A SURVEY AND ANALYSIS OF MIDDLE SCHOOL STUDENT VOLUNTARY INDEPENDENT READING BEHAVIORS

by

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As part of a survey and correlational research design, this study used a web-based survey to collect descriptive data on the voluntary independent reading (VIR) behaviors of a convenience sample of 1,603 middle school students in Oregon. On average, participants reported reading 2 hours and 21 minutes over a 24-hour period, which was considerably more than reported in previously published research. Participants reported reading more electronic than printed texts, and popular topics included reading text by and about friends, adventure and action, and novels and stories. Most frequently read media included books, text messages, email, websites, and printed magazines. Statistically significant relations were obtained between amounts of VIR time and (a) academic performance (measured by participant language arts and math course grades), (b) reading achievement (measured by participant performance on the Oregon Assessment of Knowledge and Skills Reading and Literature Test), and (c) demographics (e.g. gender, grade level, ethnicity, socioeconomic level). These positive associations

indicated that the participants in this sample who reported engaging in more VIR time also realized higher levels of academic performance and had attained a higher reading proficiency level. In general, relative to their peers, middle school students who were female, older, and of higher socioeconomic level and had cell phone access (especially cell phones with Internet access) engaged in VIR more often and for more total time. By examining these findings, educators and policymakers may more effectively understand the VIR behaviors of middle school students. This understanding may lead to improved instructional and program design, as well as increased learning, achievement, and total time students engage in VIR.

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This is dedicated to my wife and children. It is also for the present and future children of the West Linn and Wilsonville communities, who are continually striving to become the greatest thinkers and most thoughtful people for the world. This is also for all present and future middle school students so they may be understood and inspired by their parents and educators to achieve their potential.

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CHAPTER I

INTRODUCTION

Reading is a critical skill students develop during their years in school and serves as a "key" that allows them access to knowledge and information (NCES, 2007). After students become proficient at reading, they may choose to read for many reasons. Some of these reasons include reading for pleasure, learning and practicing content specific reading strategies, such as in science or social studies, and increasing receptive and expressive vocabulary (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007; Cullinan, 1992; Fisher & Frey, 2007; Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998). Middle school students, in particular, read for a variety reasons, including reading to learn, reading because it is required, reading to clarify beliefs and better understand themselves, and reading for pleasure (Anderson, Fielding, & Wilson, 1988; Barbieri, 1995; McCoy et al. 1991). Various factors appear to influence student reading performance, and it seems likely that as students' voluntary independent reading time increases, reading proficiency levels also increase (Krashen, 1993; Stanovich & Cunningham, 1993). Although most early adolescents are capable of reading independently, according to previous research they apparently do not choose to read much during their free time (Anderson, Fielding, & Wilson, 1988; Cullinan, 2006).

Reading Performance and Voluntary Independent Reading

According to the two most recent Nation's Report Cards on Reading, 2007 and 2009, the national trend in performance data for thirteen year-old students has been relatively stable during the past fourteen years (NCES, 2007; NCES, 2009). On the 2009 Nation's Report Card, for example, the average score for eighth-graders was four points

and one point higher than in 1992 and 2007, respectively. However, the higher score was not significantly different from the results for all the years in between, and the 2009 report's authors stated that the NAEP was not designed to ascertain what caused the changes in these results. Interestingly, however, the authors of the 2007 report compared the 2007 scores to the lower scores of two previous years, 2005 and 1992, and asserted that the higher 2007 scores indicated a positive trend. The 2007 authors provided an explanation for the improvement in reading proficiency, and the factors they mentioned included: (a) an increase in students' knowledge and skills, (b) changes in educational programs and policies, (c) teacher qualifications, and (d) changing demographics. Curiously missing from their list of factors was the effect of the amounts of time students spent engaged in voluntary independent reading (VIR). Despite this omission, indeed it seems important for researchers, educators, policymakers, parents, and students to understand how the total amount of time students spend engaged in VIR affects student reading abilities, general knowledge, and their lifelong interest in reading independently.

As elementary and middle school students increase the amounts of time they devote to VIR, they realize strong gains in reading comprehension, reading fluency, vocabulary level, academic performance, and general knowledge (Allington & McGill-Franzen, 2003; Cullinan, 2006; Krashen, 1993; Short, 1995). Although middle school students read for a variety of purposes, the nature and extent of their VIR is not very clear. If spending time engaged in VIR is an important factor that affects student reading achievement, academic performance, reading interest, and level of general knowledge, then it seems to be an important area to examine empirically.

Purpose of This Study

The primary focus of this study was to systematically obtain and analyze survey data to describe the voluntary independent reading (VIR) behaviors of a convenience sample of middle school students, and examine the extent to which the amounts of time they spend engaged in VIR correlates with reading proficiency and academic performance. This study also was also designed to examine and describe the relations between the amounts of time students engaged in VIR and students' (a) gender, (b) grade level, (c) ethnicity, (d) socioeconomic level, (g) reading, writing, and math proficiency levels, and (h) academic performance. For this study, the literature on VIR was reviewed and the VIR construct was defined. The review of the literature is followed by a description of the survey research design employed to collect descriptive data on the VIR behaviors of a sample of 1,603 middle school students in an upper-socioeconomic Oregon school district spanning two suburban cities.

This study is timely not only because it provides a current description (based on data collected in 2009) of the VIR behaviors of middle school students, but also because it captures their VIR behaviors in the context of the tremendous increase of digital media access. The majority of the literature on VIR consists of findings obtained prior to the past five years. During such time periods, compared to what they had access to at the time the data for this study were collected, middle school students had less access (or no access at all) to digital text. Recent studies have revealed evidence of the recent increase in teen digital media use (Rosen, 2011; Lenhart, et al., 2010; Rideout, Foehr, & Roberts, 2010). A Pew Research Center report consisting of survey data collected in 2009, for example, found that teens have increased their use of cell phones to communicate via text

messages and email (Lenhart, et al, 2010). And, more generally, according to a 2010 Kaiser Foundation Study, over the past five years, eleven to fourteen year-olds, have "increased the amount of time they consume media" (Rideout, Foehr, & Roberts, 2010). Although neither of these reports separated VIR time from other media consumption, the media they measured did include texting, email, and use of the Internet.

Because it appears that middle school students now have considerable access to electronic texts, this study provides an current description of student VIR behaviors using both printed texts (e.g. books, magazines) and electronic texts (e.g. the Internet, email, text messages). Also, because of continually changing technological innovations (e.g., portable and handheld computers, cell phones with Internet access, e-books and listening devices) and its potential (and apparent) effect on VIR, a current, research-based description of the VIR behaviors of a sample of middle school students may help educators and policymakers more effectively understand the VIR behaviors of middle school students. This enhanced understanding may lead to improved instructional and program design, and may also lead to increased learning, achievement, and total time students engage in VIR.

Research Questions

The research questions for this study include the following.

1. What are the voluntary independent reading behaviors (e.g. frequency and total amounts of time; preferred topics; media accessed) of a convenience sample of middle school students as obtained and analyzed from a web-based survey conducted in 2009?

2. What are the relationships between the voluntary independent reading behaviors of middle school students in this particular sample and student demographic indicators (e.g. personal, social, academic characteristics)?

3. What are the relationships between the amounts of time students report to be engaged in voluntary independent reading (VIR) and selected performance indicators (e.g. academic performance; reading, writing, and math proficiency levels)?

To gather descriptive data for this study, a web-based survey instrument was designed and used. Although this survey instrument did not consist of any items replicated from previous studies, a number of the items were closely related to items used in previous survey instruments (see Appendix C). These related survey instruments included: (a) one that Poerschke (2005) developed and used to describe the reading interests of high school students; (b) one that Hughes-Hassell and Rodge (2007) used to describe the reading habits and attitudes of middle school students; (c) an instrument that Ivey and Broaddus (2005) used to describe what causes sixth graders to be motivated to read; and, (d) an instrument that the New Literacies Research Team (2009) employed to investigate students' literacy habits when using non-print, electronic texts. The survey instrument for this study was designed to provide descriptive data to answer the specific research questions of this particular study.

CHAPTER II

LITERATURE REVIEW

There is an extensive body of research that examines the reading performance and behaviors of middle school students. Much of the research examines areas such as classroom reading instruction, interventions to improve student reading achievement, and student interest in and attitudes about the reading assigned by their teachers. Many studies provide evidence indicating that voluntary independent reading benefits primary, middle, and high school students (Anderson, Wilson, and Fielding, 1988; Cullinan, 2006; Hughes-Hassel & Rodge, 2007; Krashen, 1993; Poerschke, 2005; Stanovich & Cunningham, 1993). Less extensive, however, is the body of research that examines middle school students' reading behaviors when they read voluntarily and independently. During the past fifteen years, several studies have used survey instruments to investigate and describe students' voluntary independent reading behaviors (Hughes-Hassell & Rodge, 2007; Ivey & Broaddus, 2001; Poerschke, 2005).

This chapter provides a review of the literature on the voluntary independent reading (VIR) behaviors of middle school students. After establishing a definition for the VIR construct, evidence of the importance of VIR is presented. Relevant studies on voluntary and independent reading are then analyzed and discussed, including an in-depth examination of the methodology and results of the survey research conducted by (a) Hughes-Hassell and Rodge (2007), (b) Ivey and Broaddus (2001), and (c) Poerschke (2005). Also examined in-depth are the results of Shapiro and Whitney's (1997) research using reading logs and follow-up interviews. Additionally, because students appear to increasingly access Internet-based and electronically-based media to engage in VIR, the

survey work of The New Literacies Team (2009) is also reviewed. Furthermore, included in this review is a synthesis of the literature on the factors that influence whether or not, and to what extent students engage in VIR.

Voluntary Independent Reading

In the research literature, voluntary independent reading (VIR) is defined in a variety of ways and several different terms are used to reference this particular construct. Ten different definitions and terms appear to either be closely related to or are used synonymously with the VIR reading construct. These terms include the following: (a) *voluntary reading* (Krashen 1993; Short, 1995), (b) *independent reading* (Cullinan, 2006), (c) *leisure reading* (Greaney, 1980; Hughes-Hassell & Rodge, 2007; Mellon, 1990; Shapiro & Whitney, 1997), (d) *spare-time reading* (Searls, Mead, & Ward, 1985), (e) *sustained silent reading* (Krashen, 2006), (f) *self-selected reading* (Krashen & McQuillan, 2007; Krashen, 2009), (g) *recreational reading* (Manzo & Manzo, 1995), (h) *reading outside of school* (Anderson, Wilson, & Fielding, 1988), (i) *independent silent reading* (Worthy, 2002), and (j) *free voluntary reading* (Krashen, 2006; Hughes-Hassell & Rodge, 2007; Langenberg et al, 2000).

As documented in the research literature, six of these terms appear to be synonymous with voluntary independent reading. These terms include (a) *independent reading*, defined by Cullinan as "the reading students choose to do on their own . . . [when] no one assigns it; no one requires a report; no one checks on comprehension" (Cullinan, 2006, Section 1, ¶ 1); (b) *recreational reading*, a term not directly defined by Manzo and Manzo, but characterized as the reading done for recreation and pleasure (Manzo & Manzo, 1995); (c) *leisure reading*, defined by Hughes-Hassell and Rodge

(2007) as involving "personal choice, choosing what one wants to read, and reading widely from a variety of sources—not just books" (Hughes-Hassell & Rodge, 2007, p. 22); (d) *spare-time reading*, a term not explicitly defined by Searls, Mead, and Ward (1985), but characterized by them as the reading students do during their spare time; (e) *voluntary reading*, which Cullinan describes as involving "personal choice, reading widely from a variety of sources, and choosing what one reads" (Cullinan, 2006, Section 1, ¶ 2); and, (f) *free voluntary reading*, defined by Krashen and McQuillan (2007) as "reading because you want to: no book reports, no comprehension questions, and the freedom to put the book down when it is not right for you" (Section 1, ¶ 2; Krashen, 2006 & 1994; Hughes-Hassell & Rodge, 2007; Langenberg et al, 2000).

Sustained Silent Reading

In the classroom setting, sustained silent reading (SSR) appears to be the instructional method most closely related to voluntary independent reading (VIR). Although SSR is not identical to VIR, it is highlighted in this sub-section because it is the approach employed in schools that comes closest to promoting VIR in a school setting. Following a brief discussion of SSR, the voluntary independent reading construct is defined and operationalized as used in this dissertation study.

Defining sustained silent reading. As previously mentioned, sustained silent reading (SSR) is the instructional method that educators employ to promote student behavior in school that seems to be most closely related to voluntary independent reading (VIR). In SSR, as in VIR, students typically choose their own reading materials. Importantly, students are not held accountable for their "voluntary reading" in SSR, and no reports, grades, or any other expected accountability system is required or employed

(Krashen, 2006). SSR is different from VIR, however, because students engage in this activity for a designated period of time in a school setting. Students participate in SSR at the direction and under the supervision of a teacher. Krashen (2006) asserts that SSR is different than VIR because teachers "set aside time to make sure students have a chance to read, they provide access to good books, and they do things that encourage reading" (p. 445).

Krashen (2006) explains that in typical sustained silent reading (SSR), students take five to fifteen minutes each day, usually during their language arts class, to read materials of their choosing. The classroom is silent as individual students engage in reading their self-selected reading materials. Krashen asserts that these reading selections should be school appropriate and, in addition to books, may include comics, catalogs, manuals, graphic novels, and magazines. No reports or assignments are required, teachers do not assign grades for this activity, and students are not required to finish their selections. If students do not enjoy what they start reading, they are free to make another selection. Additionally, Krashen (2006) indicates that in SSR students should see educators modeling the desired behavior themselves by reading for pleasure during student SSR time.

Comparing sustained silent reading and voluntary independent reading. Compared to voluntary independent reading (VIR), sustained silent reading (SSR) is an activity that is more controlled and more directed. During SSR, the teacher expects students to read. Other students are either engaged in SSR behaviors or at least appear to be engaged in such behaviors. Students may choose their reading materials during SSR, but it is clear that they are expected to follow classroom norms by reading something.

Although SSR and VIR are similar in many ways, SSR is different because students are required to follow or respond to teacher expectations, including the behavior norms demonstrated by the teacher and other students, and by having an allocated and designated time and place to engage in this reading activity. Nevertheless, when compared to VIR, SSR appears to be the teacher-directed method students experience in school that promotes the behavior that most closely resembles VIR.

