "how they describe it;" in other words, due to the way that these experiences are depicted in the book. Dallas adds that he was also able to feel other people playing "I can feel the air from people playing and stuff"(09.29.2020). It is not clear whether this is from the climate or atmosphere, or from something else, like a smell or perhaps movement. Whatever the case may be, it is powerful enough to eclipse the world around him, for him not to notice his parents going to his room "to check on" him. The reason for this, he emphasizes, is because he "is so into it" (09.29.2020).

Exactly what is Dallas "into" in his description of his experience of reading? Above all, he appears to be into the experience of smell and atmosphere. Smell, significantly, is the sense that both phenomenologists and medical researchers have identified as the most instinctual and primal, one of the senses furthest from conscious analysis (Heyd, 1995). "Odors take a direct route to the limbic system, including the amygdala and the hippocampus, the regions related to emotion and memory" (Walsh, 2020, para. 4). Tom experiences this deep-seated sensation not so much in the world of his physical environment, his room. Instead, it is experienced in the realm of the text, in the realm that Poulet (1969) was quoted as describing as being "inside of a book":

> A book… asks nothing better than to… let you exist in it. In short, the extraordinary fact in the case of a book is the falling away of the barriers between you and it. You are inside it; it is inside you; there is no longer either outside or inside. (p. 54)

Instead of being firmly grounded in the space and time of his parents, of the weather outside, or even of the fact that he is holding and scanning the lines of text in a book, we can follow Poulet by saying that Dallas exists "inside of a book." His subjectivity appears to be merged with the objectivity of the letters, words, paragraphs and pages of what he is reading.

Tom reads regularly for school assignments, but he did not describe any recent experiences of reading for pleasure. He describes a rather different set of experiences about reading on a screen. When asked about reading the digital version of Edgar Allan Poe's "Fall of the House of Usher," he replies:

I like how it was laid out and how I had each of the paragraphs so I knew where I

had to go back and I could annotate and I liked how it had a notepad so I could

make notes about the story as I was reading and I could understand it better… I

understood the story more just because it was right in front of my face and I could

highlight and really break down the story so I think that was different from print

text just because I can't do that to a book that I don't own. (09.23.2020)

Tom's description emphasizes activity: He describes himself as participating in a range of

interactive and cognitive acts and strategies. He goes back, annotates, makes notes,

highlights, and in this way, "break[s] down the story" (09.23.2020). He first observes

how Poe's famous narrative is laid out visually, rather than mentioning what it is about.

He also suggests that by going back, breaking down the story, and having it right in front

of his face, he can understand it better. In all of his actions with the text on his screen,

Tom seems to be aware of both the interface and the text, both the medium and the

message. These factors change, however, when Tom is reading "a book that I don't own,"

presumably one borrowed from a library or a textbook from school (09.23.2020). In this

case, he cannot do this highlighting, note-taking and decomposition of the narrative

because he cannot mark the pages. Tom suggests that he gains a sense of ownership and

also orientation when the text is digital: this, for him, appears to be *the* difference

separating digital and "print texts."

Collin, who also prefers digital media, provides characterizations that are similar:

"I lose focus easily," he begins (10.23.2020). But when he *does* read, Collin prefers

dealing with readings assigned in school digitally because "you have the story…. on the

one side of the page and you can have your questions on the other side" (10.23.2020). As Collin goes on to explain, this is easier than flipping through a book.

The way that Tom and Dallas describe the purpose or outcome of their reading differs in important ways: Dallas talks of how he could smell "the pizza… the climate and everything;" he also speaks of how he "can feel the air" (09.29.2020). Tom, on the other hand, wants to know "where I had to go back," in an effort to "understand [it] better"(09.23.2020). Dallas's experience is one of feeling and sensing whereas Tom's is more cognitive. Significantly, whereas Tom describes the text itself–"how it was laid out" (09.23.2020) and what he could do with it on the screen, Dallas does not mention how his text looked or what he could do with it. He also does not speak of turning the pages, holding the book. He also does not describe jumping around to various places in his book to "understand" what he is reading.

Reading Spaces

In reference to the spaces in which adolescents read, Tom makes it fairly clear that his experience of reading is unfolding in his own bedroom; he explains earlier in his interview that he is sitting at this desk, in front of his keyboard and screen of his Chromebook while reading, while one's room, generally a bedroom, is particularly important for adolescents (09.23.2020). Research says it provides "a safe, private space in which personal identity could be constructed and reconstructed" (Grauer, 2002, p. 90). It is in this psychologically charged space that many of the accounts of reading referenced by the adolescents interviewed here are set. They were both interviewed there via Google Meet, and had those experiences there.

Cassie also reads her Bible while in her bedroom. She said that her phone can be distracting and she never reads school-related texts on her phone. She does, however, read the Bible on her phone, and she appreciates being in possession of her own digital copy of the Bible instead of sharing a printed Bible with other members of the family: she read a printed Bible "like a long time ago;" this book would "usually be [her] parents because [she] didn't own like my own Bible yet" (10.02.2020). But Cassie appreciates that she can also use the audio version of the Bible on her phone "because I like listening to audio," and she reads in her room where she "sometimes not all the time" has music playing while she reads (10.02.2020). Adolescents in particular are establishing their own identity apart from that of their long-standing relationships with family members (Erikson, 1956), and "an adolescent's bedroom is an important location for the everyday work of creating identity" (Grauer, 2002, p. 92). Cassie is establishing herself as an independent person by moving from her parents' print Bible to a digital copy on her phone–a version that she can engage with in a number of intimate ways.

Immersion: Grasping the Book vs. Getting off the Page

A similar set of patterns is clear in other adolescents' experiences with print in terms of their engagement: Molly, a studious and prolific reader, said "I don't read a lot of books" (10.2.2020). At the same time, she also spoke at length about all of the books that she enjoys reading. Significantly, she also talks about living through "second hand embarrassment from, like, the characters and stuff" when reading print books (11.6.2020). Molly describes reading print fiction as similar to having "a TV in my… mind, and I'm like watching it" (11.6.2020). Albert, another student who prefers print, describes something similar: "I take people in my life… and I would take characteristics

from them… and build this character in my head" (10.27.2020). In this way, he is able to populate his reading experience with concrete details–validating Iser's (1972) conclusion that texts can "transform reading a creative process that is far above mere perception of what is written" (p. 283). Later in his interview, Dallas shares: "One of the characters were getting chased and they were just describing like everything, like their minds racing and how they feel like they're losing breath. I started feeling that as well" (09.29.2020). Morgan takes this even further, noting how she, though her print reading, can even block out very insistent distractions. She describes reading at home by saying "so in the house I could tell that there was a lot of background noise. But since I was so into the story it kind of felt like the house is really quiet even though it wasn't" (10.02.2020). By way of explanation, Morgan then adds: "I sort of get into the story like I go into their world instead of mine" (10.02.2020).

Being absorbed and "into the story," as Morgan puts it, illustrates a set of linguistic, metaphorical patterns in students' accounts that above all highlight movement or escape from one space to another, from a place of relative stability to another of more intense (but ultimately not entirely foreign) experience. Instead of experiencing the layout of the screen, and engaging with it analytically through marking and manipulation, it almost seems as if these print readers forget about the page, the words they are reading and the physicality of the book. All of these things become transparent, allowing the reader to enter into another world on the other side of the page. In addition to the world around them disappearing or at least partially leaving their awareness, the medium telling the story also effectively disappears. The reader or viewer experiences only the story itself, as is widely noted in studies of media generally: "Media thrive on their own

disappearance: We do not hear vibrations in the air, but rather the kettle whistling… we do not hear a CD, but rather music; and the cinema screen 'disappears' as soon as the film grips us" (Krämer, 2016, p. 205). Not only does the medium disappear, but so can the world around one. Morgan's reference to going "into their world instead of mine" (10.02.2020) suggests that through this kind of reading, adolescents can leave behind the lifeworld of their everyday experience (the world of their parents and siblings, of a noisy household) and enter into the very different lifeworld of the print fiction they are reading.

Going one step further, these accounts can be seen to very directly illustrate an additional point raised by Poulet. This is found in his characterization of the book as representing another "consciousness [that] is open to me, welcomes me, lets me look deep inside itself… to think what it thinks and feel what it feels" (p. 54). Attention and experience unfold not in the world immediately around one, but instead, somewhere else. This is a place that Poulet further characterizes as being "infinitely more elastic than the world of objective reality. It lends itself to any use; it yields with little resistance to the importunities [or impositions] of the mind" (p. 55). Similarly, Poulet reinforces Iser's (1972) observations that "one is certainly drawn into the text… one has the feeling that there is no distance between the events described" (p. 297). Instead of noise and family interruptions, the world of fiction can simultaneously provide excitement and adventure without significant risk or danger in the experience of adolescents.

But is it really as simple as this? Is it only print that offers a way of getting "into" a text, feeling what its characters feel, thinking what they think? Consider the following description, from frequent print reader Tom, who is recalling an experience from the fourth grade:

I remember it was actually scaring me because in the story it said how it was a rainy day and how it was all gloomy…. I actually thought the things that were happening in the story were happening in real life and it just really brought the story to life. So I think that was like a good reading experience because it brought the book into like reality. (09.23.2020)

At first glance, this account mirrors Tom's rich account of reading in his room while it is raining outside. It was "rainy… and… all gloomy…. I actually thought the things that were happening in the story was happening in real life" (09.23.2020). The world outside of the text in Tom's recollections remains present. (Other adolescents indicated that the world outside remained present aurally. Like Albert, they describe listening to quiet or soft music while reading: "just calm, no words in it, just chill music" [10.27.2020].) They remain present at least in terms of the atmosphere around them, its ability to reflect and magnify the feelings aroused through the text they are reading. This perhaps reflects what Poulet meant in saying that the imaginary world of the book is "infinitely more elastic than the world of objective reality… . yield[ing] with little resistance to the importunities of the mind" (p. 55). At the same time, Poulet and Iser do not include this connection between the outside world and the one inside of the text as the students interviewed for this study. Moreover, it is curious that it is precisely such a connection that is also described in Poe's 1839 "Fall of the House of Usher," when the narrator and protagonist reads a story out loud to Roderick Usher: "A still increasing storm" outside produces, "in its exact similarity of character, the echo (but a stifled and dull one certainly) of the very cracking and ripping sound" being described in a text being read. This particular potential

experience, as Poe's example illustrates, is limited neither to adolescents nor to our present, electronic, digital age in which background music can be easily played.

Another discrepancy comes to light in the context of one adolescent's description of *digital* reading. This comes from Tom, who was described earlier as being cognitively and otherwise active in his task of "understanding" the Poe narrative. Tom further describes an encounter with a digital text in terms of the kind of identification described by the likes of Poulet and Iser. Dallas also describes a digital experience emotionally when he recalls that he was reading a

> digital copy of a book… a horror story…. Someone… one of the characters were getting chased and they were just describing like everything, like their minds racing and how they feel that they're losing breath. I started feeling that as well. (09.29.2020)

In other words, it is possible to experience a story on the screen with an intensity and involvement similar to one encountered on the page. Experiences of print and digital texts are not mutually exclusive. Experiences that adolescents report as common in reading print books (at least of fiction) are also at least *possible* when reading something similar on the screen. This includes the experience of being "into" a text so much that one's awareness of the outside world either disappears or begins to compliment (at least in certain respects) what one is experiencing in and through the text. It also includes the digital medium itself all but disappearing. Here, Dallas only says that he is reading a "digital copy of a book;" and it seems to disappear as Dallas gets "into" the story much like the print readers described above. At the same time, though, it is important to recall Tom's earlier description of a kind of simultaneous awareness of both the interface and

the story being told. In each of these cases, what is important in this context is not (for example) how frequently experiences may appear in the interview transcripts of this study, but rather what *patterns* can be traced. Following the research questions for this dissertation, this analysis focuses on how these patterns vary and what experiential tendencies, possibilities and also impossibilities they might suggest.

To explore experiential patterns of reading further, we can return to Tom's account of reading his Chromebook laptop on his desk:

I like to read at a desk, where I can see everything. I like to read, maybe just when I'm in the mood to not watch TV, but I want to like, see a mystery story or something like that. That's when I end up reading… when I'm on the internet and I stumble across an article that catches my attention then yes I'll read it and get into it and research just cause it caught my attention. (09.23.2020)

Reading for pleasure for Tom, as with at least one of his experiences of reading Poe's short story, again seems to be a matter of access, action, and control. Sitting at his desk, presumably in front of his Chromebook, is an experience in which Tom says he can "see everything." And what Tom ends up seeing from this vantage point are "articles," potential reading experiences that (as he says twice in this short passage) "catch his attention" (09.23.2020). Awareness of the medium and the message are both a part of Tom's experience on the internet, as stumbling across what is presumably both text and images, looking for an article that might "catch his attention." In stumbling and then "end[ing] up reading" an article, Tom can be said to move from an awareness of the computer or internet as a medium (emphasizing action and manipulation) to awareness of the message, the content of the article that he ends up reading. The other terms Tom uses

to describe his engagement and activity on the internet are equally telling. Instead of "watch[ing] TV, "see[ing] a mystery story or something like that," he *watches* for some text that he might catch and presumably fix his attention (09.23.2020). Again, the vocabulary of sight and expansive visuality are at the fore in Tom's description. This perhaps leads him to go so far as to compare seeing a story online with watching TV. However, one reference that suggests the depth and absorption that were observed in adolescents' engagement with print fiction *does* appear when Tom refers to his stumbling and then being caught. At this point he talks about actually "read[ing] and *get[ing] into it* and research[ing]" (09.23.2020). Here, a more passive "watching" becomes a more active involvement and engagement.