Examining the relation between sustained silent reading and reading proficiency. According to a recent quantitative synthesis on SSR, not all studies provided evidence substantiating that sustained silent reading (SSR) is an effective approach that results in increased reading proficiency (Bryan, 2003). The authors of the National Reading Panel's report (2000), for example, determined that SSR, or *silent independent reading* as they referred to it, is not proven to be the cause of increased reading proficiency. The authors of this report explained how they attempted to conduct a meta-analysis of the research literature on silent independent reading, but found only fourteen studies that met their criteria for inclusion in a meta-analysis. They were, therefore, only able to conduct an in-depth study of these fourteen studies. According to the report, these authors concluded that the research did not provide sufficient evidence supporting a causal relation between SSR and reading proficiency. Instead it provided evidence substantiating an association between silent independent reading and reading proficiency. Based on their examination of the fourteen studies, the panel's authors concluded that there was no clear evidence in the research literature that SSR is causally related to increasing student reading proficiency. The authors acknowledged that hundreds of studies provided evidence supporting an association between silent independent reading and reading proficiency,

yet they stressed that the studies failed to provide sufficient evidence to substantiate a causal relationship.

Nevertheless, responding to the National Reading Panel report, Krashen (2006) refuted the authors' claims that causal evidence between SSR and reading achievement is lacking in the research literature. According Krashen's (2006) own meta-analysis, he asserted that "the evidence in support of free reading in school was strong" (p. 444). Although he acknowledged that studies have shown mixed results of the effectiveness of sustained silent reading (SSR), he asserted that the balance is clearly on the side of SSR as an effective approach to promote student reading proficiency. Krashen cited a number of studies (e.g., Elley & Mangubhai, 1983; Krashen, 2001; Putnam, 1966; Shin, 2001) as evidence substantiating SSR as an effective strategy for promoting reading proficiency and reading enjoyment, particularly when employed over an extended period of time.

In Krashen's (2005) own meta-analysis of fifty-three research studies comparing SSR to other reading instructional methods, he found: (a) three studies supported a negative association; (b) twenty-six studies showed no difference; and, (c) twenty-four studies provided evidence substantiating a positive relation between SSR and reading proficiency. By discarding the twenty-six "no difference" studies, Krashen concluded that the results were twenty-four to three, suggesting that SSR is an effective instructional strategy for promoting reading proficiency. Further differentiating the results of these various studies, Krashen noted that the short term studies often demonstrated no difference in reading proficiency results between SSR and other methods. Yet, he concluded that long-term studies typically resulted in a positive relation between SSR and reading proficiency. Interestingly, Krashen noted that all three studies showing negative

correlations were based on the findings of short-term, rather than long-term, studies. Additionally, since 2005, Krashen has continued to cite research studies conducted in a variety of countries which have obtained positive relations between self-selected reading and reading achievement (Krashen, 2009).

After independently reviewing the research literature on sustained silent reading (SSR), it is reasonable to conclude that a relation does exist between SSR and reading proficiency. Nevertheless, published research does not explicitly support the conclusion that SSR causes increased reading proficiency. Both Krashen (2006) and the National Reading Panel (NRP) (2000) similarly concluded that an association between SSR and reading proficiency appears to exist, yet neither provided evidence proving that the relation is actually causal. Although it may make intuitive sense that when students spend more time engaged in SSR, it perhaps "causes" increased reading proficiency, absent a body of rigorous randomized control trial studies substantiating this causal relationship, such an assertion does not yet appear to have been confirmed. Perhaps in the future, experimental studies could provide evidence supporting that SSR does cause increased reading proficiency. In the meantime, however, for the purpose of this study, it seems sufficient to note that both Krashen and the NRP concluded that sufficient evidence exists to substantiate a positive association between SSR and reading proficiency.

Defining the Voluntary Independent Reading Construct

In the research literature, as mentioned previously, voluntary independent reading (VIR) is described as synonymous with a variety of other terms (Cullinan, 2006; Hughes-Hassell & Rodge, 2007). Hughes-Hassell and Rodge (2007) state that leisure reading is "also referred to as voluntary reading, spare time reading, recreational reading,

independent reading, reading outside of school, and self-selected reading" (p. 22). Similarly, Cullinan (2006) indicated that "independent reading is also called voluntary reading (Krashen 1993; Short 1995; Morrow 1991), leisure reading (Greaney 1980), spare time reading (Searls 1985), recreational reading (Manzo and Manzo 1995), and reading outside of school (Anderson, Wilson, and Fielding 1988)" (Section 1, ¶ 1). It appears that researchers use these terms interchangeably and that these terms do not seem to be distinctly differentiated from each other in the research literature.

Cullinan (2006) explains that voluntary reading "involves personal choice, reading widely from a variety of sources, and choosing what one reads" (p. 1). Cullinan further explains that independent reading encompasses the construct of voluntary reading, but also includes students' choice as to the time and place in which they engage in the reading activity. Students may read independently for pleasure or to learn information, but, according to Cullinan, "no one assigns it; no one requires a report; no one checks on comprehension" (Section 1, ¶ 1). Although multiple terms are used, Cullinan's definition of voluntary independent reading is similar to the construct that other researchers describe. Hughes-Hassell and Rodge (2007), for example, note that "leisure reading involves personal choice, choosing what one wants to read, and reading widely from a variety of sources—not just books" (p. 22).

Defining Voluntary Independent Reading

In the research literature, voluntary independent reading (VIR) and its synonymous terms are not clearly differentiated. Instead, various researchers employ multiple terms for several constructs (e.g. leisure reading, voluntary reading, independent reading, recreational reading) that are each very similar to VIR. Based on a review of the

research literature, the VIR construct seems to be fairly narrow. Nevertheless, with so many different terms used for VIR, this particular construct appears to be somewhat vague and unwieldy, and it calls for a clearer, operational definition.

Synthesizing the definitions. For purposes of this dissertation study, voluntary independent reading (VIR) was defined similarly to the definitions of Cullinan (2006), Hughes-Hassell and Rodge (2007), and Mellon (1990). Mellon, for example, refers to VIR as "leisure reading," explaining that "leisure reading is done by choice" (p. 227). As clarification, Mellon explains that over 70% of students "like to read when they are not forced to read and they do not have to make reports on what they read" (p. 224). Similarly, as mentioned previously, Cullinan (2006) states that voluntary reading is also called independent reading, which she defines as "the reading students choose to do on their own. It reflects the reader's personal choice of the material to be read as well as the time and place to read it. Independent reading is done for information or for pleasure. No one assigns it; no one requires a report; no one checks on comprehension" (Section 1, ¶ 1). Similarly, Hughes-Hassell and Rodge (2007) use the synonym "leisure reading" and describe the behavior as involving "personal choice, choosing what one wants to read, and reading widely from a variety of sources—not just books" (p. 22). Mellon's (1990) definition is similar to those of Cullinan and Hughes-Hassell and Rodge, except that according to Mellon, reading from a variety of sources is not necessary. These researchers seem to agree that for such an activity to be considered voluntary there must be no accountability, it must not be assigned, and self-reporting on the activity must not be required.

Synthesizing the definitions employed by Cullinan (2000), Hughes-Hassell and Rodge (2007), and Mellon (1990), voluntary independent reading is defined for this particular study as a reading activity that involves students choosing to read for their own purposes. Moreover, it involves students in self-directed, choice reading for which there are no expectations or accountability. It is not critical when or where this activity takes place (at home, in school, or elsewhere). It could be argued that anytime students read—even when directed to do so by parents or teachers—they engage in this activity voluntarily (after all, they could refuse). Nevertheless, for this dissertation study, the voluntary independent reading (VIR) construct will exclude reading when it appears there is accountability. Furthermore, whether or not students read from one source or a variety of sources does not appear to be a significant part of determining whether or not a behavior should be considered voluntary independent reading.

Defining the voluntary independent reading construct. For this study, voluntary independent reading is defined as the reading students choose to do for their own purposes, absent any accountability. The location of this behavior and the time of day are unimportant. Voluntary independent reading (VIR) is a self-directed reading activity in which students self-select the materials they read. This type of behavior can happen at any time and in any place, and students can access reading material from one source or a variety of sources. Moreover, this VIR construct is referred to as (a) *voluntary*, because students freely choose to engage in this activity of their own free will, absent any accountability, expectation, requirement, or supervision; (b) *independent*, because students engage in this activity by themselves, free of influence or control by others; and, (c) *reading*, because students are engaged in reading text for purposes of comprehending

and/or interpreting meaningful understanding of text material that may be hand-written, printed, or electronically-based.

Middle School Students and Voluntary Independent Reading

For this study, middle school students are defined as sixth, seventh, and eighth graders. They are defined this way because the student participants in this study attended middle schools designed specifically for sixth through eighth graders. The sampling frame of students in this study was drawn from three middle schools in a suburban school district in Oregon. These students ranged in age (as of September 1, 2009) from eleven years of age starting in the sixth grade to thirteen years of age starting in the eighth grade. In other districts around the nation, students at this age attend schools designed for a variety of age ranges, including fifth through eighth grade middle schools, seventh through ninth grade junior high schools, kindergarten through eighth grade elementary schools, as well as other configurations. Because this particular study was based on data gathered from a sample of students who attended sixth through eighth grade middle schools, middle school students were defined as previously described in the research literature.

Voluntary Independent Reading Behaviors of Middle School Students

According to researchers, the amount of time middle school students in their early adolescent years engage in voluntary independent reading (VIR) typically decreases when compared to elementary school students (Greaney & Hegarty, 1987; Moje, Young, Readence, & Moore, 2000; Watkins & Edwards, 1992). Curiously, at least two studies found that following the middle school years, reading behaviors increased once again for eleventh and twelfth grade students (Edwards, 2008; Moffitt & Wartella, 1992). Although

these findings provided evidence that there is a decline in VIR during the early adolescent years, middle school students do appear to enjoy reading; they just appear to prefer other activities more (Cuevas, 2003).

Early adolescents seem to enjoy a considerable range of VIR interests. Hughes-Hassell and Rodge's (2007) survey-based study of urban minority middle school students provided a breakdown of this range. In their recent survey of 584 students, these researchers found that 72% "engaged in reading as a leisure activity;" 22% read "constantly;" 50% read "when they get a chance;" 22% read "only for school;" and 6% "do not read" at all (p. 23). Although these researchers claimed that their findings were consistent with other studies of adolescent reading, they did not cite any studies with these similar findings. A review of the literature revealed one 1990 survey study conducted by Mellon that found "over 70 percent of respondents indicated that they did read for pleasure" (p. 224). Because the recent Hughes-Hassell and Rodge study is closely related to the present study, it is further analyzed in a subsequent sub-section of this literature review.

Variables that Influence Voluntary Independent Reading

Many variables appear to contribute to determining the amounts of time middle school students engage in voluntary independent reading (VIR). Among these variables are the extent to which students: (a) enjoy reading, (b) are interested in reading to learn, (c) have access to high interest reading materials, and (d) were read to by adults when they were young (Allington, 2002; Cullinan, 2000; Ivey & Broaddus, 2001; Krashen, 1999; Worthy, Moorman, & Turner, 1999). According to Cullinan (2006), the close associations between the amounts of time students spend engaged in VIR and how much

they enjoy reading is well documented. In Cullinan's meta-analysis of the close relation between VIR and school achievement, a total of nine qualitative and quantitative studies were cited as demonstrating this close relation.

Supporting Cullinan's findings, Guthrie and Wigfield's (2000) reviewed the research on reading engagement and motivation and found that students who are more motivated to learn are more apt to engage in reading. Specifically they proposed that "engaged readers in the classroom or elsewhere coordinate their strategies and knowledge (cognition) . . . to fulfill their personal goals, desires, and intentions (motivation)" (p. 404). Furthermore, based on their review they suggested that more engaged readers showed higher levels of achievement than less engaged readers. They specifically cited findings from 1997 by Campbell, Voelkl, and Donahue showing that 13-year-old highly engaged readers demonstrating higher reading achievement than less engaged 17-year-old readers. This suggests that reading engagement may be positively associated with reading achievement.

Correlating Voluntary Independent Reading with Reading Achievement

As part of a meta-analysis, Cullinan (2006) reported findings from numerous studies that utilized student survey data, activity and reading logs, and diaries. Based on her analysis of this research literature, she found that most middle school students do not choose to read great quantities, nor do they read very often. She also cited one study that found no relation between reading and pleasure. Cullinan cited three studies that showed that the amount of VIR related positively with (a) students' success in school and (b) their reading achievement level. Further, she cited seven studies demonstrating that the amount of voluntary reading relates positively with (a) higher vocabulary level, (b)

increased comprehension ability, (c) increased fluency, and (d) greater general and content knowledge. Subsequent research has found further evidence to confirm the findings in the studies that Cullinan cited (Allington & McGill-Franzen, 2003).

In the numerous studies specific to the fifth through eighth grade age range, Cullinan (2006) found that students in this age group averaged *seven to ten minutes a day* of voluntary independent reading (VIR). However, several studies contradict Cullinan's findings. For example, Greaney's (1980) study of fifth grade leisure reading in Ireland found that students averaged 79 minutes of VIR each day, and Shapiro and Whitney's (1997) fourth and fifth grade participants averaged 20-minutes daily. Even so, according to Cullinan, the more time students spent engaged in VIR, the higher their reading achievement scores and the better they performed on achievement tests in all subject areas. Based on Cullinan's meta-analysis, the students who engaged in VIR at this early adolescent age became "better readers." Further, she asserted that the amount that students engage in VIR "has consistently been found to relate to growth in vocabulary, reading comprehension, verbal fluency, and general information . . . and [they] have greater content knowledge than those who do not" (Section 2, ¶ 1). In general, however, middle school students tended to decrease the amount of time they devoted to VIR during these years. Additionally, Cullinan reported that the students who learned the most over their summer vacations were the ones who engaged in VIR.

Cullinan (2006) cited several studies asserting that "the amount of free reading done outside of school has consistently been found to relate to growth in vocabulary, reading comprehension, verbal fluency, and general information" (p. 3). Because of assertions like this, program developers appear to have prioritized VIR as a key

component of quality reading programs (McGrath, 2005). Moreover, it appears that students who voluntarily read during their free time also scored higher on achievement tests and they demonstrated greater content knowledge (Cunningham & Stanovich, 1991; Krashen, 1993; Won & Han, 2010). One such study, conducted by Won and Han (2010), specifically examined the association between the reading books for enjoyment and math achievement. These researchers surveyed 14,221 middle school students in the U.S. and South Korea and obtained a positive relation between the amounts of time the middle school students reported reading books for enjoyment and their math achievement level.

Students Engage Differently in Voluntary Independent Reading

According to Mercurio (2002), students read self-selected materials differently from the materials educators and parents expected them to read. Students who read self-selected books appear to be more inclined to engage in voluntary independent reading (VIR) than they are to watch television or play video games. In contrast, Mercurio found that students typically tried to finish assigned books quickly and spent less time engaged when reading assigned materials. Mellon (1990) concluded similarly, explaining that "teenagers read in their free time for two main reasons: entertainment and information" (p. 224). Moreover, Mellon said another commonly mentioned reason for why students read is to "escape." Cuevas' (2003) study provided evidence that students often read to please their parents and teachers, rather than because they are intrinsically motivated to read independently. It appears that when students self-select their own literature, they enjoy reading more and are more likely to choose reading over competing activities (Mercurio, 2002; Ivey & Broaddus, 2001; Pflaum & Bishop, 2004). Although middle school students do not mind teacher-selected materials, they appear less apt to read

teacher-assigned texts (Mercurio, 2002). Nevertheless, they appear to enjoy teacher-selected literature when it is read aloud to them by teachers (Ivey & Broaddus; Pflaum & Bishop).