Other adolescents describe their experiences of engagement with screens similarly: Jana, who in elementary school received trophies for her reading accomplishments, no longer reads on her "own time for fun." But still, as an adolescent, she clearly prefers print:

> [I] feel like I personally read better if it's like printed out because like digitally like you could see like literally like the whole article and I just get lost. Because I can't like multitask and it sucks. So I just I feel like I read better if it's printed because I can like keep my finger on it or like read the words with my fingers and yeah. (10.06.2020)

Jana, like Tom, says that with digital technologies, visuality is enhanced: the scope of her vision appears to be expanded in remarking that "digitally… you could see… literally… the whole article" (10.06.2020). For Tom, this is an advantage, but for Jana, it is clearly a problem: "Because I can't… multitask and it sucks… I just get lost" (10.06.2020). With

print, however, she implies that she doesn't get lost "because I can… keep my finger on it or read the words with my fingers" (10.06.2020). Although reading with one's finger is a method that should be displaced before adolescence, what is most important here is what the printed page provides to readers: instead of the endlessly refreshing variety of the screen, there is the permanency and stability of the page, words, sentences and paragraph there to read, black on white. What takes the place of metaphors of penetration and depth are now ones of stability and established orientation. This applies not just to Jana's finger following the words, but, as other students make clear, to comprehension and understanding. Molly, for example, compares print and digital experiences by saying that "it's hard for me to focus" when she's reading a digital text (10.02.2020). Molly also adds: "I feel like I focus more when I have an actual book in my hand than on the computer" (10.02.2020). Molly includes a further connection to the unique qualities of printed texts: "I like the texture of books, like I like to hold them. I also like the smell too; like, that's kind of weird, the paper" (10.02.2020). Another student who reads only when compelled to, Antonio, reinforces this focus on tactility and the material presence of the page by describing what happens on the screen: "Well, if I… read online, I'll get distracted easily and I get off of the page" (10.29.2020). Print appears to allow Antonio to literally stay on the space of the page, as is the case for Albert, who was quoted above: I'll "hear my phone chime and then I'll get distracted and I'll just hop off the book" (10.27.2020).

Molly and Mary both commented on the physicality of marking a print text, as well. Molly appreciated the ability to mark on a printed book "because I'm a visual person then I'd like highlight and annotate…. I might write some stuff down like on a

sticky note" (10.29.2020). She is able to ground herself and her thoughts on the physical space of the page. Mary also interacts with the text with written notes on bookmarks and sticky notes: "I'll write a little brief kind of sentence about what I read that day" (10.13.2020).

The printed page and the indelible words on it offer a kind of solid foundation, something experienced as both physically and cognitively fixed in space and time. It provides a secure foothold, a firm grounding where one can get one's bearings, lacking the distractions that might lead one to "get off of the page" (Antonio, 10.29.2020). This is also expressed by reference to "grasp[ing] the book," (Mary, 09.29.2020), by having "an actual book in [one's] hand" (Molly, 10.02.2020). It is something that one can grasp and hold on to, whereas online there are many possible points of focus. In this way, the book and the page within it form a singular focal point, a place where one does not easily lose one's position or grip. Sight and sound are experienced as emanating from various sources, they can be distant; they can reflect and echo and thus deceive. Touch, however, involves direct contact. It is thus the sense that is the final test of the ultimate reality of things. It allows one to experience things otherwise uncertain as tangible, palpable and substantial. Individuals keep "in touch" with each other; they "touch base" and do not want to "lose touch" with reality. As these phrases suggest and as David Heyd (1995) points out, touch is also profoundly intimate, making it "the most private of the senses" (p. 221). Together with smell, the experience of touch can be "difficult to communicate in the public sphere" (p. 220). It is no wonder, then, that after expressing her affinity for the smell and texture of books, Molly can only say "like that's kind of weird" (10.02.2020). The fact that we cannot touch the text behind the screen deprives us of both

the intimacy and certainty that physically printed material brings with it. The digital text is in this sense not palpable; it remains intangible, inaccessible to the one sense that confirms its reality.

Phenomenological studies, such as Rose's (2011; discussed in Chapter 2), express something similar in describing digital texts as seeming "to wear protective shells" (p. 519). It is (like) the sheet of transparent glass or plastic that separates us from the electronics behind the screen, and that renders touch, essentially inoperative. Touch can no longer palpitate; it loses its epistemic value and its potential for intimacy, and is turned into "haptics." It is instrumentalized for command and control. Rose continues by quoting from a university student: "I find it's just the tactile that I can't, you know, touch it, and that's the problem I find with online reading, is that I don't physically have it… it doesn't feel as here as, you know, it's kind of there, it's on the computer" (p. 519).

Affordances: Physical vs. Intellectual

Finally, there are basic pragmatic and functional aspects to adolescents' appreciation of print and its affordances: Marc, who uses either print or digital texts largely for academic purposes, explains: "I prefer to use the hard copy of the textbook because… I could flip through a bunch of pages at one time. We're just having to scroll down 40 pages… that's a big factor"(09.25.2020). Sid also notes that "it's just easier to get to the pages and stuff" when using print (10.20.2020). Students also refer to "folding" pages and otherwise manipulating pages of printed text; Jana comments that printed books can be readily marked: "I have like a bunch of different highlighters, like normally I highlight like the most important things in yellow and then like not as important things in pink and then things that I don't really understand and like green or blue" (10.26.2020).

This description is contrary to Tom's account that he feels as if digital texts are easier to comprehend than print texts, at least for texts that he does not personally own and would be unable to mark up if in printed form:

> I understood the story more just because it was right in front of my face and I could highlight and really breakdown the story so that I think that was different from print text just because I can't do that to a book that I don't own. (09.23.2020)

Jana's and Tom's comments about using highlighters and digital tools to mark texts is echoed by Morgan, who says she prefers annotating digital texts because it "doesn't make your hands as tired" and "I don't really want to fold the pages" (10.02.2020). This highlights the interaction that students described when reading digital texts but also suggests a lack of physical manipulation of the text, such as with Molly's use of sticky notes to leave notes in her print book.

The form factor of the print book means that it can be manipulated and navigated in multiple ways. Moreover, with a print book, it is possible to immediately judge its character or genre, as well as its size and length. These are all communicated in different ways online, for example, by the position and size of scroll bars or the filename. However, these factors are not perceived through multiple senses, as when a reader notices and lifts up a thick book in all of its heft. Awareness of scroll bars and of word and page counts is abstracted and indicated only visually; these things are cognitive, not physical. In addition, scrolling does not provide users with the same immediacy, manipulability and perhaps even intimacy as, say, the tactile experience of flipping

through pages, bookmarking temporarily with one's fingers, or simply turning a book on its front or back to see the publisher and read about the content.

But at the same time, there are students who affirm that digital texts are easier either to handle or to read than their print counterparts: Arthur and Orlando, both of whom generally avoid reading, experience on-screen reading as "more accessible" (Arthur, 10.02.2020) and "more convenient…because you get to use [it] on other devices. It's not like you have to bring it with you [is] what I mean" (Orlando, 10.14.2020). The same online pdf or webpage is available no matter which device you use–or whether you're at home or on vacation. Ron, a reader with habits similar to those of Arthur and Collin, asserts that "texts that are on a screen aren't as boring" (09.30.2020) and Morgan adds, "I think I like the digital textbook better… I can just open it up anytime… I feel like I understand it better when I'm reading digitally… I don't I don't pay attention to them [i.e. printed texts] as much as I would digitally" (10.02.2020). However, only Tom gives a description (quoted above) of how the screen can provide a kind of orientation of its own. However, in Tom's description, this orientation is made regarding an all encompassing workspace rather than grasping something in comprehension or entering a portal to a different experiential realm. This virtual workspace is experienced exclusively through motion and vision, with the emphasis still on action: on taking notes, on breaking down and analyzing the story, on having access to a range of functions and sources.

Attention and Distraction

Students' experiences repeatedly raise the matter of attention. Tom, who prefers digital text, speaks of things getting or catching his attention no less than three times in the quote, all in describing browsing and deciding what articles or shorter texts to read.

Other students, generally favoring print and critical of screen reading, use the word "focus." Collin, for example, says that when "looking at a screen staring at a screen and reading like I lose focus because it's digital and like so if it's paper printed out then like it's easier to keep my focus" (10.25.2020). Abraham, an infrequent reader, reinforces this: "Well for me, I normally get distracted pretty easily. But it's kind of true. It's hard to focus while I'm reading this like there's a lot of distractions" (10.29.2020). Albert, also an infrequent reader but one who prefers print, explains: "But then I like hear something going on or something like or hear my phone chime and then I'll get distracted and I'll just hop off the book" (10.27.2020). The idea that attention is easily lost but that it is something important to try to hold and sustain was important in different cultures long before our age of always-on multimedia. For example, the Chinese-buddhist notion of "monkey mind" (☐ ☐) was coined to suggest that attention is something restless, as always in search of something new.

In students' accounts, attention and distraction are closely related to the media that can work to either hold and sustain it or divert and scatter it. At the same time, their description generally does not indicate directly the cause of their distraction; instead, this is generally only suggested when they talk about their media consumption habits. When asked what online materials he reads, Antonio, for example, responds: "I'm not really sure as be [*sic*] watching like YouTube and stuff" (10.29.2020). Orlando, an infrequent reader, admits: "I really don't do too much reading. Unless you include like internet reading… The only stuff I really read online is like social media, like the news or whatever" (10.14.2020). On the other hand, students more frequently describe experiences with digital text as distracting. When asked if she reads on her phone, Iris, an

infrequent reader, responds "I don't think I'd be able to because [of] distractions on my phone" (09.30.2020). Cassie admits that "I usually like… to have my phone upside down so I don't see any like notifications and get distracted" (10.02.2020). Similarly, Molly describes her attentional accomplishment precisely in terms of resistance to digital screens. "Today I spent an hour reading because… before class, I try not to be on my phone, so I'll read for about thirty minutes" (10.30.2020). Adolescents must pay attention to involuntary interruption and distraction precisely in order to retain their focus on their own studies. Attention, which is already divided in the simultaneous experience of the screen and the story, the medium and the message, is divided yet again. Counterintuitively, it is precisely this division of attention which is required for it to be sustained.

Sustained reading of print texts also has its own challenges, but it seems that what takes students' attention away from the printed pages is different from what distracts them from the screen. For example Molly, who reads print and has a collection of books in her room, remarks: "I have to take breaks between, like, readings because I get tired, like, sleepy" (10.02.2020). And it is only when she takes a break that she will look at her phone: "I had to take a break, like because, I think I read for an hour but I took about, I read for twenty minutes and went on my phone and like went back and then I felt kinda tired from reading for so long" (10.02.2020). Rodney admits that he reads fun stuff in bed, "And then I usually read that or another time would be if I'm just bored when I'm like sitting downstairs or my bed," but that when he is "doing work" he usually does this at his desk "because I can't fall asleep in a chair" (10.13.2020). Similarly Eric, who "likes print books better," observes that reading digital texts at his desk makes him sleepy, as

opposed to a more leisurely experience with a print book: "I'll just sit like on the couch being more relaxed already" (10.16.2020). Abraham, who complained earlier of "lots of distractions" when reading on the screen, notes an important experiential exception: Books make him sleepy: "The difference between reading the digital version is that one, it's keeping you up because like, you're looking at a blue screen. It tends to keep you up more than reading like a novel type of. [he holds up a Tom Clancy title]" (10.29.2020).

The second type of experience–in addition to becoming sleepy–that takes these adolescents away from the printed pages is boredom. Morgan, an infrequent reader, describes her experience with reading in these terms: "I just usually get bored halfway, then I start another book" (10.02.2020). Cassie's experience with reading was similar to Morgan's: "I think I stopped reading because like I got a little bored and I couldn't find books that I like" (10.02.2020). Ron indicates his preference for digital texts when he says, "Texts that are on a screen aren't as boring" (09.30.2020). Simon, who was interviewed in the second phase of interviews after in-person school had resumed, has not read much since elementary school, although he is a successful student who reads to complete his class assignments notes, "If it's like a school book, it gets pretty boring" (9.12.2022). Sid comments that he does not enjoy reading printed texts: "It's boring to me and hard for me sometimes" (10.20.2020). These students expressed a common theme of boredom when reading, often associated with texts they describe as difficult.