Studies That Examine Voluntary Independent Reading Behaviors

In this section, four articles and one dissertation, all published within the past fourteen years, are examined because of their similarity to this study. Each of these studies examined the reading behaviors of students who were fourth grade or older. One study examined the voluntary independent reading behaviors of fourth and fifth graders, two of the studies focused on the reading of middle school students, and one study described the reading interests of high school-aged students. A description of the methodologies and findings of these four studies are described in the following sub-sections. Also, provided in Appendix A is a table detailing the focus, participants, methods, and findings of these four studies.

Reading Behaviors of Urban, Minority Middle School Students

In a recent study of the reading 'habits' of minority fifth through eighth grade middle school students in an urban school, Hughes-Hassell and Rodge (2007) found a positive relation between voluntary independent reading and school achievement. This particular study utilized a twenty-item survey questionnaire to examine: (a) whether or not minority, urban adolescents read during their free time; (b) what, when, and why they read; (c) what topics and characters they preferred to read about; (d) how they accessed reading material; and (e) who encouraged them to read. The student sample was primarily Latino (66%) and African-American (27%), and 86% of the students qualified for federally subsidized meals based on their socioeconomic level. To collect the data for this

study, the librarian at the middle school asked teachers to administer a questionnaire consisting of twenty items to their students. Thirty-five of the teachers agreed to participate, resulting in 715 of the 1,340 middle school students who responded to the survey. This data collection yielded results for 584 students who successfully completed the survey questionnaire. According to these researchers, eighth grade reading achievement level at the school, as measured by the state assessment of reading (an assessment taken prior to the survey), indicated that 68% performed below a basic level of reading proficiency, 23% at or above the basic cut score, and only 9% qualified as proficient readers.

Hughes-Hassell and Rodge (2007) found that 72% of the 584 student respondents "engaged in reading as a leisure activity," 22% read "constantly," 50% read "when they [had] a chance," 22% read "only for school," and 6% "[did] not read" at all (p. 23). Seventy-eight percent of the females who participated in the study reported reading for pleasure, compared to 64% of males. Forty-six percent of the students reported that they saw reading as a way to relieve boredom and escape. Those participants who reported "not reading" indicated a preference for other activities instead. Sixty-nine percent of students reported reading more than two books per month outside of school. Sixteen percent reported reading less than a book per month, and 15% reported reading only for school assignments. It is noteworthy, however, to point out that the school was chosen in part because it had a reading incentive program, which had been in place for five years prior to the study. The researchers did not specifically describe the incentive program (other than it rewarded students for reading books), but they did acknowledge that it may have accounted for the high number of books students read outside of school.

The participants in the Hughes-Hassell and Rodge (2007) sample answered questions about the media they accessed, the topics they preferred to read about, and the sources they utilized in accessing reading materials. With regard to media accessed, students reported that they liked reading magazines (72%), comics (44%), the Internet (37%), books for pleasure (30%), and newspapers (20%). The researchers indicated that students' preference for magazines revealed a finding that was different from previous studies which found that females preferred realistic fiction, mystery and fantasy, while males preferred action and adventure. As for the preferred topics, at least one-third of the male students reported that they liked reading about sports figures (63%), animals (44%), celebrities (44%), fantasy characters (43%), interesting people their age (38%), and musicians (34%). At least one-third of the female students reported their preference for celebrities (67%), people or characters like them (54%), musicians (50%), interesting people their age (47%), people their age wrestling with tough issues (41%), people or characters different from them (38%), animals (34%), and fantasy characters (33%). Finally, in terms of the sources they accessed, students reported obtaining their reading material from the school library (71%), the public library (53%), the classroom (53%), and bookstores (43%).

Summarizing this study, Hughes-Hassell and Rodge (2007) reported that 72% of the respondents read constantly or when they had a chance; 28% reported reading only for school or not at all. Three out of four respondents reported a preference for magazines, though many also read comics, the Internet, and books; and, students accessed reading material from libraries, school, and bookstores. The most popular topics chosen by the participants included reading about interesting people (e.g. celebrities,

musicians, sports figures, and people their age), animals, and fantasy characters. Further, although reading proficiency data specific to the survey participants were not available, over two-thirds of the students at the school read below the basic level of proficiency, and 32% read at or above the basic proficiency level.

Reading Behaviors of Sixth Graders

In a 2001 survey-based study, Ivey and Broaddus (2001) examined the reading behaviors of sixth graders. Although the study focused primarily on classroom reading and what students valued about classroom reading instruction, some of the findings appear to shed light on what motivates students to read. The 1,760 sixth grade student participants who completed the ten-item survey attended twenty-three schools in two distinct regions of the United States, and were taught by 74 different teachers in 109 total classrooms. Unlike the Hughes-Hassell and Rodge's (2007) study, 95% of the students in this study attended schools where less than half of the population qualified for free or reduced lunch. Further, 71% of the students were Caucasian and 12% were African American.

Of the students surveyed, 63% reported that they enjoyed 'free time reading' and 42% indicated that they were motivated to read in class when they found good materials and when they were involved in the selection process. Additionally, 28% of the students reported that they read because they were self-motivated to do so; 23% of the students reported reading because of the school environment (e.g., literacy activities, external rewards); and 19% of the students indicated that they were motivated to read by other people such as adults and peers. Among the media types students reported reading, 77% of students reported reading magazines, 49% reported reading comic books, and 28%

reported reading newspapers. Although in-class and in-school reading (e.g. sustained silent reading) is somewhat different than voluntary independent reading, Ivey and Broaddus' study provided findings that appear to be relevant to this study.

From the 109 classrooms, 31 students participated in interviews that went into greater depth. These 31 participants attended three classes, from different schools, identified as classrooms highly engaged in reading. This component of the study was conducted to gather richer descriptive data and to complement the quantitative data with qualitative, in-depth findings. Through this method, Ivey and Broaddus (2001) gathered qualitative comments from students. For example, when asked what makes them want to read, one student said, "It makes me want to read when I hear it's our choice and no one else's," while another said, "I . . . read because I like to . . . if the story is good I will [read] forever" (p. 350). These sample responses appear to indicate that choice is important, as are high interest materials. Similarly, when asked what they like about 'free reading time in class,' students shared thoughts such as: (a) "I like it that we get to choose our own book"; (b) "I like it . . . because you get to just think and you don't have to answer questions"; and, (c) "If it's a good book, I want to read it" (p. 360). When asked what motivates [you] to read in their classrooms, twelve (39%) of the 31 students said a "good book or good topic," nine (29%) identified the teachers as "an important factor;" and, seven (23%) indicated "personal reasons such as individual learning" (p. 362).

Summarizing the Ivey and Broaddus (2001) study, it appeared that in the classroom setting, students were more apt to read when they had access to good reading material and when they were involved in selecting their own material. Also important was the right environment for reading, encouragement by other people (e.g., teachers,

peers), and an interest in learning. Overall, personal choice, interest in the subject matter, and making personal connections to the text were common responses that were associated with positive reading experiences.

Reading Choices and Interests of High School Students

In another survey-based research study, Poerschke (2005) collected data on the reading choices and interests of 8,948 high school student participants who attended schools in one suburban district in Texas. Poerschke's study is of particular interest because it employed a survey instrument to gather data to describe students' reading interests. Although it was designed for high school students, and some of the questions may not fit the context of the study at hand, most of the questions appear to have been well-designed. Moreover, although the participants in this study were high school, rather than middle school students, it is presented here because the research questions, methodology, and findings appear to closely parallel this study.

In her study, Poerschke: (a) examined the reading interests of high school students; (b) analyzed the data to determine differences by student demographic characteristics (e.g. gender, age and/or grade level, ethnicity, reading ability); and, (c) examined the extent to which students reported engaging with "non-print texts". Poerschke's findings provided evidence substantiating that student reading interests are diverse, students appear to access a variety of text categories, and that student literacy is broad and deep. To gather data for her study, Poerschke developed a survey instrument called the *High School Reading Choices* Survey, and administered it to all the high school students in the district.

The findings from Poerschke's (2005) study provided evidence supporting the notion that the respondents had diverse reading interests, and these interests appeared to be affected by student demographic category and reading proficiency level. For example, (a) 86% of the respondents reported that they read magazines; (b) 85% read electronic texts; (c) 65% indicated that, in addition to required reading, they read books and newspapers on their own time; (d) 46% said they choose to read comics, cartoons, and graphic novels; and, (e) 30% reported reading poetry as their favorite non-fiction choice.

In addition to examining student reading choices and interests, Poerschke's (2005) study yielded extensive lists of specific texts (e.g. magazines, electronic texts, books) and media types (e.g. TV shows, movies). In the relatively new area of electronic texts, for example, Poerschke's findings revealed that "students enjoy instant messaging, e-mail, viewing Internet websites (surfing), chat rooms, news pages, web logs, e-books, and zines . . . [as well as] gaming, text messaging, zanga/online journaling, . . . and forums" (p. 268). Poerschke found that a high percentage of students reportedly engage in media texts about television, music and movies, and appear to engage in these more than any of the printed text categories. Further, electronic texts (especially the media text sub-category: reading texts about video and computer games) ranked higher in popularity than books, newspapers, and the comic/graphic novel categories.

Poerschke's (2005) findings were differentiated by student demographic characteristics. According to survey results, although both genders read a tremendous variety of texts, males read less than females in seven of nine text categories, with the two exceptions of comic/graphic novel reading and the media text sub-category: reading texts about video and computer games. The other seven categories, all of which females

reported reading more, included: (a) media text sub-category: reading texts about television; (b) media text sub-category: reading texts about music; (c) media text sub-category: reading texts about movies; (d) magazines; (e) electronic texts; (f) books; and, (g) newspapers. By age and/or grade level, for these ninth through twelfth grade participants, none of Poerschke's findings were statistically significant. Moreover, disaggregated by ethnicity, there were no findings that were statistically significant either.

Poerschke's study yielded results substantiating that: (a) Hispanic students reported reading an extensive list of Spanish language titles; (b) African American students reported reading text titles that target African Americans (e.g. *Ebony, Black Beat, Black Men,* etc.) and selecting books written by African American authors; and, (c) Asian American students reported a specific Japanese anime/manga title, *Dragonball Z,* and a magazine titled *Asians Today*. When differentiated by reading ability, Poerschke found that, compared to average and good readers, a smaller number of struggling readers chose to read in eight of the nine text categories. Two of the nine categories substantiated relations that were statistically significant. These included: (a) Interest in book reading, (when compared to struggling readers, 14 % more average readers reported interest in book reading; and, when compared to average readers, 15% more good readers reported interest in book reading); and, (b) interest in newspaper reading (when compared to struggling readers, 13% more average readers reported interest in newspaper reading; and, when compared to average readers, 6% more good readers reported interest in newspaper reading).

Extracting the key findings, the respondents in Poerschke's study reported that magazines (86%) were the most popular reading material, followed very closely by Internet based text (85%). The respondents also reported an interest in using electronic texts such as email, text messaging, instant messaging, blogs, and other electronic-based texts. Overall, good readers reported reading more than average readers and average readers more than struggling readers; and, these differences were particularly evident with the reading of books and newspapers.

Leisure Reading Behaviors of Fourth and Fifth Graders

To describe the leisure reading behaviors of fourth and fifth grade students, Shapiro and Whitney (1997) conducted a study in which 57 fourth graders and 50 fifth graders filled out clock-sheets over a three-week period of time. The participants were students in five classrooms at one suburban school in the southeastern United States, a school with 58% of the students qualifying for federally subsidized meals based on their socioeconomic level. Shapiro and Whitney examined students' self-reported leisure activities during fifteen-minute time intervals. Data from Chapter 1 students and English language learners were omitted, leaving a total of 90 participants for the descriptive data analyses. In addition to other leisure activities, the students recorded the amount of time they spent reading books, magazines, comic books, and newspapers. Based on these data, students were categorized in groups consisting of avid and non-avid readers. Avid readers were the 22 participants who reported reading at least one hour a day on their clock-sheets during the three-week reporting period, while non-avid readers were 22 other participants who did not report reading at all during the same time period. More, these participants then filled out two additional measures designed to examine their reading

attitudes and academic intrinsic motivation. The researchers also conducted follow up individual interviews. Further, according to Shapiro and Whitney, the students in these five classrooms "made frequent visits to the extensive school library, had regularly scheduled sustained silent reading periods and teacher read-alouds, and each classroom had an individual library" (p. 350).

Shapiro and Whitney's (1997) findings revealed that the participants reported reading for an average of 20-minutes per day. Statistically significant relations were obtained for seven out of fifteen variables between avid and non-avid readers. These seven variables included the following: (a) Avid readers enjoyed reading much more than non-avid readers; (b) avid readers had less anxiety or nervousness about their reading; (c) avid readers had a higher intrinsic motivation to read; (d) avid readers received more books as gifts; (e) avid readers were taken to the library more; (f) avid readers were read to or with by a parent until an older age (average of eight years for avid readers and six-and-a-half for non-avid readers); and, (g) avid readers were encouraged to read by someone at home. Moreover, Shapiro and Whitney noted that gender, more than any other factor, accounted for the statistically significant associations, with females rating higher.

Also worth noting are the relations that were not statistically significant between avid and non-avid readers, which included the following: (a) Their view of their own reading abilities; (b) how rewarding they thought reading was in the eyes of their teachers, peers, or parents; (c) the amount their parents used the library; (d) the amount they observed their parents reading; (e) the difference in public library membership; (f) that all individuals reported having a favorite place to read; (g) the amount they reported

using the library (though the avid-readers, especially females, reported using the library more); and, (h) the age at which parents reportedly began reading to these participants (though it was reported that the parents of avid readers typically began reading to them prior to the age of three, whereas non-avid readers' parents reportedly began reading to them before the age of five).

Reviewing the key findings of Shapiro and Whitney's study, the participants, who were all competent readers, were categorized into two groups: avid and non-avid readers. The participants reportedly averaged 20-minutes per day of leisure reading. When compared to non-avid readers, the avid readers: (a) were less anxious about reading, (b) enjoyed reading more, (c) were more intrinsically motivated to read, (d) appeared to have more access to reading material, (e) were read to more by parents, and (f) were more often encouraged to read.