Books or print reading, it seems, appear to be much more strongly associated than digital reading in students' experience with boredom and sleep. Indeed, it almost appears that other than what's beeping or popping up on their digital screens, getting tired, bored or falling asleep are the dominant ways in which readers of print "hop off the book"

(Albert, 10.27.2020) or "get off the page" (Antonio, 10.29.2020). Anne Mangen, who has undertaken phenomenological studies of digital reading herself (see chapter two), emphasizes the fixity and unity of purpose of the book as reasons for this difference between screen and page:

> When reading… the text in the book as a static and fixed perceptual phenomenon simply does not provide us with options for attentional switching and for auto-stimulating our attentional response. What we resort to when getting bored by reading a book is usually abandoning the activity altogether. (2008, p. 410)

Whether one is led to boredom or to slumber through one's engagement with print, these outcomes are quite different in nature than the distraction and lack of focus so frequently associated with the screen. Instead of the multiplicity of distractions on screens, the experience of the book or page is structured by only two possibilities: either inside or outside of the book. Thinking of the earlier remark that "media thrive on their own disappearance," it is possible to understand today's smartphones, tablets and laptop computers as never fully disappearing in this way. Just and only because of their processing power and connection to the internet, they always seem to offer something in addition to the activity in which one is already engaged. Mangen (2008) explains the result of this simultaneous multiple functionality for our attention or focus as follows: "when afforded the possibility to click… our attentional allocation is already partly directed towards the haptic intending of clicking, rather than fully directed towards the contents of the text itself" (p. 413). One could say that these computer devices, these media are always at least potentially present, and that attention in using them is in a sense consequently divided. This division is manifest not only in one's awareness of, for

example, a narrative text and the engagement with multiple tools that allow it to be annotated, highlighted, scrolled and analyzed to "breakdown the story" as Tom described (09.23.2020). It is also divided simply by the possibility of *potential* action as well.

Finally, attention is divided still further in reading on these devices. This is clearly captured by Cassie's remark that "I usually… like to have my phone upside down so I don't see any like notifications and get distracted" (10.02.2020). This kind of strategy involves a conscious limiting of the possibilities of media technologies. It is a disciplining of attention that is not specifically mentioned by any other students interviewed. Despite this fact, it is the topic of an ever-growing body of literature, and there are a wide range of techniques and tools that can help students gain this type of control. These range from pre-digital Pomodoro technique through to apps like Be Focused, and to hardware described as "Distraction-Free Writing Tools." The first involves a time management method of alternating focused work sessions with frequent short breaks; the second helps you to accomplish individual tasks by breaking them up into parts and also separating them with short breaks; and the third offers a keyboard and primitive screen together in a configuration deliberately *unable* to access the internet. With the exception only of the last of these, these ways of sustaining and focusing the attention in some ways divide it further: In these two cases, it is precisely the (constant) possibility of distraction to which one must, at least in part, attend.

Print Reading with the Always-on Internet

What might sustained reading look like in a world of multifunctional devices and always-on internet? What kind of experiential possibilities remain? In addressing these

questions and concluding this chapter, it is helpful to consider one final account of reading. This is from Mary, who describes her experiences while on cruises to Alaska:

> So when I go to Alaska, we'll see like glaciers and things like that. So I actually find it like a very nice place to read on like little balconies like that on the ship. So I actually read much better on ships than I do here at home. Because I find it easy to read on the planes, too. I do. Yes. Because my mom likes to go to shows, my sister, well, I don't know what she does. She just kind of watches TV, I guess and then I'm I'm off to do my book reading. I just have to be comfortable reading. And they always have different kinds of chairs so you can pick whichever chair you want and get comfortable. I can bring blankets out and pillows out to... the balcony. The majority of at Sea days is when I get most reading done.
>
> (10.13.2020)

Mary reads print books on cruises she takes every year with her family. On "sea days," as the ship slowly glides past mountains and glaciers, she finds a place alone where she can get comfortable, where bodily distractions are minimized. "I just have to be comfortable reading," she says (10.13.2020). Mary's experience here is reminiscent of the absorption and immersion that Tom and Dallas described earlier in this chapter. Also as noted earlier, this immersion, this retreat from the outside world is not necessarily total. The world, the cushions and the ship's passage through the water is still in some sense present, namely in terms of its atmosphere, its ability to reflect and possibly magnify the feelings aroused through the text.

Like Tom, Morgan and other absorbed readers (of print fiction) in their bedrooms, Mary is also in a private place, a kind of cocoon, a retreat. It is in such safe but

psychologically charged spaces that, as noted earlier, a key developmental task of adolescence can be undertaken. This is characterized by Grauer (2002; quoted above) as "identity work," defined as "the process of creating a sense of self… of creating and expressing personal identity …in the context of the immediate and larger social world" (p. 88). "In this context," Grauer continues, these spaces can be conceived of as mediating devices, a term used by Vygotsky… and others to describe… sites of exploration of self and identity" (pp. 89, 90).

It is not too much to say that the engagement with fiction, particularly in print form, can be an important part of this exploration process; texts, too, can be mediating devices. The potential of this kind of reading in these safe but experimental spaces is illustrated in adolescents' vivid recollections of reading experiences within them. As described above, it is through these experiences that adolescents can co-construct alternative worlds and safely experience atmospheres of excitement, danger, horror or mystery. In these contexts, things like mood music, slow movement of the ship, or the sound of rain outside seem to help in the creation of these kinds of experiences.

Finally, unlike, say, Molly or Cassie, Mary's reading experience on the ship is likely rendered all the more possible or likely by the fact that on most cruise ships (as on most flights), free and constant internet access is *not* available. Whereas Molly and Cassie deliberately limit access to their internet-connected smartphones, on cruises and flights, this limitation is done for you. Internet access in these contexts is available for a price and only for a set period of time. Of course, it is beyond the scope of this chapter to consider the role of ambient, always-on internet in greater detail. But this final

description illustrates, together with Molly and Cassie's accounts, the richness of the experiential possibilities available when instant internet access is *not* available.

Chapter Summary

The students whom I interviewed described very specific and distinct reading experiences, but there were underlying patterns involving the format of the text, whether digital or print, as well as the level of absorption and engagement. The experiences described by students are closely related to the format of their reading selection; printed books and digital books are experienced differently by readers, although there are some areas of overlap. Digital texts are connected with a shorter but more active reading experience, while printed texts are related to an experience often more leisurely and absorbed. Digital texts were also related to a more cognitive experience; the students in the study had become accustomed to reading digital texts to complete academic assignments. However, their memories of reading printed texts were often connected to pleasurable childhood experiences, likely long before their teachers had begun assigning digital text assignments. Printed texts are also associated with an ability to block out environmental and other distractions, such as with Morgan's feeling that the house is quiet while she reads, even though she knows that it is actually quite noisy.

Students described their interactions with both print and digital texts in ways that made it clear that they see value in reading strategies such as annotation. Students described with pleasure how they wrote on sticky notes or bookmarks and used those notes as they read printed books, while other students utilized digital tools to highlight and take notes and expressed appreciation that they could mark up borrowed and school texts. In fact, adolescents' experiences of digital texts were often dominated by their

ability to utilize digital tools to interact with the text and to seek further information; the screen was seen as a workspace more than as a portal to another world.

The locations of students' reading experiences were also diverse, and in many cases, the reading location was integral to the experience. The bedroom, in particular, was often where adolescents read most frequently, and in many cases, their bedroom served a dual purpose and was the place where students attended class during distance learning as well as where they participated in the virtual interviews for this study. These layers of significance as well as the role of the bedroom in the context of adolescent development highlights the importance of private reading for pleasure in the lives of young people.

The lived experience of reading a digital text seems to conform to certain boundaries that adolescents establish regarding the purposes and usages of print and digital materials, as well as digital devices. Some students use their phones exclusively for social media, for example, or only read certain types of texts on their phone or Chromebook. It may be that digital devices are reserved for specific purposes, such as Rodney's preference for reading short news articles on his phone, while enjoyment of long-form text may be connected with the feel of holding a printed text. Students may feel more comfortable with digital texts in the familiar context of articles or social media. The students seem to be able to comfortably utilize digital devices in order to accomplish school-related tasks for the most part, but it seems that reading that is immersive and is done for enjoyment are intimately connected with printed texts.

CHAPTER FIVE: CONCLUSION

Given that education is increasingly utilizing digital texts and digital assessments, this study is both timely and important. Not the least of the reasons for its importance is the list of long term benefits associated with reading. According to a study by Stuart Ritchie and Timothy Bates (2013), reading ability in children is positively correlated with greater success in school and in life. Children who experience enjoyment in reading, who discover that "it can be a fun way to explore different places and life experiences," are more likely to spend time on reading and become more proficient (Williams, 2019, para. 5). But young people are reading less than ever before (Ducharme, 2018; Ferguson, 2020; Clark & Teravainen-Goff, 2020; Twenge et al., 2019) and overall literacy is declining among youth (Clark & Teravainen-Goff, 2020; Rideout & Robb, 2019). The experiences that my students described revealed ways in which they view the world of reading and themselves as readers. In order for them to continue to develop as readers, it is critical that they have a positive view of reading and of their own reading abilities and experiences. It is clear from the research reported on here that many adolescents have had positive experiences of reading as children between the ages of 10 and 12. It is also clear that these teens would benefit greatly from "recovering" and "reconstituting" these childhood experiences of reading so that they can develop their own mature reading habits and become both lifelong readers and contributing members to society. Jana, in particular, seemed as if the physicality of a printed book could bridge a return to her childhood reading practices.

Studies have found that digital affordances can interfere with reading comprehension and with the overall experience (Dobler, 2015; Hillesund, 2010; Rose, 2011; Shapiro & Niederhauser, 2004); my research confirmed these results, but other studies found that there were no significant differences between print and digital comprehension (Chen & Chen, 2014) or that experience with digital tools or the use of strategies such as collaborative reading could reduce or eliminate any discrepancies that were found (Carr, 2010; Eshet-Alkalai & Geri, 2007; Liu, 2005). My research also indicated that these kinds of complexities also characterize the reading experience of my former students.

In the previous chapter, students such as Albert, Mary, and Tom described how they had developed their own personal reading habits. For example, several students preferred to read in the bedroom, and most students had developed personal preferences for either shorter texts or extended length texts. To have these kinds of habits, however, requires that students have access to books and likely also to a minimum of privacy. Adolescents who enjoyed their own private bedroom space and had books in their home to show me were likely to tell me about time spent reading, while students who participated in the interview from a noisy space with no books to show did not discuss time they had spent reading for pleasure. This dissertation suggests that the experience of having one's attention grounded in the stability of the print text, and correspondingly, experiences of depth and absorption, needs to be cultivated for adolescents. Schools and teachers should foster these kinds of situations as much as possible by providing a wide range of reading material for students to choose from and also by providing comfortable reading locations that are at least semiprivate.

The students whom I interviewed described very specific and distinct reading experiences, but there were underlying patterns involving the format of the text as well as the level of absorption and engagement. Students tended to be more descriptive about their reading habits and experiences during the first phase of the study, possibly because of an abundance of free time related to COVID-19 restrictions. The initial study participants also represented a wider range of attitudes towards reading, but it was possible that students felt pressure to describe positive aspects of reading in an interview conducted by their classroom teacher. Students who *did* read often described their reading experiences as drawing them into a different world, an experience in which they seem to no longer perceive the page or screen itself or the world around them but the world described in their reading. Some students incorporated elements of their environment into their experience, while others perceived the world of the text as sensorially rich, smelling and hearing things that were only in the text. Through this ability to be transported experientially to another realm, adolescents can participate in excitement and adventure or expand their knowledge and awareness without requiring any actual danger or travel.

While at least one student reported experiences of immersion in reading a digital text (Dallas's feeling of tension while reading a digital copy of Edgar Allen Poe), the majority of absorbed experiences were associated with print reading. As with Albert's experience of "build[ing] this character in my head" (10.27.2020). while reading a print book, my students tended to have more absorbed reading experiences with printed books, synthesizing the world of the book with what they already knew of the real world in a

"convergence of text and reader [which] brings the literary work into existence" (Iser, 1792, p. 279).

Print Experiences

In terms of the first research question–"What are adolescent students' experiences of reading print texts?"–I found that my students' experiences of reading print texts were complex and diverse. As already suggested, printed text was more likely to be associated with more immersive and longer forms of reading, and all of the students who described an experience with reading novels or other extended-format texts did so in a printed form. Many of the students, including Jana and Marc, seemed to have mostly stopped reading printed texts for pleasure now as teenagers, although others, such as Albert, seemed excited to be able to enjoy new reading experiences. For still other students, such as Antonio, their most recent experience with reading a print book was an assigned text for their English class. It is telling that in Antonio's case, he could not recall the title of the book that he had read the previous year, *To Kill a Mockingbird*.

Other students, such as Mary and Molly, described their print reading experiences in detail, indicating the titles, showing me books, and talking about how the experience made them feel. Molly, for example, was proud to show me books that her parents had bought for her and that she had either enjoyed recently or planned to begin soon. Molly also moved her computer's camera to show me a bookcase located behind her computer and told me about the books downstairs in her home, some of them belonging to her mother, that Molly also enjoyed reading. These students were able to benefit from having a personal selection of books that they could choose from when developing their own mature and private reading habits. Students such as Mary, reading in a private location on

a cruise ship, describe experiences of intimacy, immediacy, and privacy that seemed to be associated with print reading. It is significant that there was no readily available Wi-Fi on the cruise ship, as on flights, in Mary's description of her favorite settings for reading. This is worth paying attention to, but it was not an explicit focus for my study.

Printed texts provide a stability and permanence that allow students to focus and literally stay anchored to the page while reading, in contrast to the digital display, which finds its raison d'être in updates and interaction. The permanence of a physical page facilitates an experience in which students say they are able to be able to "grasp" the text, while simultaneously blocking out distracting sights and sounds. In confirmation of findings by Evans (2017) this dissertation study found that the physicality of a printed text, involving physically turning pages and holding a paper book, is preferred by adolescents who still read for pleasure (Evans, 2017). Those who were active readers among the adolescents interviewed asserted, for example, that they "grasped the book better" in print. Others were even more literal, saying "I like the texture of books, like I like to hold them" or "When I have… a book I can, like, see the words" (Molly, 10.02.2020). Students who read print texts were often deliberately seeking an escape from the world around them, such as with Albert's description of reading under the tree in his yard (10.27.2020) or Mary's escape to an out of the way corner of a cruise ship (10.13.2020). At other times, students who read print texts may not have been actively seeking an escape but the world of a printed text brought them in all the same. This is suggested by Tom's description of how the weather and reading experience combined and "really brought the story to life" (09.23.2020) or Molly's experience of "second hand embarrassment from, like the characters and stuff" (10.30.2020).

Digital Experiences

My second research question focused on the other side of the divide between page and screen: "What are adolescent students' experiences of reading digital texts?" Digital texts were more likely to be associated with shorter and less engaged experiences; students were often able to maintain a greater degree of awareness of the outside world and of the digital reading platform itself. Unlike immersion in or through the print book, the experience of the screen was one where students remained aware of both medium and message. In some extreme cases, this involved feeling physical discomfort such as eye fatigue. Mary, for example, reported that "my stomach kinda hurts" when reading digital texts (09.29.2020). On the other hand, digital reading supported less traditional reading habits, such as locating information quickly using the search function or locating the facts of a news story, as with Rodney's comment, "I just go in my phone and just search up something" (10.13.2020). Perhaps because digital media so explicitly invites activities of searching and scanning, readers of digital texts may do these things in place of reading that is sustained and absorbed.

The students who enjoyed reading digital texts, such as Rodney and Marc, described an active "doing" across multiple windows that was akin to "consuming" information from tabs or windows that kept them occupied with different tasks associated with the principal text they were reading. Unlike the print novel readers, their reading activity was not focused on a single linear path guiding them through the developments of a story; instead, reading activity appeared to be combined with significant action and interaction, likely tracing recursive, branching paths. Often, readers of digital texts were engaged in locating something of interest or needed information, while students who read

shorter works in a digital format enjoyed options such as hyperlinks and search functions. Students who read digital texts, however, seemed to be exposed to multiple sources of information simultaneously, such as with multiple browser tabs. These both allowed students to actively manage their information gathering activity and also served as a potential hindrance to their ability to focus on a single task.

In general, students who experienced digital texts were more likely to remain aware of the world around them and of their own engagement with the text. As mentioned, students who read digital texts often retained awareness of both the medium and the message, actively searching for and evaluating an article or locating information and utilizing digital tools to allow them to complete reading-related tasks in a minimal amount of time. My students generally spoke of things such as the external reading conditions, their interactions with the text, or the convenience of digital tools.

Some students described distracted reading experiences in which they had difficulty focusing on the text. Phones were described as particularly distracting, and students who wished to remain focused, such as Cassie, reported turning their phone over or otherwise making their phone less ready to hand in order to not be distracted (10.02.2020). Molly also commented on her strategy for focusing on reading without the distraction of her phone: "Before class, I try not to be on my phone, so I'll read for about thirty minutes" (10.30.2020). Students who become distracted while reading printed texts often report feeling bored, while students who become distracted while reading digital texts often seem to be distracted because they were never immersed or particularly focused to begin with; their attention is already divided by the actions of clicking and

scrolling, their continued awareness of the medium itself, and perhaps also their desire to avoid distraction itself.

For some students, digital reading is an uncomfortable experience, something they did not want to engage in for any length of time. Evans (2017) and Taipale (2014), for example, report concerns such as headaches and eyestrain. These feelings of physical discomfort can constitute a roadblock to immersion in digital reading tasks; students who are preoccupied with feelings of distress are unlikely to be absorbed by the fictional world contained in a book. The experience of being absorbed is such that one cannot at the same time be experiencing overt discomfort. As Mary put it, "I just have to be comfortable reading" (10.13.2020).

It also appears that there was an increased cognitive load when reading digital texts. For example, Molly commented that navigating a digital text, at least on a small screen, involves "scrolling and scrolling," which can place a greater demand on memory and recall (Coiro & Dobler, 2007). Students may require more time to evaluate the quality of uncurated digital texts, which can also be a barrier for memory and comprehension (Bråten et al., 2020). As indicated in Chapter 4, the task of "sizing up" a digital text cannot rely on concrete characteristics like size, weight, or ready access to a cover image. Instead, it often requires more abstract tasks like checking the size of scroll bar tabs, parsing the URL, or simply looking for errors in spelling, grammar, and formatting. Different text structures as well as a disruption of natural eye movements can both contribute to a lack of comprehension or feeling of frustration–a common finding in the literature (Coiro & Dobler, 2007; Cull, 2011; Shapiro & Niederhauser, 2004).

On the other hand, some students appeared to prefer reading shorter digital texts such as articles, confirming an earlier 2014 finding by Taipale. Shorter texts may involve less scrolling and clicking; they almost always allow for searching across paragraphs rather than requiring sustained linear reading or scanning. When reading a digital text, the search function "facilitates reading, you don't need to read everything" (Taipale, 2014, p. 12). It is clear that this was an important part of the digital reading experience for a student like Rodney, who described his experience with trying to complete school work on his Chromebook: "I just get sidetracked and just search up news…. Shorter things tend to get my attention more than longer articles" (10.02.2020).

Differences and Similarities

My third research question allowed me to explore commonalities in how my students utilized print and digital texts, as well as to provide awareness into how the formats are experienced as dissimilar for my students: "How are adolescent students' experiences with digital texts similar to or different from experiences with traditional print texts?" The students with whom I spoke had developed strategies for navigating both print and digital texts, and they could typically successfully complete their school assignments with either format. Their experiences with digital texts, however, were often more transactional than their experiences with print; students read to accomplish a goal, rather than for pleasure, as an end in itself. If there was an easier way to accomplish the goal such as by skimming or searching, students were likely to take the shortcut.

As noted by Martinez and his colleagues (2019), students "engaged in self-regulation of learning through their purposeful selection of reading material that met their unique goals for reading" (p. 62). Students who read in order to complete tasks, such as

Rodney's goal to quickly locate articles about current events (10.02.2020) or Cassie's need to easily navigate her Bible (10.02.2020), are able to successfully utilize the affordances of digital texts, while students who pursue a more nuanced and immersive reading experience, especially one involving long-form text, are more likely to enjoy the experience of reading printed texts.

I think that I assumed that because digital materials are much easier to acquire, especially in pandemic or post-pandemic conditions, my students would be more engaged with digital reading. What I found, though, was surprising; my students generally preferred printed materials for extended texts, in large part, although they choose to read shorter texts nearly exclusively in digital form, and often on their phones. This is confirmed in the research, which shows that adolescents prefer printed text for extended reading tasks (Baron, 2015). Students who described experiences with extended works of fiction such as novels nearly universally were reading print texts, while students who described their experiences with shorter texts such as articles were consistently reading those texts in a digital format. Additionally, those formats were typically an intrinsic part of the experience; students who read printed texts and longer works relied upon physical cues such as flipping through pages, or as Molly commented, "I might write some stuff down like on a sticky note" (10.02.2020) or Mary, "I'll write a little brief kind of sentence about what I read that day" on either a sticky note or a bookmark (10.13.2020). Several students, such as Molly and Jana, relied upon these types of physical manipulation and navigation of a printed text, while other students utilized digital annotation tools to accomplish similar tasks. Students who were less engaged readers or

nonreaders appreciated digital affordances that allowed them to avoid or manage longer

reading tasks.

Supporting Diverse Learners in an Educational Context

The students wanted to talk - a lot - and they wanted to talk about reading. My

own experiences with adolescents support the idea that students are more likely to engage

in reading and academic behaviors if they can see that other students enjoy these

activities, and it is important for students to be able to connect with others who share

their interests. Because adolescents often enjoy using social media and connecting with

their peers, social media and other types of online book clubs in addition to traditional

face to face book clubs can help students connect with other readers and extend their

reading.

I am curious to know how much of this willingness to talk to me during the

interviews stems from a lack of social connection. For the initial group of students

interviewed for this study, it is possible that due to the stay at home orders and COVID-

19 restrictions that had been in place, many of these students saw few people outside of

their home. It also seemed that perhaps some of my students were willing during these

exceptional circumstances to reconnect with the pleasure that they had experienced while

reading in childhood, perhaps by exploring digital texts. Both print and digital texts can

provide opportunities for students to come together, but in today's post-COVID context,

students may feel differently about using digital reading tools to connect virtually. The

last few students whom I interviewed, more than a year after most of the COVID

restrictions had ended, seemed to have the same level of comfort with both print and

digital texts as the students I had interviewed previously; one openly expressed a

disinterest in reading for pleasure, while the others preferred printed texts. However, these same students often read digital texts for reasons of convenience. The majority of students have returned to traditional face-to-face school with a mix of print and digital texts, including all of the students whom I interviewed, but I currently work with students who feel more comfortable participating in online school; nearly all of their assigned reading is online, and I also facilitate a virtual book club for my online students.

Because reading digital texts is different from reading print texts, and because students may have a preference about either format, genre, or both in their reading (Martinez et al., 2019), it is important to offer a variety of reading materials in both print and digital formats. Students are differently motivated, and students may find technology either challenging or engaging (Loh & Sun, 2019). To best support all learners, libraries and classrooms should contain various types of reading materials that are both current and appealing. Students often prefer to read shorter texts in a digital format, while longer texts are preferred in a print format (Taipale, 2014), and students should be encouraged to develop their own ability to self-select appropriate reading materials.

As Hunsberger (1982) states, it is important for young readers to engage actively in positive reading experiences; reading is not a passive experience. In order for adolescents to enjoy reading, they must be proficient, and proficiency requires extensive practice (Duncan et al., 2016). Unfortunately, by the time they reach adolescence, young people are less likely to read and less likely to enjoy reading: "Children and young people's levels of reading enjoyment decreased between 2016 and 2017/18," and the percentage of respondents who read for pleasure continues to decline, "dropping sharply by 5 percentage points from 30.8% in 2017/18 to 25.8% in 2019" (Clark & Teravainen-

Goff, 2020, pp. 2-5). Research shows a connection between reading motivation, reading

engagement and frequency, and reading comprehension (De Naeghel et al., 2012);

students who lack motivation, perceive themselves to be poor readers, or spend little time

reading in early elementary school often spend even less time reading in later elementary

and middle school. The result is a vicious cycle: not reading reinforces an avoidance of

texts of all kinds, while reading regularly allows for sustained reading for pleasure, and

this fosters ever greater proficiency.

In a contemporary context that requires a level of digital literacy to accomplish

routine tasks such as obtaining a driver's license or applying for a job, as well as to

perform in computer-based high-stakes testing, students benefit from gaining proficiency

in navigating and reading digital texts. Exposure to both print and digital texts as well as

to the devices used for digital reading tasks can improve comprehension for readers in

both formats (Lauterman & Ackerman, 2013). Young readers who have experience with

a particular reading technology are more likely to comprehend digital texts than older

readers without the same experience (Eshet-Alkalai & Geri, 2007), a finding that perhaps

provides some justification for ideas like "digital natives."

Because of the importance of literacy skills and the roles that reading and literacy

play in the larger culture (Cull, 2011; Gee, 2010), educators and families should be

involved in fostering positive reading experiences. Additionally, students should be

provided with explicit instruction in digital literacy and authentic opportunities to

practice those skills, such as with employment and higher education documents.

Technology may also be able to help narrow the achievement gap with accessibility

features such as text to speech and speech to text, particularly when used to develop

comprehension skills or an interest in reading. The availability of digital texts as well as digital affordances make it more possible for all students to access learning and educational materials.

Reading is far more than an academic activity, however; the ultimate goal of providing instruction and support for students is to help them develop agency and their own sense of themselves as readers, as well as to develop the skills that will help them participate fully in the larger culture of their community and society as a whole. Educational technology provides a host of tools that can help students "consume" digital texts such as text to speech, but in the interests of helping students develop reading proficiency and feel comfortable as adult readers it may be more important to teach students to focus on the text itself, an experience which print texts so readily provide.

Suggestions for Future Analysis

There is a need for further research in adolescent experiences of reading, especially in this current educational era in which more students than ever before have digital texts readily available, both in an academic setting and for personal reading. Digital reading requires a complex blend of skills that differ significantly from the skills required to read printed text and include technical, cognitive, and social emotional digital literacy skills (Aviram & Eshet-Alkalai, 2006). Further analysis is needed to explore the connection between age and digital reading strategies and to determine how best to support all readers.

Additionally, difficulty with comprehension and critical thinking related to the increased cognitive load of digital texts (Eshet-Alkalai & Geri, 2007; Fesel et al., 2018; Noyes & Garland, 2008; Wolf et al., 2009) needs further study, as well as investigation

into how these challenges can be addressed in educational settings. Students with specific learning disabilities can benefit from the use of digital text affordances (Dalton & Proctor, 2007), but more research is needed to determine how best to support these learners with available print and digital resources.