Factors That Influence Students' Motivation to Read and Interest in Reading

The four studies that were reviewed in the preceding subsections revealed findings that appear to support the research literature on voluntary independent reading (VIR). According to the research literature, there is evidence that many factors influence how often and for how long students engage in VIR. A list of some of the important variables include: (a) Students observing reading modeled by others (especially parents); (b) access to reading material (especially in the home); (c) students' learning about high interest reading material (e.g. book talks, current events discussions); (d) reading proficiency or ability; (e) involvement and encouragement by parents and other significant adults; and, (f) adequate time and a comfortable place for reading (Cullinan, 2006; Everhart, 2002; Hughes-Hassell & Rodge, 2007; Worthy, Moorman, & Turner,

1999). Access and choice appear to be two of the key variables that influence the frequency and duration that students engage in VIR. As previously mentioned, Appendix A offers a table with details on the focus, participants, methods, and findings of the four studies reviewed in the preceding subsections.

Two Important Factors: Access and Choice

According to Worthy, Moorman, and Turner (1999), access to high interest reading materials is critical. These authors reported that students read more when they could easily access high interest texts. Similarly, Worthy and McKool (1996) found that both struggling and competent student readers reported that they would be inclined to spend more time reading if their access to high interest reading materials increased. These findings appear to have a positive relation with an improvement in students' attitudes toward reading, as well as an improvement in their reading proficiency. In addition to adequate access, Cullinan (2006) found that other important variables include active parent involvement, partnerships among community institutions, and collaboration among important adults in students' lives. Moreover, Worthy, Moorman, and Turner (1999) contend that to maximize effectiveness, access must be more than just to the materials available in classrooms and libraries. They suggested that the key to access is for students to actually have various media in their homes and/or the ability to purchase reading materials.

According to Everhart (2002), Krashen's work suggests that 'certain elements must be in place for voluntary independent reading to be successful. These include the following: providing (a) free choice in reading materials; (b) a print-rich environment; (c) access to large library collections; (d) time for sustained silent reading in school; (e)

encouragement to readers; and, (f) quiet, comfortable places for children to read. Additionally, Krashen's work suggests the importance of having others promote positive reading habits and have reading modeled by parents, teachers, and friends. Voluntary independent reading programs do not require books reports, journal entries, or chapter review questions. These programs are set up to allow students to participate in the enjoyment of reading. Many school programs include the self-selection of reading materials and sustained silent reading time. Less common are programs encouraging reading outside of school.

Recommendations for Increasing Interest and Motivation

For increasing students' interest in reading and their motivation to read, the studies conducted by Shapiro and Whitney (1997) and by Hughes-Hassell and Rodge (2007) seem to offer helpful findings. As discussed previously, Shapiro and Whitney presented findings that suggest the importance of students' motivation to engage in voluntary independent reading. To review, Shapiro and Whitney differentiated between avid and non-avid readers, finding that avid readers: (a) enjoyed reading more, (b) had less anxiety about their reading, (c) had higher intrinsic motivation to read, (d) received more books as gifts, (e) were taken to the library more, (f) were read to or with by a parent until an older age, and (g) were more often encouraged to read by someone at home. Similarly, Hughes-Hassell and Rodge's (2007) study led these researchers to recommend that educators consider the following when supporting students' literacy development: (a) Provide the materials students prefer; (b) respect students' culture and heritage; (c) talk to students; (d) provide time for students to read during their day; (e) provide adequate funding for materials; (f) encourage summer reading; (g) partner with

parents to encourage and support leisure reading; and, (h) share their passion and love of reading with students.

Media Accessed by Students

To ensure that students have access to the reading material they prefer, it seems logical to review the research on the media accessed by students for their voluntary independent reading (VIR). It appears that during the past ten to fifteen years, students have increasingly accessed electronic texts for their VIR (Poerschke, 2005). Interestingly, with the exception of Poerschke's study (2005), the VIR research literature does not specifically address the effect of electronic media on student reading behaviors. Prior to the past ten years, the VIR research literature provided findings on the amount students read by accessing traditional media such as books, magazines, comic books, and newspapers. The research literature did not address student leisure reading of incidental texts such as signs, billboards, restaurant menus, pamphlets, or brochures. Based on the research literature, the amount that students access incidental texts when they engage in VIR is unclear. Although this study does not address the area of incidental texts, it does attempt to examine student VIR of electronic media.

Voluntary Independent Reading using Electronic Text

During the ten years prior to 2007, student access to electronic text via the Internet has increased dramatically (Coiro, 2007). During the past few years, this trend of teen access to and use of electronic media seems to have further increased (Rosen, 2011; Lenhart, et al., 2010; Rideout, Foehr, & Roberts, 2010). Because of this trend, this present study is designed to obtain data on students' access to and reading behaviors using electronic text for their VIR. Evidence supports that the Internet, email, text

messages, and other new technologies have expanded the ways that students can access reading materials, not to mention how they can communicate by using these texts (Rosen, 2011; Lenhart, et al., 2010; Rideout, Foehr, & Roberts, 2010). These electronic media are referred to as the "new literacies" by current researchers, including Coiro, Knobel, Lankshear, and Leu (2008). In the book proposed by these authors, titled *The Handbook of Research in New Literacies* (retrieved on February 7, 2009 from http://ctell1.uconn.edu/coiro/erlbaum.pdf), these researchers point out that current research is only at the point of developing theories and constructs to be able to study student literacy behaviors that are specific to these new digital technologies. These researchers also assert that the Internet, in particular, has caused a dramatic increase in the amount that students access texts through these "new literacies." Supporting this assertion, several recent studies have provided evidence substantiating that many students spend considerable amounts of time reading by accessing electronic media, and that students enjoy reading on the Internet (Aitken, 2006; Plaum & Bishop, 2004; Walsh, 2006).

Interestingly, Walsh (2006) suggests that when it comes to current reading practices, educators are presently 'out of touch' with today's youth. Although Walsh's study did not specifically target middle school students, his findings suggest that educators should keep in mind that students access reading material through a wide variety of sources, including electronic text. Supporting Walsh's assessment of today's educators, Alvermann (2002) claimed that school reading tends to prioritize books and other traditional print-based media more than other electronic-based media, despite students' growing interest in the Internet and other electronic text. Further, according to

Walsh (2007), by accessing interactive electronic-based texts, students are able to combine visual, digital, and written text as they synthesize information to create new knowledge and develop their understanding. It seems important, therefore, to call attention to fact that the Internet and other digital media (e.g. cell phones) appear to allow for a more interactive literacy experience, perhaps causing an increased blurring of the lines between the amounts of time students spend reading and the time they spend writing. Moreover, Coiro (2007) points out that reading comprehension of online texts requires a different skill set than the comprehension strategies students draw upon when using off-line texts. For example, Coiro contends that these online comprehension skills require more of a focus on locating, evaluating, synthesizing, and communicating information.

A Set of Six Survey-based Research Reports that Examine Student Use of Electronic Text

To collect data on the Internet use and online reading behaviors of sixth, seventh and eighth grade students, The New Literacies Research Team (2009), a group of researchers affiliated with the University of Connecticut, administered surveys during the 2005-06 school year to 1,020 middle school students, primarily seventh graders, who attended seven different school districts (Retrieved from the *New Literacies* website on February 28, 2009 from http://www.newliteracies.uconn.edu/pubs.html). The survey participants consisted of (a) 113 sixth graders (11%), 804 seventh graders (79%), and 103 eighth graders (10%); (b) 474 males (46%) and 546 females (54%); and, (c) approximately 547 Caucasians (54%), 176 Hispanics (17%), 135 African-Americans (13%), 29 Asian-Americans (3%), and 137 respondents of other ethnicities (13%).

Additional demographic and achievement data (e.g., socioeconomic level, reading proficiency) were not available at the *New Literacies* website.

The participants responded to questions on the *Survey of Internet Usage and Online Reading*, a survey questionnaire designed to ascertain the amount that middle school students access the Internet and other electronic text to do various activities at school and outside of school. A selection of some of the activities examined with this survey instrument included the amount students used the Internet to do each of the following activities: (a) Complete school assignments; (b) read email; (c) read web logs; (d) read Internet discussion boards; (e) read about movies, music, and sports; (f) read manga or comics; (g) read about various school subjects; (h) read about current events; and, (i) read about hobbies. How the data were collected for this research project was not explicitly described, though it appears that the sample of 1,020 students who participated in the study successfully completed the survey questionnaire. The results of the questions that appear to be relevant to this proposed study were analyzed and are described in the following subsection. The findings of this research project seem to be important because in the research literature there are limited data on the online reading behaviors of middle school students.

Findings of the New Literacies Research Team. The New Literacies Research Team's (2009) findings consisted of data on the Internet use of middle school students during the 2005-06 school year. The results were available online in six different research reports consisting of 1,020 total participants. The number of participants in each report consisted of: (a) 315, (b) 125, (c) 61, (d) 133, (e) 215, and (f) 170 respectively. For this literature review, the data from the six reports were combined and, as a result, the raw

numbers and percentages provided are approximations (precise results are anticipated when the New Literacies Research Team publishes their findings).

Of the 1,020 total students who participated in the survey:

1. 817 (80%) students reported access to the Internet in their homes.

2. 587 (58%) students reported an increase in the amount they used the Internet from the previous year.

3. 729 (71%) students reported using the Internet at home more often than at school.

4. 720 (71%) students reported reading email at least occasionally and 528 (52%) students a few times a week.

5. 399 (39%) students reported reading web logs at least occasionally and 277 (27%) a few times a week or more.

6. 418 (41%) students reported reading Internet discussion boards at least occasionally and 108 (11%) a few times a week or more.

7. 821 (80%) students reported reading information on the Internet about movies, music, or sports at least occasionally and 434 (43%) a few times a week or more.

8. 251 (25%) students reported reading manga or comics on the Internet at least occasionally and 129 (13%) a few times a week or more.

9. 543 (43%) students reported reading current events on the Internet at least occasionally and 119 (12%) a few times a week or more.

10. 564 (55%) students reported reading about their hobbies on the Internet at least occasionally and 230 (23%) a few times a week or more.

Summarizing the New Literacies Research Team (2009) report, findings support that the middle school students are increasingly using the Internet for a variety of purposes, including reading electronic text. In the 2005-06 school year, 80% of the survey participants reported using the Internet at least occasionally to read about a variety of topics and over 70% reported reading email. Information on the focus, participants, methods, and findings provided by the set of six surveys administered by the New Literacies Report Team has also been added to the table in Appendix A. Although these findings provide data on the frequency that students access the Internet, it does not reveal how much time students spend engaged in reading on the Internet. Hence, it appears that this present study may contribute new findings on the current voluntary independent reading behaviors of students using the Internet and other electronic text.

Summary

This literature review provides a synthesis of the research on the voluntary independent reading (VIR) behaviors of middle school students. The VIR construct was defined and operationalized as it is used in this study. In the research literature, evidence supports that the amount of time students engage in VIR is closely related to both student academic performance and student reading achievement. Evidence substantiates that students access a wide variety of texts when they engage in VIR. Moreover, findings support that there is considerable variation among middle school students with respect to their choice of topics and the frequency and total amount of time that they engage in VIR. Based on this literature review, it appears that this study may contribute new findings on the current state of the VIR behaviors of middle school students. Perhaps most

noteworthy is how this study may shed light on the extent to which students use the Internet and electronically-based media to engage in VIR.

CHAPTER III

METHODOLOGY

A web-based questionnaire (see Appendix B) was used to survey the voluntary independent reading (VIR) behaviors of a convenience sample of middle school students. The survey questionnaire was designed to gather descriptive data designed to examine: (a) the frequency and total amounts of time this sample of middle school students engaged in VIR, (b) the topics they selected when they read voluntarily and independently, and, (c) the media they accessed when they engaged in VIR, including how much students accessed electronic text for their VIR.

This study was designed to examine the relations between VIR and the following variables: (a) The amounts of time middle school students engaged in VIR and demographics (e.g. personal, social, academic characteristics); (b) The amounts of time middle school students engaged in VIR and other variables (e.g. access to reading material in the home, access to cell phones); (c) Academic performance indicators (e.g. grades in language arts and math courses; reading, writing, and math proficiency levels as measured by the *Oregon Assessment of Knowledge and Skills*). The specific demographics included: (a) gender, (b) grade level, (c) ethnicity, (d) socioeconomic level, and (e) special education or talented and gifted qualification.

The results of this study provide data for researchers, scholars, and educators interested in understanding the voluntary independent reading (VIR) behaviors of this particular sample of middle school students, including the associations these behaviors may have with academic performance and achievement levels. Perhaps most noteworthy is how this study provides evidence substantiating the extent to which students now use

the Internet and other electronic media (e.g. email, text messaging), as well as printed text, to engage in VIR. The results of this study may make it possible for educators, researchers, and policymakers to make more informed decisions as they design instruction, create student learning opportunities, and enhance reading programs.

Research Design

This non-experimental quantitative study used a correlational survey design to gather data from a sample of the student population that attended three middle schools in a suburban school district in Oregon. Survey instruments are often employed in quantitative studies to gather data for the purpose of describing, explaining, and exploring relevant characteristics of participant data and participant perceptions on a variety of topics (Babbie, 1990; Berends, 2006; Creswell, 2003). The survey questions included in this study and subsequent data analyses were designed to elicit data to answer the research questions as they pertain to the study population. The data were analyzed using a variety of statistical procedures to provide descriptive statistics of the study sample, and to determine whether the findings support, refute, or expand on the empirical and theoretical research found in the literature (Fowler, 2002). To answer some parts of the research questions, statistical analyses were used to test differences between various demographic subgroups.

The unit of analysis was the individual middle school student in the convenience sample of students who attended the three middle schools under study. So that the data gathered from this study could be compared to past empirical data. In addition, some of the questions used in this survey instrument were closely related to items employed in previous survey instruments (see Appendix C). These related survey instruments

included: (a) one that Poerschke (2005) developed and used to describe the reading interests of high school students; (b) one that Hughes-Hassell and Rodge (2007) used to describe the reading habits and attitudes of middle school students; (c) an instrument that Ivey and Broaddus (2005) used to describe what makes and sixth graders motivated to read; and, (d) an instrument that *The New Literacies Research Team* (2009) employed to investigate students' literacy habits when using non-print, electronic texts.

Research Questions

The survey instrument for this study was designed to provide descriptive data to answer the following research questions.

1. What are the voluntary independent reading behaviors (e.g. frequency and total amounts of time; preferred topics; media accessed) of a convenience sample of middle school students as obtained and analyzed from a web-based survey conducted in 2009?

2. What are the relationships between the voluntary independent reading behaviors of middle school students in this particular sample, and selected academic performance achievement measures and student demographic indicators (e.g. personal, social, academic characteristics)?

3. What are the relationships between the amounts of time students report to be engaged in voluntary independent reading (VIR) and selected performance indicators (e.g. academic performance; reading, writing, and math proficiency levels)?

Hypotheses

The survey was designed so that results could provide descriptive data on the voluntary independent reading (VIR) behaviors at a single point in time for the middle school student participants. The data permitted the description and analyses of the VIR

behaviors from a sizeable, albeit convenience sample of students who attended three middle schools in an Oregon suburban school district. This method of data collection allowed nearly all of the students in these schools to have an opportunity to participate.