More investigation is essential to determine the nature of the experiential differences between print and digital reading and their relationship with genre and reading purpose. More research regarding the differences between print and digital reading may help determine if students could benefit from explicit instruction in how best to select and benefit from both print and digital texts.

Final Thoughts

It is necessary to support adolescent readers so that they can develop their own individual reading habits and strategies as a foundation. For example, young readers should have a semi-private and comfortable reading location and sufficient time for reading, and schools should budget for an abundance of materials to facilitate this, including print materials that invite sustained and absorbed reading. In an elementary classroom, students often have a bookcase from which to select reading materials as well as a reading corner with comfortable seating. In middle and high school, however, with multiple subjects and extracurricular activities demanding time and attention, adolescent readers may not have the time or physical space to read for pleasure. Educators should talk to students and encourage them to read in their rooms or in other quiet places so that they can have a distraction-free environment in which to read, and they should also provide a selection of books, as well as a comfortable reading location in the classroom and time for reading built in the daily school schedule. Additionally, students should be

able to mark in these materials and be given sticky notes for additional notes and comments, in order to invite adolescents to "own" their reading in a way common among adults but often frowned upon for younger readers.

Another tool that educators can use to support students in reading for pleasure is to help students recall their earlier reading experiences. Several students in my study had very positive memories of reading in elementary or middle school, and they commented that recalling those memories made them want to get back into reading. In particular, Albert highlighted the importance of recalling youthful reading: he was able to resume reading for pleasure after recalling the pleasure he had felt reading when younger.

Students should be exposed to both print and digital texts in their coursework, but they should also be given strategies for how to manage different types of reading tasks and eliminate digital distractions. As my students discussed, it is easy for readers to fall prey to digital temptations such as notifications, and struggling readers may suffer the most from distraction. Creating a space in which these distractions are managed, for example by having procedures for the use of phones during reading and study time, can help students learn to self regulate and manage the digital distractions in their lives. Educators should also incorporate digital literacy education so that students can quickly evaluate credibility and purposefully choose and navigate digital texts, including social media and new stories. Students are aware of the need to be critical of online sources and information, but they are not always skilled in this area.

In order to help adolescents to become lifelong readers and learners, educators and other adults need to be deliberate in supporting students in developing their own personal reading habits. Students who are able to make choices about reading materials

and the locations in which they read are more likely to continue reading, developing

skills and habits that will assist them in becoming contributing members of the larger

community. Educators in elementary school are deliberate about encouraging and

motivating students to read independently, but as this study demonstrates, the importance

of supporting leisure reading continues into high school. During these formative years,

when many students become preoccupied with athletics and social activities, adolescents

can benefit from remaining connected with or reconnecting with the reading experiences

of earlier years.

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APPENDIX A

Informed Consent

B

BOISE STATE UNIVERSITY

INFORMED CONSENT

Study Title: Digital Reading at the Secondary Level
Principal Investigator/Faculty Adviser: **Co-Principal Investigator:**
Dr. Norm Friesen   Melissa Brown

Dear Parent/Guardian:

My name is Melissa Brown and I am a doctoral student in the Educational Technology program at Boise State University. I am asking for your permission to include your child in my research. This consent form will give you the information you will need to understand why this study is being done and why your child is being invited to participate. It will also describe what your child will need to do to participate as well as any known risks, inconveniences or discomforts that your child may have while participating. I encourage you to ask questions at any time. If you decide to allow your child to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

➢ **PURPOSE AND BACKGROUND**
➢ As you know, Beaumont Unified School District has a focus on 21st century learning and technology. As part of my dissertation, I would like to survey and interview my students about their digital text experiences and how they use digital texts.

➢ **PROCEDURES**
➢ This study will include a survey and/or an interview with your child about their digital reading experiences, as well as an analysis of their course work. This study will not require your child to do anything above and beyond what they would be doing in class anyway, except for the completion of a short survey and interview. If you choose not to allow your child to participate, they will remain in their assigned class, but they will not be surveyed or interviewed, and copies of their course work will not be analyzed.

➢ Your child will be surveyed and/or interviewed by the researcher with a focus on digital text experiences. Interviews and surveys will be conducted and noted without interrupting the flow of teaching, and will only apply to those students for whom consent is received. However, those students who opt out of the study will receive the same teacher attention as any other students in the class. Students who opt out of participation will still engage in the

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same learning and activities as students involved in the study and will experience the same instruction. At no time will your child be separated from peers or the teachers.

➤ RISKS/DISCOMFORTS

Your child may feel uncomfortable being surveyed and/or interviewed, but all information will be recorded anonymously. You are able to remove your child from the study at any time and your child will continue to receive quality English instruction in this class.

➤ EXTENT OF CONFIDENTIALITY

Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Boise State University Office of Research Compliance (ORC) may access the data. The ORC monitors research studies to protect the rights and welfare of research participants.

Your name will not be used in any written reports or publications which result from this research. Data will be kept for three years (per federal regulations) after the study is complete and then destroyed.

➤ BENEFITS

➤ There will be no direct benefit to your child from participating in this study. However, the information gained from this research may help education professionals better understand how students engage in digital reading activities.

➤ PAYMENT

➤ There will be no payment to you or your child as a result of your child taking part in this study.

➤ QUESTIONS

➤ If you have any questions or concerns about participation in this study, you should first talk with the investigator Harrison Ford or his advisor, Dr. Norm Friesen, at (604) 754-1856.
➤ If you have questions about your rights as a research participant, you may contact the Boise State University Institutional Review Board (IRB), which is concerned with the protection of volunteers in research projects. You may reach the board office between 8:00 AM and 5:00 PM, Monday through Friday, by calling (208) 426-5401 or by writing: Institutional Review Board, Office of Research Compliance, Boise State University, 1910 University Dr., Boise, ID 83725-1138.

DOCUMENTATION OF CONSENT

I have read this form and decided that my child will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I will discuss this research study with my child and explain the procedures that will take place. I understand I can withdraw my child at any time.

_____

Printed Name of Child

_____   _____   _____

Printed Name of Parent/Guardian   **Signature** of Parent/Guardian   Date

_____   _____

Signature of Person Obtaining Consent   Date

Assent for Students

B
BOISE STATE UNIVERSITY

ASSENT FORM

Study Title: Digital Reading at the Secondary Level
Principal Investigator: Dr. Norm Friesen   **Co-Investigator:** Melissa Brown

Hello! My name is Melissa Brown and I am a doctoral student in the Educational Technology program at Boise State University. I am conducting a research project for my dissertation. This form will give you the information you will need to understand why this study is being done and why you are being invited to participate. It will also describe what you will need to do to participate as well as any known risks, inconveniences or discomforts that you may have while participating.

I encourage you to ask questions at any time and to talk to your parents about participating. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

➢ **PURPOSE AND BACKGROUND**
As you know, Beaumont Unified School District has a focus on 21st century learning and technology. As part of my dissertation, I would like to survey and interview my students about their digital text experiences and how they use digital texts.

➢ **PROCEDURES**
This study will include a survey and/or an interview by the researcher about your digital reading experiences, as well as an analysis of your coursework. This study will not require you to do anything above and beyond what you would be doing in class anyway, except for the completion of a short survey and interview. If you choose not to participate, you will remain in your assigned class, but you will not be surveyed or interviewed, and copies of your coursework will not be analyzed.

➢ **RISKS/DISCOMFORTS**
You may feel uncomfortable being surveyed or interviewed, but all information will be recorded anonymously. You may also stop your participation in the study at any time and you will continue to receive quality English instruction in your class.

➢ **EXTENT OF CONFIDENTIALITY**
Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Boise State University Office of Research Compliance (ORC) may access the data. The ORC monitors research studies to protect the rights and welfare of research participants.

Your name will not be used in any written reports or publications which result from this research. Data

will be kept for three years (per federal regulations) after the study is complete and then destroyed.

➢ **BENEFITS**

There will be no direct benefit to you from participating in this study. However, the information gained from this research may help education professionals better understand how students engage in digital reading activities.

➢ **PAYMENT**

There will be no payment to you as a result of taking part in this study.

➢ **QUESTIONS**

If you have any questions or concerns about participation in this study, you should first talk with the investigator Melissa Brown or her advisor Dr. Norm Friesen at (604) 754-1856.

If you have questions about your rights as a research participant, you may contact the Boise State University Institutional Review Board (IRB), which is concerned with the protection of volunteers in research projects. You may reach the board office between 8:00 AM and 5:00 PM, Monday through Friday, by calling (208) 426-5401 or by writing: Institutional Review Board, Office of Research Compliance, Boise State University, 1910 University Dr., Boise, ID 83725-1138.

DOCUMENTATION OF CONSENT

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I understand I can withdraw at any time.   I have received a copy of this form.

I understand that I can choose not to participate in this study, or to withdraw from participating at any time. Declining participation will not interfere with my learning experiences in my classroom. I understand that by not participating in this study, I will be provided with the same activities and experiences as all other pre-calculus students.

_____   _____

Printed Name of Study Participant   **Signature** of Study Participant   Date

_____   _____

Signature of Person Obtaining Consent   Date

APPENDIX B

IRB Application

DIVISION OF RESEARCH & ECONOMIC DEVELOPMENT
Office of Research Compliance |Institutional Review Board
(phone) 208.426.5401 | (fax) 208.426.2055
humansubjects@boisestate.edu | MS 1138

EXEMPT PROTOCOL APPLICATION

INSTRUCTIONS
• The application must be typed. **Handwritten applications will not be accepted.**
• **All Questions MUST be answered.**
• **SUBMIT COMPLETED APPLICATION TO: HUMANSUBJECTS@BOISESTATE.EDU**

SECTION A: General Information		
1.	Project Title:	EXPLORING DIGITAL AND PRINT TEXT EXPERIENCES OF ADOLESCENT READERS

2.	Anticipated Start Date:	8/1/2022	Anticipated End Date:	12/15/2022

3. **PRINCIPAL INVESTIGATOR (PI)** (Refer to the IRB PI Eligibility requirements. IRB staff will confirm your eligibility. Graduate thesis or dissertation students MUST list an eligible PI as their co-investigator)

Nam:	Dr. Norm Friesen					
Title:	☒	Full Professor	☐	Associate Professor	☐	Assistant Professor

☐ If you fall into any of the titles in the grey box below, you must have an eligible PI listed as your Co-I.			
☐ Adjunct Faculty		☐ Visiting Faculty	
☐ Instructor/Lecturer		☐ Staff	
☐ Graduate Student—Thesis		☐ Graduate Student—Dissertation	
Department:	Educational Technology	Phone:	604 754 1856
E-mail:	normfriesen@boisestate.edu		
Roles and responsibilities in this study:			
Dr. Friesen will be the faculty advisor for this study, providing feedback throughout the process.			
CITI Training Completed:	☒ Social & Behavioral Researchers	☐ Biomedical Researchers	

4.	CO-INVESTIGATOR (IRB staff will confirm your title with the directory.)				
	Name:	Melissa Brown			
	☐ Full Professor		☐ Associate Professor		☐ Assistant Professor
	☐ Adjunct Faculty		☐ Instructor		☐ Staff
	☒ Graduate Student		☐ Undergraduate Student		
	☐ Other:				
	Department:	Educational Technology		Phone:	604-754-1856
	E-mail:	Melissabrown95@boisestate.edu			
	Roles and responsibilities in this study:				
	I will be designing the study, conducting the research, and documenting my findings.				

	CITI Training Completed:	☒ Social & Behavioral Researchers	☐ Biomedical Researchers

5.	Do you have additional research personnel (Co-Investigators, key personnel, student research assistants, etc.)?
	☒ NO
	☐

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To list additional investigators and/or key personnel, complete and attach an ADDITIONAL PERSONNEL form.

SECTION B: Financial Conflict of Interest Disclosure	
Conflicts of interest must be disclosed in accordance with the Boise State Conflict of Interest and Commitment Policy #1110.	

1.	Do any investigators (PI, Co-Investigator) or research team members (key personnel) have any relationship or equity interest with any institutions or sponsors related to this research that might present or appear to present a conflict of interest (COI) with regard to the outcome of the research?
	☐ NO POTENTIAL CONFLICTS EXIST
	☒ YES:

2.	Name of the person(s) with the potential COI:	Melissa Brown
	☐ This potential conflict has been disclosed to the Boise State Conflict of Interest Office via the electronic disclosure form: https://web.boisestate.edu/conflictofinterest/app.html.	
	☒ This conflict has not been disclosed to the Boise State COI Office.

The above link is broken, and I am unsure of where to disclose a potential conflict of interest. I am a teacher in the school district where this study takes place, and the study participants are my students in an independent study program. | |

> **Note: If a significant conflict of interest exists, you must also attach the Boise State COI Committee approved management plan.** If you have questions about conflicts of interest, contact the Boise State Conflict of Interest Officer at (208) 426-1252.

3.	Is this research supported in whole or in part by a grant or contract?				
	☒ NO				
	☐ YES:				
		Sponsor Name:			
		PI on Grant:			
		Grant Title/Contract:			
		Project Period:	From:		To:	
		☐ Grant Project Summary Attached			
		OSP Proposal Number (if known):			
	Is this research funded internally by Boise State University?				
	☒ NO	☐ YES:			

SECTION C:	YES	NO
Will the data be recorded by the investigator in such a manner that the identity of the subjects can be readily ascertained **OR** be potentially damaging to a participant's financial standing, employability or reputation?	☐	☒
Will your research participants include prisoners, cognitively, economically, or educationally impaired participants?	☐	☒
Will the information be obtained in such a manner that the identity of the participant can be readily ascertained, directly or through identifiers, linked to the subjects? (Exempt Category 2 or 3-requiring Limited IRB Review)	☐	☒

Does the research involve **federal** department or agency heads for the purpose of assessing or changing public benefit or service programs? (Exempt Category 5)	☐	☒
Does the research involve the *storage or maintenance* of identifiable private information or bio-specimens? (Exempt Category 7 – requires Limited IRB Review)	☐	☒
Does the research involve *using* identifiable private information or identifiable bio-specimens? (Exempt Category 8 – requires Limited IRB Review)	☐	☒

- *If you answered YES to any of these questions, your application does <u>NOT</u> qualify for exempt review. STOP COMPLETING THIS FORM and complete the "<u>Expedited or Full Board Protocol Application</u>" for IRB review.*

SECTION D: Exempt Research Category

Exempt Categories 5, 7, and 8 require Expedited Application. Study must fit *exactly* into one of these categories.
Indicate the applicable Exempt Category (1-4 or 6):

☒	1.	Research, conducted in established or commonly accepted educational settings that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special educational instructional strategies, and the research on the effectiveness of or the comparison amount instructional techniques, curricula, or classroom management methods.
☐	2.	Research that only includes interactions involving educations tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least ONE of the following criteria is met:
	☐ i.	the information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;
	☐ ii.	any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.
☐	3.	Research involving benign behavioral interventions in conjunction with the collection of information from an ADULT subject through verbal or written response or audiovisual recording if the subject prospectively agrees to the intervention and information collection at least ONE of the following criteria is met:
	☐ i.	Information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;
	☐ ii.	Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.
☐	4.	Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable bio-specimens, if at least ONE of the following criteria is met:
	☐ i.	The identifiable private information or identifiable bio-specimens are publicly available;
	☐ ii.	Information, which may include information about bio-specimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;
	☐ iii.	The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR 160 and 164, subparts A and E, for the purpose of "health care operations" or "research" as defined by the regulations;
	☐ iv.	The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for non-research activities, if the research generates

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		identifiable private information that is or will be maintained on information technology that is subject to and in compliance with section 208(b) of the E-Government Act of 2002, if all of the identifiable private information collected, used, or generated as part of the activity will be maintained in systems of records subject to the Privacy Act of 1974, and, if applicable, the information used in the research was collected subject to the Paperwork Reduction Act of 1995.
☐	6.	Taste and food quality evaluation and consumer acceptance studies, if:
	☐ i.	wholesome foods without additives are consumed; or
	☐ ii.	if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the USDA.

SECTION E: Summary

1. Please provide a *detailed* description of your project. Include information on recruitment, consent process, incentives (if applicable), methods of data collection, data storage, etc.:

I will use interview and observational data to study my students' uses and experiences of print and digital texts. I am a secondary independent study teacher, and beginning in August, I will collect data about how my students use and experience digital texts. I will interview my students virtually about their text preferences and their reading practices. All students with whom I work will be contacted to obtain parent/guardian consent, and all students for whom consent is received may be randomly selected to interview. All data will be analyzed anonymously. Assent and consent information will be provided to all students and parents/guardians, and there will be no incentives provided for participation. Interviews and transcripts will be stored in my FERPA compliant Google Drive with no identifiable information about the students or their families.

SECTION F: Population

1. Will your population include:

☐ Adults (18 and over)			
☐ Minors (17 and younger):	☒ Ages 15-17	☒ Ages 11-14	☐ Ages 10 and younger
☐ At risk population:	Explain: _____		

Additional school district permissions may apply if research is being conducted in primary or secondary schools. Check with the appropriate school district.

2. Will your population include Boise State University students or employees? *If so, additional permissions may apply.*

☒ NO

☐ YES:

If BSU students or employees report to you, list the third party contact who will hold all data until final grades have been given or data has been coded: _____

SECTION G: Applicable Documents

1. Please check the boxes for the documents included with this submission:

☐ Recruitment Scripts	☐ Survey(s)	☒ Interview Questions	☐ Letter(s) of Support
☒ Consent	☒ Assent (15-17)	☐ Assent (11-14)	☐ Verbal Assent (10 and younger)
☒ Other: parental consent			

Please see my 🔵 Dissertation Proposal- Brown for more information and 🟩 Interview questions. Thank you!

Please see my informed consent document at ▌ CoverLetter.pdf .

Please see my parental consent document at ▌ Consent.pdf and assent form for students at ▌ Assent.pdf . My students are all secondary students, 14 years old and older, so I will use one assent form for all students.

SECTION H: Signature

My signature below and/or by submitting protocol documents from my Boise State email address indicates:

- I agree to fully comply with the policies and procedures outlined in Boise State University's IRB Policy (5050) as well as all applicable program guides, rules and regulations.
- I will ensure all personnel involved in the activities outlined in this application have received training on appropriate practices and procedures.
- I ensure the information provided in this document is accurate and complete and that I am qualified to perform the described activities.
- I agree to stay within the scope of activities outlined in this application, and I understand any changes in activities must be approved by the IRB before they begin.

PI Signature_____ Date__7/18/2022_____
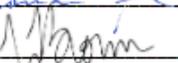
Co-I Signature_____ Date__7/15/2022____

*If the Principal Investigator is a graduate student, faculty Co-Investigator signature must be received before the protocol application will move forward to the IRB for review. Otherwise, Co-PI signature is not required.

You will receive a Notification of Exemption once the IRB has reviewed this application. Research cannot begin until this letter is received.

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IRB Approval

BOISE STATE UNIVERSITY

RESEARCH AND ECONOMIC DEVELOPMENT

Date: June 05, 2020

To: Norm Friesen   cc: Melissa Brown

From: Office of Research Compliance (ORC)

Subject: SB-IRB Notification of Exemption - 101-SB20-094

Digital Reading at the Secondary Level

The Boise State University ORC has reviewed your protocol application and has determined that your research is exempt from further IRB review and supervision under 45 CFR 46.101(b).

Protocol Number: 101-SB20-094	Received: 5/21/2020	Review: Exempt
Expires: 6/4/2023	Approved: 6/5/2020	Category: 1, 2

This exemption covers any research and data collected under your protocol as of the date of approval indicated above, unless terminated in writing by you, the Principal Investigator, or the Boise State University IRB. All amendments or changes (including personnel changes) to your approved protocol must be brought to the attention of the Office of Research Compliance for review and approval before they occur, as these modifications may change your exempt status. Complete and submit a Modification Form indicating any changes to your project.

Exempt protocols are set to expire after three years. Annual renewals are not required for exempt protocols. If the research project will continue beyond three years, a new application must be submitted for review. If the research project is completed before the expiration date, please notify our office by submitting a Final Report.

All forms are available on the ORC website at http://goo.gl/D2FYTV

Please direct any questions or concerns to ORC at 426-5401 or humansubjects@boisestate.edu.

Thank you and good luck with your research.

Office of Research Compliance

1910 University Drive Boise, Idaho 83725-1139
Phone (208) 426-5401   orc@boisestate.edu
This letter is an electronic communication from Boise State University

APPENDIX C

Sample Questions

How often do you read for pleasure:
Often
Sometimes
Seldom
Never

How often do you complete reading tasks that are related to school work:
Often
Sometimes
Seldom
Never

When you read outside of school, how do you usually access your reading?
Paper
Computer
Tablet
eReader (Kindle, etc.)
Other

How do you prefer to access your reading materials?
Paper
Computer
Tablet
eReader (Kindle, etc.)
Other

Do you feel that you comprehend text better when you read either paper texts or digital texts?
Yes- paper is better
Yes- digital is better
No

Explain-
Do you feel that you enjoy reading more when you read either paper texts or digital texts?
Yes- paper is better
Yes- digital is better
No

Explain-

APPENDIX D

Sample Interview Transcript

13:17 MS: Oh, we fly to Washington.

13:17 You: Do you read on the airplane?

13:17 MS: um I try to but I don't do it a whole lot just because we we will normally fly out about five or six in the morning. So I normally sleep.

13:17 You: Okay.

13:17 MS: If like I'm awake or just kind of I don't know if I can't sleep then I will try to read Because I find it easy to read on the planes, too.

13:17 You: But you get a lot of reading done on the cruise ship which means your family kind of splits up and everybody does their own thing and you get left with your books in a quiet place on the ship.

13:18 MS: I do. Yes. Because my mom likes to go to shows my sister will I don't know what she does. She just kind of watches TV, I guess and then I'm I'm off to do my book reading.

13:18 You: And look at glaciers.

13:18 MS: Yes, the reading and Glaciers.

13:18 You: Sounds like a very relaxing fun time. You didn't get to go this year, though.

13:18 MS: I did not we actually this is the only year we did not do it because normally well like We'll book the cruise and about this time like October for that following year. And this was the first year. We didn't book it. Kind of worked out for us.

APPENDIX E

Memo Examples

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Melissa Brown
Feb 10, 2021

he views reading as strictly educational;
if there is no learning,, there is no value

Enjoys reading paper books better "I feel like I get more like distracted when it's like online and like if I have a paper copy then like I could read it like walking around like if I need to go sit in the in the living room or if I'm like at my friend's house or my family members house. Like I can just like pull out a favorite coffee of it and not have it be digital."

Only annotates bible
Annotates digital texts
Reads in car- gets sick
Uses google to look up words

Reads shorter digital texts
Particular reading experience- recalls the details of a Cold War text (digital) in amazing detail, spends several minutes recounting the details; doesn't describe his experience at all, enjoys nonfiction? Maybe? Definitely enjoys the competitive nature of Academic Decathlon. He describes not liking test questions and reading for English class because he has trouble identifying the correct subjective answer- analysis, etc.

APPENDIX F

First and Second Cycle Codes

Digital
Print
Audio
Nonreader
Silence
Music
Fiction
Nonfiction
Read outside
Read inside
Visual
Weather
Sensory

APPENDIX G

First and Second Cycle Notes and Coding

Tom Likes descriptive book and imagining	Inside Digital Weather LS	"it puts it in my head and I can like imagine it better" "Descriptive" "I like how it was laid out and how I had each of the paragraphs so I knew where I had to go back and I could annotate and I liked how it had a notepad so I could make notes about the story as I was reading and I could understand it better. " " I like to read at a desk,where I can see everything " -he reads to SEE a mystery story -understands digital texts more because able to annotate -reads articles online "So it was fourth grade, it was raining" " it just really brought the story to life" Noisy Interactive- prefers that he can annotate digital books, doesn't annotate print reading for school	I like how it was laid out and how I had each of the paragraphs so I knew where I had to go back and I could annotate and I liked how it had a notepad so I could make notes about the story as I was reading and I could understand it better. I read print text, I like to read at a desk, I understood the story more just because it was right in front of my face and I could highlight and really breakdown the story so I think that was different from print text just because I can't do that to a book that I don't own.
Marc Cold War digital text, likes objective texts and feedback	Visual Nonfiction Silence No pref. Dig. LS	"unless it's a necessity for class. " Lacks "patience and focus" "visualize things better" "I really have no preference" Quiet Prefers nonfiction competitive Reads shorter digital texts Particular reading experience- recalls the details of a Cold War text (digital) in amazing detail, spends several minutes recounting the details; doesn't describe his experience at all, enjoys nonfiction? Maybe? Definitely enjoys the competitive nature of Academic Decathlon. He describes not liking test questions and reading for English class because he has trouble identifying the correct subjective answer- analysis, etc.	competitive It's more logistical I guess. (logical) Nonfiction It doesn't really matter to me. I really have no preference nor do I think that I'm exceptional at it? motivation I really just don't end up doing it very much unless it's a necessity for class.

Mary	Print Stomach hurts	"For me personally, I like reading like paper books for stuff like not really digital books." "personally it's easier for me to read paper books." More used to print books Wants exposure to digital materials to get ready for college "So just personally I find that I grasped the book better" "Like my stomach kinda hurts" "Get more side tracked if I'm on digital" Books separate from family Read for an hour, take a break, go back to book, finish ¼ of book in one day "try to not get in trouble for being so distant from the family." "REAL BOOK" "turn the page myself" "the whole reading experience" referring to a print book "I like the whole reading experience" TACTILE; MS remembers vividly the tactile experience of reading, similar to how OR remembered the weather when he was reading.	I doubt college is gonna be just paper print text. try to not get in trouble for being so distant from the family. But yeah, I spent every spare minute. I had going into the book. So just personally I find that I grasped the book better fits print to me. "Like my stomach kinda hurts" "Get more side tracked if I'm on digital" he last school I went to Um, we did nothing digital whatsoever personally it's easier for me to read paper books. I like reading like paper books for stuff like not really digital books. like actual books
Dallas Blurry digital	Print Weather	"For me, when I read for pleasure, It's like to waste time " "I'll forget. where I'm reading from too" reads both print and digital "I would normally read more print text. It's easier on my eyes." "easily get thrown off task" "they're kind of like the same but I'm able to value more information from physical text" "When I read the text, they're all like the same like font or format for me." "There was this one time, like, a year or two ago when it was raining" " it was raining really hard."" Reads when alone Forgot title of digital book- couldn't remember title "What I like about reading is that it Sparks creativity inside my mind."	What I like about reading is that it Sparks creativity inside my mind. I started feeling that. as well I'll just stay reading it because I'm so into it. my parents would go to check on me. they're kind of like the same but I'm able to value more information from physical text when I try to do it on a laptop or phone. I would easily get thrown off task. when I read for a certain amount of periods of time the words for me start getting blurry. It's easier on my eyes. because I haven't been able to go anywhere. I've been reading on digital form. when I read for pleasure, It's like to waste time or to try to learn something that I don't know.