Prior to administering this survey, I hypothesized that students in this study would report VIR behaviors comparable to the behaviors of the students who participated in the surveys conducted by Poerschke (2005), Hughes-Hassell and Rodge (2007), Ivey and Broaddus (2001), Shapiro and Whitney (1997), and the New Literacies Research Team (2009). The descriptive results of these aforementioned survey studies were detailed in the literature review, as well as in Appendix A. Comparisons between the results of this study and those of the previously referenced studies will be examined in the discussion chapter.

Though much of this research is exploratory, prior to administering the survey, some of the specific hypotheses for this study included the following.

1. Middle school students (MSS) who spend more total time engaged in VIR activities are likely to have higher grades in their classes, as measured by their language arts and math class marks, than the MSS who engaged in less VIR (Allington & McGill-Franzen, 2003; Cullinan, 2006; Hughes-Hassell & Rodge, 2007; Krashen, 1993; Short, 1995).

2. Middle school students who spend more total time engaged in VIR activities are likely to have higher proficiency levels, as measured by their reading, writing, and math assessment data, than the middle school students who engage in less VIR (Allington & McGill-Franzen, 2003; Cullinan, 2006; Guthrie & Wigfield, 2000; Hughes-Hassell & Rodge, 2007; Krashen, 1993; Short, 1995; Stanovich & Cunningham, 1993).

3. Female MSS are likely to spend more total time engaged in VIR activities than their male MSS counterparts (Hughes-Hassell & Rodge, 2007; Poerschke, 2005).

4. Middle school students who report having more access to reading materials in their homes are likely to spend more total time engaged in VIR activities than MSS with less access to materials in their homes (Worthy & McKool, 1996; Worthy, Moorman, & Turner, 1999).

5. Middle school students are likely to report enjoying VIR more than the reading that was assigned to them by their teachers or parents (Cuevas, 2003; Ivey & Broaddus, 2001; Mercurio, 2002; Pflaum & Bishop, 2004).

6. Middle school students are likely to access a wide variety of media, including electronic text, when they spend time engaged in VIR activities (Hughes-Hassell & Rodge, 2007; Poerschke, 2005).

Setting and Participants

The school district from which the middle school student sample was derived consisted of thirteen schools: (a) Six grade schools, kindergarten through fifth grade; (b) three middle schools, sixth through eighth grade; (c) two comprehensive high schools, ninth through twelfth grade; (d) one small alternative high school, ninth through twelfth grade; and, (e) one charter school, fourth through eighth grade. The school district spanned two suburbs of a large metropolitan area in Oregon. Two of the three middle schools in the district were categorized as upper socioeconomic status schools; the third was categorized closer to an average socioeconomic status level.

The participants in this particular study were drawn from a sampling frame of the 1,972 sixth, seventh, and eighth grade students who were enrolled during the time

(October 31 through December 10, 2009) the survey was administered in the three middle schools in this suburban school district. When the survey data were collected, residing within the school district's geographic boundaries was a total middle school population of approximately 2,107 students. At the time the survey was administered, those students in the population who did not attend one of the three district middle schools included the following: (a) Sixty-five students who attended a small charter school, which primarily drew students who resided within the district's geographic boundaries; (b) 69 registered homeschooled students; and, (c) one student who attended an alternative district program. Unavailable to the researcher was the number of students who resided within the geographic boundaries, but attended a private school or a school outside of the district's geographic boundaries; however, the number of students in this specific sub-category was likely quite small. Thus, it is important to note that this sampling frame did not represent the entire geographic-resident census of the district's middle school population.

In addition to the 135 aforementioned students who did not participate in the survey, five additional sub-groups are not included in the final data set. These sub-groups include the following (numbers are estimates): (4) The 100 students who were absent from school on the day the survey was administered in their language arts classes; (5) the 30 students who selected the option "I will not participate in this study;" (6) the seven middle school students who were enrolled in the district's special education program designed to provide life learning skill instruction; (7) the thirteen middle school students who participated in the district's special education program designed to deliver behavioral instruction; and, (8) the 220 students who may have attempted to participate in

the study, but either did not complete the web-based survey or for whom the school district was unable to provide a complete extant data set.

Of the approximately 2,107 middle school-aged students who resided within the district boundaries at the time the survey questionnaire was administered, a total of approximately 500 (23.8%) in the sampling frame did not participate in the study. The researcher believes that all of the approximately 500 students who were part of the sampling frame, but did not participate in the study, are included in one of the nine groups of students identified in the previous material. Hence, a total of 1,603 completed the web-based survey and for whom complete extant data were available.

Student Characteristics

According to the data provided by the cooperating school district, at the time of the survey the ethnicity of the students who attended the three middle schools consisted of 82.4% White, 8.4% Hispanic, 5.0% Asian, 1.3% Multi-Racial, 0.9% African-American, 0.5% Native American, and 1.4% who did not have an ethnicity designation. As determined by their federally subsidized lunch status, 20.0% of the student body was identified as economically disadvantaged. Extant data from the school district database were used to describe the participants' demographics, including gender, grade level, ethnicity, socioeconomic level, special education and talented and gifted qualification, academic performance level, reading achievement level, writing achievement level (taken by 8^{th} graders during February of their seventh grade year, 2009), and math achievement level. The academic performance level was based on each participant's final first quarter grade in his or her respective language arts and mathematics classes during the fall quarter, 2009. Thus, it's important to note that all participants took the survey within six

weeks of when this grading quarter ended. The reading, writing, and math achievement levels were based on the scores students earned on the *Oregon Assessment of Knowledge and Skills* taken between December of 2008 and May of 2009 (i.e., six to eleven months prior to the time the participants completed the survey questionnaire).

Differences in student characteristics by school. Two of the middle schools, with enrollments of 725 and 564 students respectively, can be categorized as upper socioeconomic status (SES) schools because only 13.7% of the students at those two schools qualified for federally subsidized meals. These two upper SES schools were similar to each other, had a combined ethnic diversity consisting of 86.6% White, 5.8% Asian, 3.8% Hispanic, and 3.8% other ethnic categories or were without a provided ethnic designation. Compared to other schools in the state, the third middle school, with an enrollment of 683 students, was categorized as slightly above average SES, with 30.9% qualifying for federally subsidized meals. The ethnic make-up of this third school consisted of students who were 74.5% White, 17.1% Hispanic, 3.4% Asian, 2.8% Multi-racial, and the remaining 2.2% either of other ethnic categories or without a provided ethnic designation. Thirty-four of the district's 48 English language learning middle school students attended this third middle school, representing 5.0% of the school's enrollment.

A summary of the combined demographic distribution of the students at these three schools is provided in Table 1. Because these schools were part of the same district, they received similar special education services, had a similar academic curriculum, followed a similar daily schedule, and offered similar elective course opportunities. The schools also shared similar levels of district support, student-to-teacher ratios, resource

allocation, and district office direction. According to the Oregon Department of Education, in the year prior to this study the two upper SES schools were rated as exceptional, and the slightly above average SES school was rated as strong. The ratings of exceptional, strong, satisfactory, low, and unacceptable were based on student test scores on the *Oregon Assessment of Knowledge and Skills* and attendance data measured by the rate at which students attended school.

Variables and Instrumentation

This subsection includes the list of variables measured for this study. It also includes a description of the procedures employed to collect data for these measured variables from extant data sources and through the web-based survey questionnaire. Moreover, survey development procedures are provided, including: (a) the items that were similar to those used in related studies, (b) original items designed to answer the proposed research questions, and (c) a description of how focus groups piloted the survey which led to minor modifications of the survey instrument.

To study the voluntary independent reading (VIR) behaviors of middle school students, this study examined a number of variables. These variables consisted of the: (a) VIR behaviors of the middle school student participants, (d) student demographics, and (c) student performance data. These procedures were designed to measure all the variables included in the research design using either survey methods or extant school district data records. The following procedure was used to develop each survey item: (a) A construct map to determine the possible range of responses for the participants; (b) development and design (or modification from other survey items) of items to capture the range of responses for each construct; (c) the outcome space to determine appropriate

categories for the closed-item responses; and (d) the measurement and/or interpretation model for each construct (Wilson, 2005). This four-step process was repeated as the survey questionnaire items were developed and then finalized prior to and during the focus group process. Below is a description of how the variables were measured in this study. The three subsequent sections are provided to offer a detailed description of the variables that were measured and the method for collecting the data.

Voluntary Independent Reading Variables

The primary purpose of this study was to investigate the voluntary independent reading (VIR) behaviors of middle school students (MSS). Such behaviors appear to vary primarily: on (a) student interest in various topics, (b) student access to different media types, (c) the extent that students enjoy VIR, and (d) choice. The specific VIR behavior variables are detailed in this subsection, including the method by which these variables were measured or interpreted. Because of the complexity of the range of VIR behaviors of MSS, this investigation was not exhaustive, but was designed to collect sufficient data to provide thorough and comprehensive findings to answer the first research question.

This subsection provides a description of the data that were collected using *The Voluntary Independent Reading Survey Questionnaire for Middle School Students*, a survey instrument that was designed and developed for this study. This questionnaire was a web-based survey that the researcher employed (see *Procedures* section of this chapter). A copy of the survey questionnaire is in Appendix B. For the purposes of describing the VIR behaviors of MSS, the responses to survey questions from this sample of MSS included the following variables and measures for those variables:

1. Enjoyment level of (a) reading, (b) assigned reading, (c) VIR, (d) fiction reading, (e) nonfiction reading,(f) reading of electronic texts, and (g) reading of printed texts. Each of these kinds of reading and types of reading materials were assessed separately with specific questions. The degree to which MSS enjoy these specific kinds of reading and types of reading materials was assessed by students responding to the degree to which they agreed or disagreed with following statements: (a) I enjoy reading; (b) I enjoy reading assigned by my teachers/parents; (c) I enjoy free choice reading; (d) I enjoy reading fiction (novels, stories, etc.); (e) I enjoy reading nonfiction (true/real life, facts, information, etc.); (f) I enjoy reading electronic texts (Internet, email, text messages, etc.); and, (g) I enjoy reading printed texts (books, magazines, newspapers, etc.). Response choices included (a) strongly agree, (b) agree, (c) disagree, and (d) strongly disagree.

2. Amount of VIR on (a) weekend days and (b) vacation days versus VIR on school days. The amount MSS engaged in VIR on these two non-school days was measured separately with specific questions. The amount of time MSS engaged in VIR on school days (versus weekend days and vacation days) was measured by students responding to the degree to which they agreed or disagreed with following statements: On weekend days, I do more free choice reading than on school days. And, on vacation days, I do more free choice reading than on school days. Response choices included (a) strongly agree, (b) agree, (c) disagree, and (d) strongly disagree.

3. Preferred topics. The topics that MSS selected to read about when they engage in VIR were measured by student responses to choices to following the question ‘When you do free choice reading, which topics do you select?’ Respondents were invited to

select one or more responses from the menu of response choices. The response choices included the following: (a) text by or about your friends (email, text messages, interactive websites), (b) stories about people my age/teen issues, (c) text about video/computer games, (d) interesting novels/stories, (e) sports/sports figures, (f) entertainment/ celebrities, (g) fashion/beauty, (h) religion/spiritual, (i) puzzles/crosswords/games, (j) romance/love stories, (k) movies/television, (l) comics/graphic novels, (m) adventure/ action, (n) music/musicians, (o) poetry, (p) true life/realism, (q) history/historical figures, (r) drama/plays, (s) war/war stories, (t) autobiographies/biographies, (u) how-to books/ manuals, (v) mystery/spy/suspense, (w) comedy/humor/jokes, (x) cooking/nutrition/diet, (y) facts/statistics/ world records, (z) science fiction/fantasy, (aa) horror/supernatural, (bb) health/exercise/fitness, (cc) ads/advertisements, (dd) arts/crafts, (ee) news/current events, (ff) science/animals/nature, (gg) weather, (hh) travel, (ii) other: [Individual student text entry was optional], and (jj) none of these choices.

4. Reading modeled by parent(s)/guardian(s) and amount read to/with by parent(s)/guardian(s) as a young child. These two potential parent factors were measured separately with specific questions. The amount that MSS see reading modeled by their parent(s)/guardian(s) was measured by asking students to respond to choices on a frequency continuum following the question: 'How often do you see your parent(s)/ guardian(s) reading?' The amount that MSS remember their parent(s)/guardian(s) reading to or with them as a young child was measured by asking students to respond to choices following the question: 'As a young child, how often did your parent(s)/guardian(s) read to or with you?' Possible response choices included: (a) never, (b) less than once a week, (c) once a week, (d) a few times each week, (e) once a day, and (f) more than once a day.

5. Frequency of VIR and reasons why MSS do or do not engage in VIR. The frequency and reasons why or why they did not engage in VIR was assessed separately with specific questions. The frequency that MSS engaged in VIR was assessed by asking participants to respond to the question, 'How often do you do free choice reading?' Possible response choices included: (a) never, (b) less than once a week, (c) once a week, (d) a few times each week, (e) once a day, and (d) more than once a day. The reasons why MSS engaged or did not engage in VIR during their free time were assessed by students selecting one or more response choices from a list of reasons why they do or do not enjoy reading during their free time. Depending on each student's response to the frequency question, participants were given one of the following questions. Students who selected a response other than 'never' to the previously listed frequency of VIR question ('How often do you do free choice reading?') were invited to respond to why they like to read. These students chose one or more of the following: (a) for fun/enjoyment, (b) to avoid being bored, (c) to learn information, (d) to learn about people, (e) to fill up my time, (f) to relax, (g) to escape, (h) I like the plot/story line, and (i) other: [Individual student text entry was optional]. Participants who selected 'never' to the frequency question were asked to select one or more responses from the following choices: (a) I'd rather be with friends, (b) I can't find good reading material, (c) I like other activities better, (d) I'm not good at reading, (e) reading is boring/not fun, (f) I'm too busy/no time, (g) I have too much school work, (h) I have no place to read, and (i) other: [Individual student text entry was optional].

6. Printed texts accessed for VIR. The printed text media types that MSS accessed for their VIR materials was assessed by asking participants to select one or more response

choices following the question, ‘When you do free choice reading, which printed texts do you read? (select all that apply).’ Response choices included: (a) magazines, (b) newspapers, (c) books, (d) comics, (e) other: [Individual student text entry was optional], and (f) none of these choices. Prior to this question, *printed texts* were defined as ‘reading materials you can hold (books, newspapers, magazines, comics, etc.).’