Ron Prefers digital, distracted	Nonread Quiet LS digital	"I used to read a lot but not really anymore" "I just got bored of it." " If I read it on my phone, then it's because I can't read it in physical." " I think reading because of school is the reason I stopped reading." Reading sci-fi stories online on his phone- had read a lot of stories "Reading because I was bored" Quiet, alone " And so I would read them to get over my fear of horror stuff. " Boring "Texts that are on a screen aren't as boring."	I just got bored of it. I think reading because of school is the reason I stopped reading. I feel like I can understand better when I read digital. If I read it on my phone, then it's because I can't read it in physical. Probably just on my phone. I think I stopped because it was too much like there are like 5,000 stories or something. I just probably just sitting on like my bed or something. reading because I was bored. I read when I'm outside I think I used to be afraid of the books. And so I would read them to get over my fear of horror stuff. I thought reading the Goosebumps books got kind of boring
Iris Digital, reads less now, reads in room with music	music Digital	Quiet- alone in room" Started reading less in middle school "sometimes just like I'll skim through it." reading for school "Well both but it's easier for me to do it on computer." "maybe because I'm like always on a device." I have to have music playing in the background like low music. Understands print and digital the same- then no, understands print better Started reading less in middle school Reading on phone- "I'd be able to because distractions on my phone" Loves Gatsby "it makes you want to read more because there's always like stuff coming up next." Annotation- "Because like when you're annotating you're thinking about it more and you're getting it like a reason. Yeah, and it makes you like understand better probably."	Probably when I hit Middle School. [stopped reading] sometimes just like I'll skim through it. it's easier for me to do it on a computer. maybe because I'm like always on a device. . I would prefer to read. Digital I have to have music playing in the background like low music. I don't think I'd be able to because distractions on my phone It stays the same in my head all the time. Because like when you're annotating you're thinking about it

			more and you're getting it like a reason. Yeah, and it makes you like understand better probably.
Rodney	Prefers digital Visual nonfiction	Prefers movies, "don't have to visualize it and remember everything" Prefers nonfiction, articles, online Reads on Chromebook "That's more easier than reading and studying a chapter because you don't know what you're supposed to focus on in the chapter based on a question for an article." Likes shorter reading Likes reading news "I'm actually one of the few people that … like reading the news" Doesn't have time to find or read a good novel Considers bias in the news Doesn't remember what happened in the first chapter. "I forget everything." Reading out of the book harder than reading online, "so many words" "get sidetracked"- doesn't get sidetracked with online texts (references Newsela)	I don't have to visualize it and remember everything so when I read I usually read the news online Novels- I don't really read those for fun. I don't really have that much time. I tend to read those online more I just get sidetracked and just search up news reading stuff like news and stuff on paper on a newspaper is... it doesn't really catch my attention as much as online. Reading out of the book's harder than reading online. shorter things tend to get my attention more than longer articles.

| Cassie

Bible, devotions, Quiet bedroom with music | Bible; fragmented: read, take break
No pref. Dig music | "reading a book can take them to like a different place and just make them feel comfortable and sometimes they might be able to really relate to a book."
Likes to feel comfortable and happy when reading, got bored and couldn't find books.
Reads school texts for information and knowledge.
Likes to navigate Bible on phone.
Doesn't own her own print Bible.
Audio version of Bible.
Feels like print and digital is the same
Audio enhances reading experience- helps her understand it better
Doesn't read any school texts on phone
Reads in room first thing in the morning
Twitter
Gets distracted by phone, but not when reading Bible
Reads in quiet bedroom, sometimes music
Reads New International version of Bible; prefers that to parents King James | eading a book can take them to like a different place and just make them feel comfortable and sometimes they might be able to really relate to a book.
Yeah, I used to. (read) just made me feel like comfortable and happy just happy that I can get all this information on whatever type of book it was.
I think I stopped reading because like I got a little bored and I couldn't find books that I like.
Just reading the one thing which is like the Bible
I think mainly having to be able to use like the audio version.
I like listening to audio.
I kind of feel like it's the same.
It's better. (audio)
my phone stuff is on my phone and then school work is like in the books and on the computer.
. In my room like, first thing in the morning is what I do.
like Twitter- like that's my new source.
I usually like like to have my phone upside down so I don't see any like notifications and get distracted.
Sometimes not all the time. |

| Molly | Tactile, smell
Print
Visual
LS | "I don't read a lot of books"
Reads for pleasure "out of curiosity"
Likes characters
Likes mysteries and murders
"I always read books in print. I don't like books online."
"an actual book"
Has books in room
Reads AP Euro "long stories and stuff and chapters" on "my computer or my cell phone"
Cell phone different because "I have to keep scrolling and scrolling but on my computer I can just like see it in the larger form"
"Because I'm a visual person"
Uses sticky notes sometimes
"I have to take breaks between like readings because I get tired. like sleepy "<br>"when I have like a book I can like see the words and I don't know it's just easier"
Reads articles on phone sometimes-scroll
Reads to "accomplish;" takes breaks with phone when sleepy
"So I feel like just reading just to read or trying to read will like help you."
Bilingual program; reads in spanish | I don't I don't read a lot of books.molly
And usually when I read for pleasure, it's out of curiosity and stuff.
I always read books in print. I don't like books online.
It's hard for me to focus. I like the texture of books, like I like to hold them. I also like the smell too like that's kind of weird, the paper.
I read like articles and stuff online
because on my phone it's just like a small surface, you know, and I have to keep scrolling and scrolling but on my computer I can just like see it in the larger form.
because I'm a visual person then I'd like highlight and annotate.
 I usually do my reading. Like in my bed like late at night before I go to bed.
 I have to take breaks between like readings because I get tired.
I feel like I focus more when I have an actual book in my hand than on the computer.
 then I feel like I haven't accomplished anything, you know, like I didn't read a lot. |

| Morgan

Does not often finish books, Stephen King | Fiction
Quiet
Digital
Mostly nonreader, but describes herself as reader | Reads Stephen King "I usually like to go with longer stories" "his books are the only really interesting thing that I could read"
Reads on the couch or in bed- "anywhere that's quiet" "{that's the only book I've read so far like completely."
Reads many books partway
"But I'll just skim through the books sometimes "
When she reads for school "you have to focus on the details"
Read digital books "that I'd find on my Chromebook like Goosebumps. I read that series a lot and I finished them any chance that I got."
Easier to find digital books
Has read digital books on phone
"I actually have to keep scrolling"
"So I'll kind of read it."
Prefers digital textbook- annotating "doesn't make your hands as tired "
Typing is easier
Prefers digital texts "I don't really want to fold the pages"
Normally annotates digital books, not print- feels uncomfortable writing in books
Pays more attention to digital books | whenever I read for pleasure, I usually like to go with longer stories, like for example, I'll read a lot of Stephen King any chance that I get.
I just feel like his books are the only really interesting thing that I could read.
I usually just stay on the couch or in my bed anywhere that's quiet.
I like Stephen King's it since that's the only book I've read so far like completely.
I just usually get bored halfway, then I start another book.
Yeah, but when I go to the library, sometimes I'll check out his books and that's when I kind of start reading them.
sometimes I'll read graphic novels.
back when I actually read more in seventh grade.
I read that series a lot and I finished them any chance that I got.
I mainly read fictional stories on my phone.
I actually have to keep scrolling
I think I like the digital textbook better.
it doesn't make your hands as tired[to annotate digitally]
I just feel like for digital it's easier. And I can just open it up anytime.
I don't really want to fold the pages
I just feel like for digital it's easier. And I can just open it up anytime.
I feel like I understand it better when I'm reading digitally
I don't I don't pay attention to them as much as I would digitally.
but if it's for school, I'll read it digitally.
I started kind of getting nervous [while reading]
in the house I could tell that there was a lot of background noise. But since I was so into the story it kind of felt like the house is really quiet even though it wasn't |

			Yeah, I sort of get into the story like I go into their world instead of mine.
Arthur Prefers nonfiction, likes audiobooks	"Scroll" in a physical book, take notes Nonfiction digital	"Because I personally don't really like reading that much." Reads nonfiction Read more when little Listens to audible on phone, listens to podcasts Interested in books that tell you how to do things, live Doesn't remember fiction- "I've never really been good at remembering that kind of genre of books." Likes history Reads online version of textbooks "I think it's just a little more accessible. and then like it's a lot easier to because like you have like the it'll like read for you" likes digital Chromebook is for school only Doesn't read paper books Takes long breaks from finishing books	Because I personally don't really like reading that much. I like the movies and the books were nice too. It's just you know, they're super long. [Harry Potter] I'll usually just listen to like audible on my phone. He writes the more educational books like I was saying. I also listened to podcasts and stuff with my dad. I saw a movie about the seals and then like also just the Navy in general. And so it was ever since then I've like always wanted to it's it's been stuck in my head. I've never really been good at remembering that kind of genre of books. So all actually read all that stuff because I like learning about all that [nonfiction]. I think it's just a little more accessible. and then like it's a lot easier too because like you have like the um it'll like read for you. I'm not the best reader.

			my Chromebooks for school only.
Jana Stopped reading in 7th grade	Reading in elementary, Bible, tactile Print	Stopped reading in seventh grade, completed in elementary for "most words per minute"- got trophies- encouraged to read a lot Enjoys stories, doesn't have time to read "when I was like forced to read I guess in like sixth grade." Enjoys reading paper books better "I feel like I get more like distracted when it's like online and like if I have a paper copy then like I could read it like walking around like if I need to go sit in the in the living room or if I'm like at my friend's house or my family members house. Like I can just like pull out a favorite coffee of it and not have it be digital." Only annotates bible Annotates digital texts Reads in car- gets sick Uses google to look up words " I feel like I personally read better if it's like printed out because like digitally like you could see like literally like the whole article and I just get lost."	I read like the most words per minute so that I mean like, it encouraged me to read a lot because I wanted to get like the trophy every year So I used to read like a lot but with sports and everything like I just don't read like on my own time for fun. probably like seventh grade [stopped reading] when I was like forced to read I guess in like sixth grade. It's mostly digital. I feel like I get more like distracted when it's like online and like if I have a paper copy then like I could read it like walking around like if I need to go sit in the in the living room or if I'm like at my friend's house or my family members house. Like I can just like pull out a favorite coffee of it and not have it be digital. I have a Bible that I annotate. sometimes or I have like a bunch of different highlighters, like normally I highlight like the most

			important things in yellow and then like non as important things in pink and then things that I don't really understand and like green or blue. I probably. rather read like printed text like an important like news article or something that I see all like read it. [on my phone] I mean I've read like magazines. I feel like I personally read better if it's like printed out because like digitally like you could see like literally like the whole article and I just get lost.

| Mary

Cruise reader, Fire | Reading on cruise, take a break after reading, distracted Fiction outside | "whenever I have time and wherever I am."
"Normally, I'll read about eight books a year" Old Yeller, Little House of the Prairie, Charlie and the Chocolate Factory, Hunchback of Notre Dame,
"I like get sidetracked very easily so I try to stick with one book so I can finish that book and get to the next one"
"I try to read at least like 45 minutes to an hour straight then maybe a little break "
Reading is a chore?
Writes on bookmarks or post its
Read in bedroom
"If I'm sitting around doing nothing just kind of like completely just doing whatever "<br>"So I actually read much better on ships than I do. here at home"
Enjoys reading outside in scenery-glaciers during alaska cruise
Reads murder- jeffrey daumer, etc.
Needs privacy "It's just I'm more by myself versus being surrounded by other people" maybe worried about people looking at her?
"or like I'll lay down sideways like this to read it"
Brings pillows on balcony | So I just kind of whenever I have time and wherever I am.
I like get sidetracked very easily so I try to stick with one book so I can finish that book and get to the next one
But typically I try to spend at least an hour.
 typically when we travel we get bookmarks wherever we go.
I'll write a little brief kind of sentence about what I read that day. [on a sticky note]
it's harder for me to find time to read
 If I'm sitting around doing nothing just kind of like completely just doing whatever
So I actually find it like a very nice place to read on like little balconies like that on the ship.
So I actually read much better on ships than I do. here at home
I find it easy to read on the planes, too.
The majority of at Sea days is when I get most reading done.
When I read on the ship... It calms me.... It's way easier for me to read in a calm state.
I spent every day on that balcony reading because like my mom was either inside the cabin or like with my sister. So I was outside on the balcony reading more and that was definitely nicer because like there wasn't people walking by
 It's just kind of way more relaxed like less stressful, I guess? Sitting on the balcony versus um on a deck where like other people can come join you and sit and read. I'm like no one's loud or anything. So it's really easy for me to read. It's just I'm more by myself versus being surrounded by other people.
I just have to be comfortable reading.
 I can bring blankets out and pillows out to on the balcony versus I'd feel weird if I brought half of my bed on like the deck. So that's also me. |

Rodney Books are printed versions of texts, articles read in digital form	Nonfiction LS	"I usually read fiction for book-books." Reads more nonfiction Reads in bedroom- school work at desk, fun stuff in bed "so if I'm doing work, I usually just go on my desk because I can't fall asleep in a chair." Reads a lot of short articles, o phone " I don't read a lot like book books because some sometimes it takes a lot long time to read and I don't have a bunch of time. " Reads books in print, articles digital" Reads articles during class? "after a while or another example would just be if I'm bored in class" "but sometimes if the book is interesting. I'll read like like 30 pages and I'll put it down then I'll remember it. And if I remember it, I'll keep on reading it but most the time I forget what happens and I don't want to go back and read it again." Likes books about music Likes short movies and games, too Clancy and King are "more realistic"	-enjoys short movies, short games, not long movies, games, books, etc. mostly all the time like 90, 95% It's on my bed when I'm just reading but if it's a work reading I'm the I use my desk to read because you know, sometimes when I read in my bed, like I fall asleep and stuff, so if I'm doing work, I usually just go on my desk because I can't fall asleep in a chair. mostly all the time like 90, 95% It's on my bed when I'm just reading but if it's a work reading I'm the I use my desk to read because you know, sometimes when I read in my bed, like I fall asleep and stuff, so if I'm doing work, I usually just go on my desk because I can't fall asleep in a chair. fiction for book books but for non books, I read, you know, like my articles and stuff and uh Magazines and stuff but I also read a bunch of comic books because I have a bunch of comic books. I read so it's mostly a mix but more in the nonfiction side because I read more articles than more other stuff. it depends whatever it gets my attention. I don't read a lot like book books because some sometimes it takes a lot long time to read and I don't have a bunch of time. so I get bored if I read them again, another example would just be if I'm bored in class. I just go in my phone and just search up something. So I have to search it up to know what they're talking about. but sometimes if the book is interesting, I'll read like like 30 pages and I'll put it down then I'll remember it. And if I remember it, I'll keep on reading it but most the time I forget what happens and I don't want to go back and read it again.

Orlando Reads new and social media, convenience of digital	Reads on phone, dislikes books digital	Likes digital better "I really don't do too much reading." "because you get to use another devices. It's not like you have to bring it with you what I mean, like because you can always we don't your phone the computer or whateve " Read in the past- when he was younger Online "it's more convenient" Reading is boring The main reason why he read when he was younger was to learn how to read Reads social media and news "Official news sources" Interested in medical field and fire fighter stuff Reading for school " it's kind of seemed like it's forced, you know, it might be article that you don't like and then you pretty much bored out of your mind depending on what the article is." Read on different devices	I really don't do too much reading. Unless you include like internet reading. It's kind of like a boring topic for me to read. Not too many books that I like to read. The only stuff I really read online is like social media, like the news or whatever because you get to use on other devices. It's not like you have to bring it with you know what I mean, like because you can always read on your phone the computer or whatever so. it's kind of seemed like it's forced And I usually try to rush through as quickly as possible. If I don't care for reading it. I'll just try to you know, get it done, you know, not really look back at it long.
Eric rather watch or listen to stories, sleepy	Reads at desk, sleepy, doesn't read Visual Audio Inside print	"I'd rather watch instead of like read." "Like reading you have to like physically read it and then you don't get it." "I did not read when I was younger. I barely read." Assignments- " I mostly just listen to the audio." " I like print more but digital is pretty much what we have." Likes annotating Reading while sitting at desk Gets sleepy Loud environment- difficult to hear interview; is it this loud during school? While working? Construction in bathroom Doesn't enjoy reading. "When I'm reading. I just look for like the main point or like it's all studies looking for like what happened like who died and all that stuff?" Calls more than t "like computer you have to resign everything looking where you found the book and then" "For social studies I just skim" "If you have to stop, you can put like a bookmark or something like that" Likes print books better	My I just read if I have to. Like reading you have to like physically read it and then you don't get it. You have to read it again. Watching a movie I guess. I learned like more like looking at than looking at pictures instead of reading. I did not read when I was younger. I barely read. We read like a book a year, maybe. Oh, I just read it. Get it done over. I mostly just listen to the audio. when you hear it, you can you know what it is. I like print more but digital is pretty much what we have.

			And for like my science class, usually we don't read s like computer you have to resign everything looking where you found the book and then
Sid Doesn't enjoy reading	Doesn't read Print Quiet LS	"I don't like it." "It's boring to me and hard for me sometimes." Last good book was elementary school "Hang out with friends and stuff" Pick book by cover Usually reads print version- "It's just easier to get to the pages and stuff"doesn't read digital for school "Quiet and calm" Reads alone in room Reads text messages and social media on phone "It's different because it's not as long." "Just wherever I am. I read it." reading on phone "Mostly just read summaries" "just the first one that pops us" Skim	I don't like it. It's boring to me and hard for me sometimes. like hang out with friends and stuff. If the front covered looked good. It's just easier to get to the pages. and stuff Just quiet and calm. [noise dog]

Collin Questions on same screen, loses focus, prefers audio and quiet room	Interviewed from outside on phone Print Inside Quiet LS	Kid was outdoor during interview-clearly more comfortable working with hands, being outdoors "I've never really like been into reading?" "Reading's not like my first thing I do." Doesn't enjoy reading. Dad would help pronounce words in elementary "None of the books really interest me that much. " Has trouble with school tasks. "like looking at a screen staring at a screen and reading like I lose focus because it's digital and like so if it's paper printed out then like it's easier to keep my focus." Likes print books Enjoyed book fairs The Giver Reads texts and social media on phone, seldom articles Likes having the textbook questions on the same page in the online textbook " I lose focus easily." "In my room just where it's like quiet" "I feel like I understand them like the same." Reading digital for English class " I was at my desk just listening to the audio. Trying to breathe and answer the questions. As the audio was going" "it was a little frustrating because like I can't I couldn't keep up like um it was reading too fast. like I'd be on a question getting the answer for it and then it'll like disappear from my mind because he went to like started to read something else for a different question or something. "	He recalled when his reading experiences were more central to his life. He recalled vividly books and book fairs he had enjoyed in elementary school.

| Arthur

Convenience of digital, podcasts and audiobooks, focused on future, reads to gain info | Audible
Needs HANDS ON learning
Audio visual | "And then my mom also found this book series that I'm gonna read. " Adventure books, podcasts, military, travels while listening to audiobooks, "I think it's easier for me to like. like gain info " with audiobooks
"It's easier for me to visualize what's going on in the book when I'm just listening to it."
"You know, I say it correctly or whatnot. So it makes it a little harder to actually visualize what's going on in the book and like understand"
Works out while listening
"I'm not the best reader"
Differentiates between reading and listening to audio- "still technically reading the book" when following along with computer reading
"I get mixed up with words a lot"
Has a big book for engine wiring in his drawer- "looked through it a couple times"
Reading is harder than BMX and ju jitsu
"I do better with hands on things"
Listens to and reads field manuals- one over 20 times- to "chill"
"there's the other people that just don't read at all. because they they're like too impatient to sit there and read a book I guess"
" like being able to get all that information on how to get through life because that's like my main thing pretty much how to you know. Stay good all the way through by how to stay healthy fit. make smart choices" | |

Albert Reads under tree, prefers print, calm music and jazz	Visual Print Outside music	"I used to like reading a lot like I used to love it." Stopped reading "although the books didn't really interest me" Gets distracted " I feel like we already look at our phones and everything so much. It hurts my eyes. I wear glasses."digital reading is uncomfortable" "Books are like movies for your head" Enjoyed reading funny books; stopped reading as he got older; stopped in eighth grade " I like to go outside just my front yard and you know, I like this beautiful tree in front of me. So I'll just read there and I'll sit in the shade and I'll have my headphones on and block all the other noise, and I just read the book. I mean, it's really peaceful." "Reading digital is harder for me. I just find myself unable to like really get into it.""It's uncomfortable." Listens to music without words in bed, when he's going to sleep "I try to limit myself to an hour, an hour thirty" " I'd rather like have like calm music. No, I mean like jazz or piano or like Lo-Fi just stuff just calm no words and it just chill music." "When I read books that I was intrigued in I find it to be very pleasant experience." "When I was forced to read books that I didn't really find interesting… it felt more like a chore" "I take people in my life… and I would take characteristics from them… and build this character in my head" "I've become invested in a few characters" hasn't been this interested in a book since fifth grade- fell in love with reading in fifth grade, hasn't been the same since	

Abraham Digital reading is distracting, books make him sleep, doesn't finish books, the hobbit	Music Print indoors	Reading is a "more mental practicing thing" "something for work" like "your boss wanted you to read on something and figure out what it meant and all that" "Reading for me is like kind of a big deal for the world now" "When I'm reading sometimes. If I'm trying to focus like really into depth. I listen to music." Reads at desk and in bed "I think it's good to take a break from like the digital world." " It tends to start like having giving my eyes like pain. But stuff from staring at a blue screen all the time." Mentions "blue screen" twice- affected by news and stories of "blue light" affecting sleep Books make him sleepy " I normally get distracted. pretty easily" Reads in room- quiet More distracted while reading printed book "When you're on like the computers, you tend to like focus more." "Yeah a few times I've started reading The Hobbit." "Just trying to get through the book,honestly."	
AA Antonio Digital texts are distracting, video games	Fiction silence	"I don't really read a lot but like whenever it's probably scary book" Never read a digital book. "if I like read online, I'll get distracted easily and I get off of the page." Social media and youtube on phone "but like if I use my phone I could be like relaxing laying down like reading the Articles and stuff." Quiet, "every once in while play music or… a video of YouTube going on in the background" "but like if I use my phone I could be like relaxing laying down like reading the Articles and stuff." " like I was younger I didn't really like reading I like if I had to read I would but like if it was out of my will like just to read for fun" "I don't read as much anymore because I have been playing my game more but like I would read like two to three books like like a year or so." Read OMAM previous year- didn't remember the title. " it was like a giant dude in a small dude and they were like working on a farm." 9th grade To Kill a Mockingbird "Like I wasn't really paying attention that one."	

Molly Focused on future, successful, AP Euro	Sensory ~~printeric~~	"this book makes me feel different makes me feel like comforted … it's like warm." was reading twilight; currently read the secret life of bees "so when I read it like a TV in my in my mind and I'm like watching it." Reading print version "And every time I always get second hand embarrassment from, like, the characters and stuff and I feel what they're feeling" " if I'm just catching up on on my reading up on reading now print it out." "I read, like, bits and pieces of digital books. I have never, like, finished a digital book before." "when I read print books I feel like I understand more , but when I go through, like Online articles and stuff. I have to read it again" "the longest thing I've ever read was probably in AP Euro when I had to readThe whole chapter fourteen online textbook that… I hated that, but the good thing is to take notes so I could write down my ideas and stuff and then go back, but I felt I just wanted to Grab my computer and smash it against the (unclear) 'cause, I just are hated that. 6 Nov 2020 23:03 - I, like, would drift off and I'd have to read it all over again." "I was like really mad that like my teacher would ever assign something like that." "I just think print is like fun. I I don't know if that makes sense, but I just get excited when I see a book that I'm interested in" "but when I see the same book on line - I'm like- I really don't want to read that any more. " "I think I'd rather read. 6 Nov 2020 23:06 - Data and stuff like science stuff because it just seems more Interesting, you know, I get seems like- Real it's real" "I could sit down and watch movies for hours." "I could picture it like you can actually see what's happening, you don't have to Imagine it in your head." "I thought of reading as a chore." "Today I spent an hour reading because I before class, I try not to be on my phone, so I'll read for about thirty minutes"	

Simon	Comics- reads either print or digital, prefers print Often downloads comics and reads on phone because they're hard to find	"I remember reading Diary of a Wimpy Kid for the first time and fourth grade, I think was the first time already and I remember it being like really funny." Emotional connection- humor "whenever there was like, a funny moment I would always like read like turning my friends and show them and we did both laugh about it. I remember doing that a lot." "I just don't really have an interest in reading anymore. " "And I always wanted to like be like one of the top students in those tests, but as I grew older, I haven't really had a passion for reading anymore." "if it's like a school book, it gets pretty boring." Likes action, not description " I prefer antenna annotating on paper, though." "And then by the time, was done with homework. I was like, I want to play video games. I don't want to read, so that's what I did instead."	
Page	Prefers print, reads digital too	"I usually read printed but sometimes if I don't like have the resources to get a printed book, I'll read it online" "I feel like reading it in print is like, you're more involved with the book since you're turning the pages and stuff yourself but online it's like it's a little different" "I like how you can create different worlds and of stories in your head and put them on paper and it doesn't have to be related to real life situations."	
Mike	Print, doesn't read much anymore	"probably for like, print, it's more like Like I think it's more intriguing to be honest because on the on the computer it's just like I'm on the computer." " it's just funny, it's more like a kid book." Read on the chromebook since elementary, personal books were print, still reads Easter books from mom "Me and my mom read it because I couldn't go to sleep. So me and my mom just read like like almost the whole book. And it just, it just felt good to be with my mom like that. " Listens to audio version of English textbook, not enough print copies Reading less after 4th or 5th grade "Maybe I think I just cuz my worth as my work ethic dropped." Got a lot of AR points from Diary of a Wimpy Kid	