7. Electronic texts accessed for VIR. The electronic text media types that MSS accessed for their VIR materials was assessed by asking participants to select one or more response choices following the question, ‘When you do free choice reading, which electronic texts do you read? (Select all that apply).’ Response choices included: (a) Internet websites, (b) Interactive Internet websites (Facebook, Twitter, MySpace, etc.), (c) instant messages, (d) text messages (e) email, (f) blogs (web logs), (g) electronic newspapers, (h) electronic books, (i) electronic magazines, (j) chat rooms, (k) other: [Individual student text entry was optional], and (l) none of these choices. Prior to this question, *electronic texts* were defined as ‘non-printed reading materials (Internet, email, text messages, etc.).’

8. VIR over past 24-hours subdivided by (a) printed text VIR and (b) electronic text VIR. The total amounts of time that MSS engaged in VIR during the 24-hour period preceding their survey participation was subdivided into printed text VIR time and electronic text VIR time. For printed texts, students were asked to respond to the question: ‘During the past 24 hours, how much time did you do free choice reading of printed texts?’ For electronic texts, students were asked to respond to the question: ‘During the past 24 hours, how much time did you do free choice reading of electronic texts?’ To allow student respondents to provide a precise amount of time, students were

first invited to select from the following choices: (a) I didn't read printed/electronic texts, (b) between 0 and 10 minutes, (b) between 10 and 20 minutes, (c) between 20 and 40 minutes, (d) between 40 and 60 minutes, and (e) an hour or more. Depending on the responses to the initial questions (one for printed texts and one for electronic texts), participants were asked to specify the precise amount of time they engaged in VIR using printed and/or electronic texts during the previous 24 hours. The printed text question was, 'Specify the amount of time you did free choice reading of printed text during the past 24 hours.' The electronic text question was, 'Specify the amount of time you did free choice reading of electronic text during the past 24 hours.' Each respondent placed an arrow on a slider scale. The ranges included the following: (A) 0 to 60 minutes and (B) 0 to 6 hours.

9. Cell phone and home access to various media. Cell phone and home access to reading media were assessed separately with specific questions. The access MSS have to reading material through their cell phones was asked with up to three yes or no questions. The initial question was, 'Do you have a cell phone?' Those participants who reported having cell phones were then asked: (a) 'Does your cell phone receive text messages?' and (b) 'Does your cell phone have Internet access?' The access MSS have to various reading media in their homes (e.g. the Internet, magazines, newspapers, books) was examined with the question: 'What reading materials are available for you in your home?' Respondents were asked to select one or more response choices from the possibilities: (a) Electronic texts (Internet, email, etc.), (b) magazines, (c) books, (d) newspapers, (e) comics, (f) other: [Individual student text entry was optional], and (g) no materials are available.

10. The Places Where MSS locate VIR material. The locations where MSS find their VIR materials were assessed by asking students to select one or more response choices following the question: 'Where do you find the reading materials you use for free choice reading?' Response choices included: (a) in my classrooms, (b) at the public library, (c) at the bookstore, (d) my parents help me, (e) at the school library, (f) at home, (g) my friends help me, (h) my teachers help me, (i) the librarian helps me, (j) from the Internet, (l) other: [Individual student text entry was optional], and (m) I don't enjoy reading.

Each of the aforementioned variables was measured with survey items. The survey questionnaire that was used to gather this descriptive data, including the range of responses for each item, is provided in Appendix B.

Demographic Variables

The second important purpose of this study was to investigate the relations between the amounts of time students spend engaged in voluntary independent reading (VIR) and specific demographic characteristics of the participants. To describe the demographics of the participants in this study, the following variables were assessed for this sample of middle school students (MSS):

1. English language learner status. English language learner (ELL) status was specified according to students' (a) ELL status and (b) Non-ELL status.

2. Special education and talented and gifted qualification. Special education and talented and gifted qualification was specified according to students' (a) special education status (whether or not they had an Individual Education Plan) and (b) talented and gifted status.

3. Grade level. The participants' grade levels were specified by the following categories: Students who were in the (a) sixth grade, (b) seventh grade, and (c) eighth grade.

4. Gender. The range of gender possibilities included: (a) Male and (b) female.

5. Ethnicity. The range of outcomes for ethnicity included: (a) White, (b) Hispanic, (c) Asian-American, (d) African-American, (e) Native American or Pacific Islander, (f) Multiracial, and (f) No ethnic designation provided.

6. Socioeconomic status. Socioeconomic status was assessed by whether or not students qualified for federally subsidized meals.

By collecting these demographic data on the participants, this study was able to describe the relations between the VIR behaviors of MSS and selected student demographics.

Performance Variables

A third important purpose of this study was to investigate the relations between the amounts of time students spend engaged in voluntary independent reading (VIR) and specific performance indicators. Such performance indicators included: (a) academic performance and (b) proficiency level based on student performance on standardized assessments in reading, writing, and mathematics. To describe the academic performance and specific proficiency levels, the school district provided assessment data on this sample of middle school students for the following measured variables:

1. Academic performance. Academic performance was specified by students' language arts and math course grades: (a) The language arts grade for the quarter ending in November, 2009 (the range includes: A+, A, A-, B+, B, B-, C+, C, C-, and No Pass);

and, (b) the math grade for the quarter ending in November, 2009 (range includes: A+, A, A-, B+, B, B-, C+, C, C-, and No Pass). According to these academic performance data, participants were designated in a high performing academic group (both language arts and math grades were a B- or higher) or a low performing academic group (at least one grade was a C+ or below).

2. Reading proficiency level. Reading proficiency level was specified according to student performance on the *Oregon Assessment of Knowledge and Skills* (*OAKS*) taken between December, 2008, and May, 2009 (range of outcomes included scores that were categorized as exceeds, meets, nearly meets, and does not meet). Participants were placed into one of two categories, depending on whether they did or did not score at or above the cut score (i.e., meets the state proficiency standard) on the state reading assessment.

3. Writing performance level. Writing proficiency level (only available for 2008-09 seventh graders) was specified according to student performance on the *Oregon Assessment of Knowledge and Skills* (*OAKS*) taken between January, 2008, and March, 2009 (range of outcomes include scores that were categorized as exceeds, meets, nearly meets, and does not meet). As with reading, participants were placed into one of two categories, depending on whether they did or did not score at or above the cut score (i.e., meets the state proficiency standard) on the state writing assessment.

4. Math proficiency level. Math proficiency level was specified according to student performance on the *Oregon Assessment of Knowledge and Skills* (*OAKS*) taken between December, 2008, and May, 2009 (range of outcomes include scores that were categorized as exceeds, meets, nearly meets, and does not meet). Again, participants were placed into one of two categories, depending on whether they did or did not score at or

above the cut score (i.e., meets the state proficiency standard) on the state math assessment.

Development of the Survey Instrument

This study consisted entirely of original survey items, though certain survey items were similar to items on measures used in related survey research. As documented in the literature review, the following four survey instruments were examined for items to be used in the proposed study: (a) *The Reading Choices Survey* (Poerschke, 2005); (b) the survey questionnaire employed by Hughes-Hassell and Rodge (2007); (c) the survey questionnaire designed and implemented by Ivey and Broaddus (2001); and, (d) the *Survey of Internet Use and Online Reading* employed by the New Literacies Research Teams (2009).

The survey instrument utilized some question items and measures that were related to some of the items found in the four instruments referenced above. Nevertheless, to ensure that the survey questions addressed this study's research questions, modifications were made. Although no question items were replicated from any of the items found in the related survey instruments, similarities allowed for comparisons to be made between the findings of this study and the aforementioned research studies. Further, additional items were included to ensure that the survey questionnaire gathered data to fully address the critical research questions and constructs of this study. Because access to various reading materials continually changes as new technologies develop and as different media (e.g. Websites) become popular, current information was used to create an up-to-date survey instrument for the time when the survey was administered. The questions in this study's survey questionnaire that were

derived from items found in previous studies are listed according to their study of origin in Appendix C.

Focus Groups Piloting the Survey

Because this survey questionnaire was designed and developed by the researcher, no prior studies had established its reliability and validity (Creswell, 2003). Hence, two focus group studies were conducted with (a) six ninth grade and (b) nine sixth grade students respectively who resided in the same school district of the sampling frame of study participants described previously. The participants responded to the questions on the survey and then participated in an exploratory discussion designed to elicit feedback on the following potential issues: (a) The clarity of the survey question items; (b) the appropriateness of response categories for each item, including whether or not the range of choices was adequate to capture each student's response; (c) the overall organization and structure of the survey instrument; (d) the ease of transition from one item to the next; and (f) the total length of time in minutes required for the participants to complete the survey questionnaire. The researcher attempted to have focus group participants who were representative of the sampling frame of the study population (at least one English language learner, special education student, students at various reading skill levels, etc.). However, because focus group participation was voluntary, the goal of having a representative sample was not the primary intent of the focus group pilot.

Based on focus group feedback and recommendations, modifications were made to the survey questionnaire to clarify text and provide more comprehensive content, but no changes to the survey structure or length were required. Adjustments were also made to the introductory presentation that the researcher eventually shared with each of the 73

survey groups who participated in the study. For example, the ninth grade focus group volunteers suggested that the researcher explain that when they think of the term 'reading,' they should not limit their thinking to simply the reading of books, but rather the 'reading' could be of any type of text material, including electronic media. Appendix D includes post-focus group modifications, a sample script and the accompanying PowerPoint slide that the researcher presented to the 73 participant groups.

Procedures

As previously described, the student data on all of the variables identified in the *Instrumentation* section was collected through two methods. First, extant data were obtained with the cooperation and assistance of the school district's instructional technology staff. Second, the survey questionnaire data were collected via a web-based survey from participating students in the district's twenty-two sixth-grade language arts classes, twenty seventh-grade language arts classes, and twenty-four eighth-grade language arts classrooms, plus additional classes where other students were taught language arts (e.g. special education classes). The total number of classes included all of the special education students and all of the English language learners, with the exception of the special education students who were instructed in life learning skills and those who participated in a program designed for students with behavioral disabilities.

Employed for the web-based survey method was a *Qualtrics*-designed survey questionnaire. The various data were collected and then imported into an Excel database and also a Statistical Package for the Social Sciences (SPSS) database spreadsheet that was developed for the data set. Analyses were completed at the individual student level, by various groupings according to student characteristics.

Procedures for Administering the Web-based Survey Questionnaire

Between October 31 and December 10, 2009, nearly all of the students who attended the three district middle schools, and were present on the day that the survey was administered, were invited to complete the web-based survey questionnaire that was administered during their language arts classes. Individual students and the parents of each individual student were provided with the opportunity to decline participation if they so desired. In each middle school, a computer lab was set up and utilized for students to take the web-based survey questionnaire. Language arts teachers had their students participate by allowing their sixth, seventh and eighth grade students to go to a computer lab to participate in the fifteen to twenty minute survey activity.

To administer the survey questionnaire, students first listened to the researcher provide verbal instructions to assist participants as they navigated to a designated website. Once participants were at the correct website, students listened to a brief presentation by the researcher (see sample verbatim transcript with accompanying PowerPoint presentation in Appendix C). Participants then started the survey questionnaire by entering their personal student identification information (e.g. ID number). To ensure that students entered their identification information accurately, the researcher (or his designee) visually verified that each student identification number entry was accurate. This information allowed the survey data to be accurately matched with the extant data of each respondent. Once each student's identification information was verified by the researcher (or his designee), each student was invited to proceed by answering the questions on the web-based survey questionnaire. To ensure that all students were able to participate in the survey, the researcher encouraged the language

arts teachers and/or instructional assistants to provide necessary reading support for any struggling readers.

Procedures for Combining the Survey and Extant Data Files

After the survey questionnaire was administered to all 73 groups of participants using Qualtrics.com, student extant data were downloaded from the district and state databases and then entered into a single spreadsheet file. For each individual student, the extant data and the survey data were aligned in a single row. To ensure the confidentiality of the student respondents, prior to accessing the data files, the researcher had one of the district's information specialist assist with linking the extant and survey data by using the personal identification information. Then, the identifying information was removed from the data file.

Data Analyses

Exploratory, descriptive data analyses and statistical tests of correlation and group differences were used to answer research questions with the obtained data.

Descriptive Data Analyses

Standard descriptive statistics were employed to determine and describe the voluntary independent reading (VIR) behaviors of the middle school students (MSS) in this study. Through these methods, the frequency and total amounts of time that MSS reported spending engaged in VIR during the 24-hours preceding survey participation were analyzed and described. The topics of interest and the various media students used to access their reading materials were examined. These methods allowed the researcher to answer the first research question:

1. What are the voluntary independent reading behaviors (e.g. frequency and total amounts of time; preferred topics; media accessed) of a convenience sample of middle school students as obtained and analyzed from a web-based survey conducted in 2009?

Correlational Analyses

Correlational analyses were used to examine the relationships between the demographic data, performance data, survey data, and other factors, as well as the degree to which these factors appeared to be associated with the amounts of time that students reported to have spent engaged in VIR. Pearson's chi square tests and one-way ANOVAs were utilized to analyze the relationships between some of the variables for which associations seemed likely. The strength of the relations between the various data categories were estimated to determine the possible associations between the amounts of time MSS spent engaged in VIR and the following: (a) Reading achievement; (b) writing achievement (available for eighth graders only); (c) math achievement; (d) academic achievement; and, (e) a variety of personal, social, and academic characteristics of the students participating in this study. These methods allowed the researcher to answer the second and third research questions:

2. What are the relationships between the voluntary independent reading behaviors of middle school students in this particular sample, and selected academic performance achievement measures and student demographic indicators (e.g. personal, social, academic characteristics)?

3. What are the relationships between the amounts of time students report to be engaged in voluntary independent reading (VIR) and selected performance indicators (e.g. academic performance; reading, writing, and math proficiency levels)?

Advantages of Descriptive Survey Methodology

Descriptive survey methodology has many advantages, including the following: (a) The number of students from whom data was able to be collected, (b) the efficiency in administering the surveys, (c) the possibility of analyzing the data by demographic category, (d) the ability to analyze results from individual questions, (e) the possibility of conducting comparisons between questions and between surveys, (f) the opportunity to correlate student reading assessment data with findings from the survey, and (g) the possibility of creating a variety of ways to use the descriptive data.

CHAPTER IV

RESULTS

The results based on the responses obtained from 1,603 participants who completed *The Voluntary Independent Reading Survey Questionnaire for Middle School Students* during the fall of 2009 are presented here. Following a demographic description of the sampling frame and participants, the results in this chapter are organized according to the three research questions.

Participant and Sampling Frame Demographics

The school district did not have demographic data available for the entire 2,107 middle school aged students in the sampling frame. Nevertheless, of the District's 1,972 middle school students, 1,603 (81.3%) participated in the study. Non-participation was due to: (a) student absenteeism, (b) students opting out of or failing to complete the survey questionnaire, (c) the school district not having a full set of extant data available for some student participants, or (d) students not given the opportunity to participate (e.g., seven students in a life learning program and thirteen in a behavioral education program). Table 1 provides a summary of the demographic distribution for the sampling frame and participating sample at the time the survey was administered.

Table 1. Demographic Distribution of Participants in Study Sample and in School District

Participant Sub-Group	*Sample (%) (N=1,603)*	*District (%) (N=1,972)*
Gender		
Female	47.3	46.7
Male	52.6	53.3
Grade Level		
6th Grade	34.4	35.2
7th Grade	30.4	30.8
8th Grade	35.2	34.0
IEP or TAG status[1]		
Students on an IEP	10.3	11.9
Students Identified as TAG	20.9	19.1
Ethnicity		
Asian	5.0	5.0
Black	0.7	0.9
Hispanic	7.5	8.4
Multi-Racial	1.4	1.3
Native American	0.4	0.5
No Ethnicity Provided	1.6	1.4
White	83.2	82.4
Socio-economic Status		
Low SES	17.2	20.0
Middle-to-High SES	82.7	80.0
English Language Learners	2.0	2.4

Note 1. Individual Education Plan (IEP) and Talented and Gifted (TAG).

VIR Behaviors for the Sample Population

The results obtained to answer the first two research questions are presented together because the first question focuses on voluntary independent reading behaviors and the second question simply calls for the results to be disaggregated by demographics. The first question is: 1. What are the voluntary independent reading behaviors (e.g. frequency and total amounts of time; preferred topics; media accessed) of a convenience

sample of middle school students as obtained and analyzed from a web-based survey conducted in 2009? And, the second question is: 2. What are the relationships between the voluntary independent reading behaviors of middle school students in this particular sample, and selected academic performance achievement measures and student demographic indicators (e.g. personal, social, academic characteristics)?

Frequency and Time Participants Reported Engaging in VIR

On the survey, participants reported how frequently they engage in voluntary independent reading (VIR). They also reported the number of minutes or hours they engaged in VIR during the 24-hours preceding their survey participation. The amounts of printed and electronic VIR time were reported separately. Frequency and VIR time are presented in the following material.

Frequency. Participants selected from response choices in a frequency scale to the question, 'How often do you do free choice reading?' Nearly 94% of the participants reported that they engaged in VIR at least sometimes, leaving approximately 6% who reported that they 'never' do VIR. Further, more than three out of four participants reported that they engage in VIR at least a few times each week. Table 2 provides a breakdown of these results.

Table 2. Frequency Participants Engage in VIR

Frequency Participants Engage in VIR	*% of Total Participants (%) (N= 1,603)*
Never	6.1
Less than once a week	9.6
Once a week	8.0
A few times each week	26.6
Once a day	17.8
More than once a day	31.4
Total	100.0

There was a statistically significant relation obtained between gender and the frequency participants reported engaging in VIR (χ^2 (6) = 35.133, $p < .05$). Data displayed in Table 3 indicate that females (37.3%) were more likely than males (26.0%) to engage in VIR 'more than once a day.' At the other extreme, compared to females (3.7%), over twice as many males (8.2%) reported 'never' engaging in VIR. Further, more males (27.8%) reported engaging in VIR 'less than once a week' than their female (19.2%) counterparts.

Table 3. Frequency Participants Engage in VIR, Disaggregated by Gender

Frequency Participants Engage in VIR	*Female (1) (%) (N=759)*	*Male (2) (%) (N=843)*
Never	3.7	8.2*
Less than once a week	8.3	10.8
Once a week	7.2	8.8
A few times each week	26.6	26.7
Once a day	16.3	19.1
More than once a day	37.3	26.0*
Total	100.0	100.0

*$\chi^2_{(df = 6)} = 35.133$, $p < .05$

A statistically significant relation was not obtained between grade-level and the frequency with which participants engaged in VIR. Similarly, there was not a statistically significant relation obtained among Asians, Hispanics, and Whites and the frequency with which they engaged in VIR. However, the relation obtained between socio-economic level and frequency of VIR engagement was statistically significant. Students who are of low socio-economic status reported doing less VIR (χ^2 (6) = 20.057, $p < .01$). Table 4 displays the frequency participants reported engaging in VIR, disaggregated by socio-economic level.

Table 4. Frequency Participants Engage in VIR, Disaggregated by Socio-economic Status (SES)

Frequency Participants Engage in VIR	*Low SES (1) (%) (N=276)*	*Middle-to-High SES (2) (%) (N=1,326)*
Never	7.6	5.7
Less than once a week	12.3	9.0
Once a week	11.6	7.3
A few times each week	25.7	26.8
Once a day	13.4	18.7
More than once a day	27.9	32.1

$\chi^2_{(df = 6)} = 20.057$, $p < .01$.

Highlighting differences based on socio-economic level (SES), 31.5% of low SES participants engaged in VIR 'once a week' or less, whereas 22% of middle-to-high SES MSS participants reported the same.

Total VIR Time during the 24-hour Period Preceding Survey Participation. Participants reported the amount of time they engaged in VIR during the 24-hour time period preceding their survey participation. Participants reported spending an average of approximately two hours and twenty minutes (M = 141.74 minutes) engaged in the VIR of printed and electronic texts during the 24-hours prior to taking the survey. Table 5 shows a detailed view of the combined VIR time (printed and electronic texts). The data did not attain statistical significance on relations between combined VIR time and (a) socio-economic level, (b) ethnicity, and (c) talented and gifted status.

Table 5. ANOVA Summary of the Number of Minutes Participants Engaged in VIR of Combined Texts (Printed and Electronic) by Demographic Subgroups during 24 hours Preceding Survey

	No. Minutes VIR Combined Text for 24 hrs. pre-Survey		*95% Confidence Interval for Mean*			
Population Sub-Group	*M*	*SD*	*Lower Bound*	*Upper Bound*	*F*	*df*
All Groups	141.74	126.18	135.56	147.93		
Gender (N=1602)	141.67	126.19	135.49	147.86	35.37**	1, 1600
Female (N=759)	161.22	133.04	151.74	170.70		
Male (N=843)	124.07	117.00	116.16	131.98		
Grade Level (N=1,603)	141.74	126.18	135.56	147.93	14.50**	2, 1600
6^{th} (N=522)	118.75	113.57	109.25	128.25		
7^{th} (N=487)	150.68	131.51	138.97	162.39		
8^{th} (N=564)	156.53	130.17	145.77	167.30		
SPED (N=165)	106.38	128.20	86.67	126.08	14.57**	1, 1601
Cell phone access						
No access (N=370)	105.91	109.10	94.76	117.07	39.96**	1, 1599
w/cell phone (N=1231)	152.65	129.01	145.43	159.86		
Cell w/texting (N=1155)	154.03	129.49	146.55	161.50	3.06	1, 1202
Cell w/Internet (N=538)	162.11	136.97	150.51	173.71	4.94*	1, 1224

* $p < .05$, ** $p < .01$.

Note 2. Only Asian, Hispanic, and White were included in Ethnicity analysis because less than 25 participants were included in the other sub-groups (Black, Multi-racial, Native American, and No Ethnicity Provided).

Females reported engaging in VIR over 35 minutes more than males (F (1, 1600) = 35.367, N = 1602, $p < .01$). Seventh and 8^{th} grade students reported engaging in VIR

for longer periods of time than the younger 6th grade students (F (2, 1600) = 14.501, N = 1603, $p < .01$). In fact, as students' grade level increased, the mean VIR increased and was statistically significant. A statistically significant relation was also found for special education status and total VIR time (F (1, 1601) = 14.572, N = 1602, $p < .01$); that is; students who did not qualify for special education engaged in significantly more VIR time.

Moreover, according to the Pearson's chi-square test, the greatest independence was obtained between participants with cell phones and those without. Those students with cell phone access reported an average of 45 minutes more VIR time than those without (F (1, 1599) = 35.959, N = 1601, $p < .01$). Moreover, participants whose cell phones had access to the Internet reported spending significantly more time engaged in VIR (8 minutes more) than those participants without Internet access (F (1, 1224) = 4.941, N = 1231, $p < .05$). In fact, students who had cell phones with Internet access reported spending almost an hour more VIR time than those without cell phones.

Examining VIR of Printed and Electronic Texts Separately. By separating participants' printed voluntary independent reading (VIR) time from their electronic VIR time, differences can be further analyzed. As is evident in Table 6, only gender distinction obtained differences that were statistically significant for printed text VIR time (F (1, 1544) = 33.211, N = 1546, $p < .01$). Females (M = 72.04) reported engaging in VIR of printed texts an average of nearly 22 minutes more than their male (M = 50.44) counterparts.

Table 6. ANOVA Summary of the Number of Minutes Participants Engaged in VIR of Printed Texts during 24 hours Preceding Survey

	No. Minutes VIR Printed Text for 24 hrs. pre-Survey		*95% Confidence Interval for Mean*			
Population Sub-Group	*M*	*SD*	*Lower Bound*	*Upper Bound*	*F*	*df*
Gender N=1546)	60.78	74.38	57.06	64.49	33.21**	1, 1544
Female (N=740)	72.04	82.95	66.05	78.02		
Male (N=806)	50.44	63.86	46.02	54.85		

** $p < .01$

However, for the VIR of electronic texts, more population sub-group independence was evident. Although, relations obtained between electronic VIR time with ethnicity and with socio-economic status were not statistically significant, all other sub-group relations were statistically significant. Table 7 shows these population sub-group comparisons for electronic text VIR.

Table 7. ANOVA Summary of the Number of Minutes Participants Engaged in VIR of Electronic Texts during 24 hours Preceding Survey

	No. Minutes VIR Electronic Text for 24 hrs. pre-Survey		*95% Confidence Interval for Mean*			
Population Sub-Group	*M*	*SD*	*Lower Bound*	*Upper Bound*	*F*	*df*
All Groups	87.60	101.64	82.49	92.72		
Gender (N=1520)	87.50	101.59	82.39	92.61	5.35*	1, 1518
Female (N=737)	93.71	103.84	86.20	101.21		
Male (N=783)	81.66	99.15	74.70	88.61		
Grade Level (N=1,521)	87.60	101.64	82.49	92.72	26.19**	2, 1518
6^{th} (N=512)	62.68	83.36	55.44	69.92		
7^{th} (N=471)	93.16	107.54	83.42	102.90		
8^{th} (N=538)	106.46	107.39	97.36	115.55		
TAG (N=330)	67.15	83.84	58.07	76.23	17.26**	1, 1519
SPED (N=143)	69.41	98.32	53.15	85.66	5.07*	1, 1519
Cell phone access						
No access (N=346)	44.73	74.28	36.98	52.48		
w/cell phone (N=1173)	100.35	105.38	94.31	106.39	84.37**	1, 1517
Cell w/texting (N=1102)	102.59	106.13	96.32	108.87	11.66**	1, 1147
Cell w/Internet (N=499)	118.30	111.93	108.46	128.15	25.22**	1, 1166

* $p < .05$, ** $p < .01$.

Highlighting these data, independence for VIR time of electronic text was also revealed in grade level and cell phone differences. Based on these data, older middle

school students (7th and 8th graders) engaged in significantly more electronic text VIR time than younger (6th grade) ones (F (2, 1518) = 26.193, N = 1521, $p < .01$). In fact, 7th graders (M = 93.16) reported engaging in 30 minutes more electronic text VIR time than 6th graders (M = 62.68), and 8th graders (M = 106.46) an additional thirteen minutes more than 7th graders. Thus, as grade level increases, means increase, and this relation is statistically significant. Likewise, the relations obtained between electronic VIR time and cell phone access was also statistically significant (F (1, 1517) = 84.336, N = 1519, $p <$ .01). Participants who had cell phone access (M = 100.35) reported over 55 minutes more electronic text VIR time than participants without cell phone access (M=44.73); and, those with Internet access on their cell phones reported engaging in almost 75 minutes more electronic text VIR time than those without cell phones.

Examining the analyses of printed and electronic VIR time separately, it is evident that sub-group variation is greater for electronic text VIR time than printed text VIR time. Moreover, female students, students who were older, and students who had cell phone access (especially those with cell phone with Internet access) were likely to spend more VIR time than their peers.

Preferred Topics

To ascertain which topics participants reported selecting when they engaged in voluntary independent reading (VIR), participants selected choices from a menu of options in response to the following question: 'When you do free choice reading, which topics do you select?' Participants were instructed to select all topics that applied to them. Data for all participants are presented in Table 8 according to rank order, with the topics selected by the highest percentage of participants listed first. The statistically significant

results disaggregated by population sub-group (gender, grade level, ethnicity, and socio-economic status) are presented in Tables 9 through 12. The topics selected by over half of the study participants included the following: Text by or about friends (74.4%); adventure and action (63.0%); interesting novels and stories (56.2%); and comedy, humor, and jokes (55.6%).

Table 8. Topics Participants Selected for VIR

VIR Topics	*All Participants (%) (N=1,603)*
Text by/about friends	74.4
Adventure/Action	63.0
Interesting novels/stories	56.2
Comedy/Humor/Jokes	55.6
Mystery/Spy/Suspense	47.7
Movies/Television	45.0
Science fiction/Fantasy	36.0
Sports/Sports figures	35.2
Reading texts about video/computer games	33.3
Stories about people my age/Teen issues	32.3
Comics/Graphic novels	31.7
Music/Musicians	29.7
Horror/Supernatural	28.6
Puzzles/Crosswords/Games	27.3
Entertainment/Celebrities	27.2
War/War Stories	24.4
Romance/Love stories	24.1
Fashion/Beauty	20.4
Science/Animals/Nature	20.4
News/Current events	19.8
History/Historical fiction	17.7
Facts/Statistics/World records	17.1
Poetry/Drama/Plays	16.1
Arts/Crafts	15.3
Other	14.3
Cooking/Nutrition/Diet	12.6
Ads/Advertisements	10.8
Autobiographies/Biographies	10.5
How-to-books/Manuals	10.5
Religion/Spiritual	8.5
Travel/Weather	8.0
Health/Exercise/Fitness	7.5
None of these choices	.6

Preferred topics disaggregated by gender. According to participant responses, many topic preference differences were evident between females and males. Pearson's chi-square analyses and odds-ratios were conducted to determine the differences between females and males with respect to each topic. Those topics for which statistically significant relations were obtained based on gender are listed in Table 9. These data are provided in the identical rank order as listed in Table 8.

Table 9. Topics Participants Selected for VIR, Disaggregated by Gender

VIR Topics	*Female (1) (%) (N=759)*	*Male (2) (%) (N=843)*	*Chi-Square*	*Odds Ratio*	*95% Confidence (for odds ratio)*	
					Lower Bound	*Upper Bound*
Text by/about friends	81.3	68.2	35.90**	.49	.39	.62
Adventure/Action	57.3	68.1	19.90**	1.59	1.30	1.95
Interesting novels/stories	65.1	48.6	43.96**	.51	.42	.62
Comedy/Humor/Jokes	52.8	58.4	5.43*	1.27	1.04	1.54
Mystery/Spy/Suspense	53.2	42.7	17.73**	.66	.54	.80
Sports/Sports figures	20.8	48.2	130.92**	3.53	2.83	4.41
Reading texts about video/computer games	21.9	43.5	84.43**	2.75	2.21	3.43
Stories about people my age/Teen issues	51.9	14.7	252.63**	.16	.13	.20
Comics/Graphic novels	25.3	37.5	27.40**	1.77	1.43	2.20
Music/Musicians	33.6	26.1	10.77**	.70	.56	.87
Puzzles/Crosswords/Games	31.1	24.0	10.23*	.70	.56	.87
Entertainment/Celebrities	41.1	14.6	141.97**	.25	.19	.31
War/War Stories	6.5	40.6	251.92**	9.89	7.18	13.63
Romance/Love stories	46.9	3.6	410.29**	.04	.03	.06
Fashion/Beauty	41.2	1.7	385.10**	.02	.01	.04
News/Current events	15.4	23.7	17.38**	1.71	1.33	2.20
History/Historical fiction	13.8	21.2	14.99**	1.68	1.29	2.19
Facts/Statistics/World records	11.6	22.1	30.88**	2.16	1.64	2.84
Poetry/Drama/Plays	27.5	5.7	141.47**	.16	.11	.22
Arts/Crafts	23.6	7.9	75.12**	.28	.21	.38
Other	16.3	12.5	4.91*	.73	.55	.97
Cooking/Nutrition/Diet	18.8	7.0	50.83**	.32	.24	.45
How-to-books/Manuals	8.8	11.9	3.94*	1.39	1.00	1.93
Health/Exercise/Fitness	9.1	5.9	5.80*	.63	.43	.92

* $p < .05$, ** $p < .01$.

Females in this study were statistically significantly more likely than males to select thirteen of the topic choices. For example, females were 41.7 times more likely to read about fashion and beauty, 23.8 times more likely to select romance and love stories, 6.3 times more likely to choose poetry, drama, and plays, and 6.3 times more likely to select stories about people their age and teen issues. Other topics females were significantly more likely to select included the following: (a) Entertainment and celebrities (4.1 times more likely); (b) arts and crafts (3.6); (c) cooking, nutrition, and diet (3.1); (d) text by or about friends (2.0); (e) interesting novels and stories (2.0); (f) health, exercise, and fitness (1.6);(g) mystery, spy, and suspense (1.5); (h) music and musicians (1.4); and, (i) puzzles, crosswords, and games (1.4).

In contrast, males were statistically significantly more likely to select ten of the topics. For example, males were 9.9 times more likely to select war and war stories and 3.5 times more likely to choose sports and sports figures. Other topics males were more likely to select included the following: (a) Reading texts about video and computer games (2.8 times more likely); (b) facts, statistics, and world records (2.2); (c) comics and graphic novels (1.8); (d) news and current events (1.7); (e) history and historical fiction (1.7); (f) adventure and action (1.6); (g) how-to-books and manuals (1.4); and, (h) comedy, humor, and jokes (1.3).

Topics disaggregated by grade level. Based on participant responses, ten topics were statistically significant when comparing grade level sub-groups. Chi-square analyses were conducted for each topic to determine whether relations obtained between grade-level subgroups were statistically significant. Results are listed according to the overall rank order (see Table 8) in Table 10.

Table 10. Topics Participants Selected for VIR, Disaggregated by Grade Level

VIR Topics	*Grade Level*			*Chi-Square (df=2)*
	6th (%) (N=552)	*7th (%) (N=487)*	*8th (%) (N=564)*	
Text by/about friends	64.7	74.1	84.2	56.02**
Sports/Sports figures	37.7	37.6	30.7	7.76*
Stories about people my age/Teen issues	27.2	31.8	37.8	14.39**
Comics/Graphic novels	38.8	32.4	24.3	27.14**
Entertainment/Celebrities	23.2	28.1	30.3	7.42
Romance/Love stories	19.7	23.4	28.9	12.96*
Fashion/Beauty	13.6	22.6	25.2	25.14**
News/Current events	16.1	20.9	22.5	7.71*
Arts/Crafts	19.6	14.0	12.4	12.02*
Other	18.5	15.6	9.0	21.28**
Cooking/Nutrition/Diet	9.6	16.4	12.2	11.05**

* $p < .05$, ** $p < .01$.

Eighth graders (84.2%) reported reading text by or about friends at a significantly higher rate than 7th graders (74.1%) and 6th grade participants (64.7%) (χ^2 (2) = 56.022, $p < .01$). Likewise, older students were statistically significantly more likely to read about fashion and beauty (χ^2 (2) = 25.141, $p < .01$). Among the other topics older participants reported selecting at a higher rate were stories about people their age and teen issues, and romance and love stories.

Exhibiting VIR behaviors in the opposite direction, younger students were significantly more likely to report selecting comics and graphic novels (χ^2 (2) = 27.135, $p < .01$). Other topics with statistically significant differences with respect to grade level

included the following: (a) Cooking, nutrition, and diet; (b) sports and sports figures; (c) news and current events; and, (d) entertainment and celebrities.

Topics disaggregated by ethnicity. Analyzing results of ethnic sub-group differences revealed that ten topics had relations that were statistically significant. As with grade level comparisons, chi-square analyses were conducted for each topic to determine statistical significance. Those found to be statistically significantly different are listed according to overall rank order (see Table 8) in Table 11.

Table 11. Topics Participants Selected for VIR, Disaggregated by Ethnicity

	Ethnicity			
VIR Topics	*Asian (%) (N=81)*	*Hispanic (%) (N=120)*	*White (%) (N=1335)*	*Chi-Square (df=2)*
Adventure/Action	75.3	54.2	63.1	9.29**
Interesting novels/stories	70.4	45.0	56.6	12.80**
Movies/Television	42.0	59.2	43.4	11.25**
Sports/Sports figures	34.6	46.7	34.5	7.20*
Music/Musicians	28.4	40.8	28.5	8.16*
Horror/Supernatural	17.3	44.2	27.2	20.61**
Entertainment/Celebrities	21.0	35.8	26.4	6.45*
Arts/Crafts	19.8	25.8	14.0	13.28**
Travel/Weather	12.3	13.3	7.3	7.69*
Health/Exercise/Fitness	8.6	13.3	6.6	7.72*

* $p < .05$, ** $p < .01$.

It appears that more Hispanics reported selecting horror and supernatural texts (44.2%) when compared to either Asians (27.2%) or Whites (17.3%). Following a similar pattern, a much higher percentage of Hispanics (59.2%) selected movies and television when compared to their Asian (42.2%) or White (43.4%) peers. Likewise, Hispanics selected texts about music and musicians at a higher rate (40.8%) than Asians (28.4%) and Whites (28.5%). However, Hispanics selected adventure and action (54.2%) significantly less than their Asian (75.3%) and White (63.1%) peers. Highlighting other differences among ethnic sub-groups, Asians selected interesting novels and stories at a much higher rate (70.4%) than either Whites (56.6%) or Hispanics (45.0%) and Whites selected arts and crafts (14.0%) significantly less than either Hispanics (25.8%) or Asians

(19.8%). Other topics with statistically significant differences disaggregated by ethnicity were (a) health and fitness, (b) travel and weather, (c) sports and sport figures, and (d) entertainment and celebrities.

Topics disaggregated by socio-economic status. According to participant responses, when differentiating by socio-economic status (SES), a number of statistically significant relations were obtained. As with gender, to determine differences between low and middle-to-high SES sub-groups, chi-square analyses and odds-ratios were conducted, and the topics found to be statistically significant are listed according to overall rank order (see Table 8) in Table 12.

Table 12. Topics Participants Selected for VIR, Disaggregated by Socio-economic Status (SES)

VIR Topics	*Low SES (1) (%) (N=276)*	*Middle-to-High SES (2) (%) (N=1326)*	*Chi-Square*	*Odds-Ratio*	*95% Confidence (for odds-ratio)*	
					Lower Bound	*Upper Bound*
Adventure/Action	57.2	64.2	4.71*	1.34	1.03	1.74
Interesting novels/stories	48.6	58.1	8.42**	1.47	1.13	1.90
Reading texts about video/computer games	38.8	32.1	4.54*	.75	.57	.98
Comics/Graphic novels	37.0	30.6	4.24*	.75	.57	.99
Music/Musicians	37.3	28.1	9.40**	.66	.50	.86
Horror/Supernatural	40.2	26.2	22.08**	.53	.40	.69
Puzzles/Crosswords/ Games	33.3	26.1	6.03*	.71	.53	.93
Entertainment/Celebrities	32.2	26.1	4.37*	.74	.56	.98
News/Current events	15.6	20.7	7.76*	1.41	.99	2.01
Poetry/Drama/Plays	22.5	14.7	10.21**	.60	.43	.82
Arts/Crafts	22.5	13.9	23.96**	.56	.40	.77

* $p < .05$, ** $p < .01$.

According to these analyses, the participants in this study who qualified for federally subsidized meals (low SES) were statistically significantly more likely to select eight of the topic choices. For example, for their VIR, low SES participants were 1.9 times more likely to report reading horror and supernatural selections, 1.8 times more likely to report reading about arts and crafts, and 1.7 times more likely to select poetry, drama, and plays. Other topics low SES participants selected more frequently than their peers included: (a) music and musicians (1.5 times more likely), (b) puzzles, crosswords, and games (1.4), (c) reading texts by or about their friends (1.3), (d) and comics and

graphic novels (1.3). In contrast, middle-to-high SES students were statistically significantly different in their selection of three topic choices: (a) Interesting novels and stories (1.5 times more likely), (b) news and current events (1.4), and (c) adventure and action (1.3).

Reading Media Participants Selected for Their VIR

Participants reported which printed and electronic texts they select for their voluntary independent reading (VIR). For printed texts, the majority of participants reported reading books (77.3%) and magazines (59.2%). Similarly, the most frequently reported electronic text media included the following: Text messages (73.1%), email (68.9%), Internet websites (68.4%), and social networking Internet websites such as Facebook (55.3%). Table 13 provides a detailed list of media types, listed in rank order of participant selection, and the corresponding percentage of participants who reported selecting each of the media types for their VIR.

Table 13. Reading Media Participants Select for VIR

Text Types	*All Subjects (%)*
Printed Texts	
Books	77.3
Magazines	59.2
Comics	34.2
Newspapers	19.7
Other	10.0
None of these choices	2.7
Electronic Texts	
Text messages	73.1
Email	68.9
Internet websites	68.4
Social Network Internet websites (Facebook, Twitter, MySpace, etc.)	55.3
Instant messages	40.2
Chat rooms	26.1
Blogs (Web blogs)	16.8
Other	7.7
Electronic magazines	5.9
Electronic books	5.7
None of these choices	4.2
Electronic newspapers	4.1

Although they were selected by less than the majority of participants, other commonly selected media types included Instant messages (40.2%), comics (34.2%), and chat rooms (26.1%). Less commonly selected media included newspapers, Blogs, electronic books, and electronic newspapers.

Media types disaggregated by population sub-groups. Further analysis of these data to explain population sub-group variations, it appears that gender and grade level independence was much stronger than ethnic or socio-economic independence.

For most media types, whether a participant was female or male seemed to explain which media types were most frequently selected. By examining Table 14, it is evident that, compared to males, females were more likely to select the following media types: (a) Email (2.9 times more likely); (b) magazines (2.7); (c) books (1.9); and, (d) instant messages (1.9). Other media types for which female differences were statistically significant included text messages, social networking websites (e.g. Facebook), and electronic magazines.

Table 14. Reading Media Participants Select for VIR, Disaggregated by Gender

Text Types	*Female (1) (%) (N=759)*	*Male (2) (%) (N=843)*	*Chi-Square (df=1)*	*Odds-Ratio*	*95% Confidence (for odds ratio)*	
					Lower Bound	*Upper Bound*
Printed Texts						
Books	83.0	72.1	26.93**	.53	4.16	.68
Magazines	71.4	48.2	89.36**	.37	.30	.46
Comics	26.2	41.4	40.90**	1.99	1.61	2.46
Newspapers	14.2	24.4	26.41**	1.95	1.51	2.52
Other	12.0	8.3	6.00*	.67	.48	.92
None of these choices	1.1	4.2	14.67**	4.07	1.87	8.82
Electronic Texts						
Text messages	78.1	68.6	18.58**	.61	.49	.77
Email	80.4	58.6	88.35**	.35	.28	.43
Social Network Internet websites (Facebook, Twitter, MySpace, etc.)	60.5	50.7	15.59**	.67	.55	.82
Instant messages	46.9	34.0	27.49**	.58	.48	.72
Electronic magazines	7.2	4.6	4.96*	.62	.41	.95
None of these choices	3.0	5.2	4.78*	1.76	1.05	2.95
Electronic newspapers	2.8	5.2	6.17*	1.94	1.14	3.29

* $p < .05$, ** $p < .01$.

Revealing a disparity in the opposite direction, males were much more likely to select the following media types: Comics (2.0 times more likely); newspapers and electronic newspapers (1.9 times more likely for each newspaper media). Additionally, males were much more likely to indicate that they do not select any printed or electronic

media for VIR, corresponding with other data that males were simply less likely to engage in VIR.

Grade-level variation provided evidence on the variation based on age. By examining the data provided in Table 15, it is evident that 6th grade participants were significantly more likely to select books (χ^2 (2) = 11.579, $p < .01$) and comics (χ^2 (2) = 18.985, $p < .01$). On the other hand, the number of 7th and 8th graders that selected the following media types was also statistically significant: (a) interactive websites (χ^2 (2) = 67.713, $p < .01$); (b) text messages (χ^2 (2) = 64.523, $p < .01$); (c) instant messages (χ^2 (2) = 33.347, $p < .01$); (d) magazines (χ^2 (2) = 20.260, $p < .01$); and (e) newspapers (χ^2 (2) = 17.321, $p < .01$). Other media types that revealed statistically significant differences based on grade-level comparisons were: (a) email, (b) Blogs, (c) electronic magazines, and (d) electronic newspapers.

Table 15. Reading Media Participants Select for VIR, Disaggregated by Grade Level

Text Types	*Grade Level*			
	6th (%) (N=552)	*7th (%) (N=487)*	*8th (%) (N=564)*	*Chi-Square (df=2)*
Printed Texts				
Books	81.3	72.5	77.5	11.58**
Magazines	52.5	59.1	65.8	20.26**
Comics	41.1	32.4	29.1	18.99**
Newspapers	14.3	20.5	24.1	17.32**
Electronic Texts				
Text messages	61.8	74.5	83.0	64.52**
Email	66.5	67.1	72.9	6.36*
Internet websites	61.4	69.0	74.6	22.71**
Social Network Internet websites (Facebook, Twitter, MySpace, etc.)	42.6	56.3	67.0	67.71**
Instant messages	30.8	42.5	47.3	33.35**
Blogs (Web blogs)	14.9	21.8	14.4	12.50**
Electronic magazines	3.4	7.4	7.1	9.36**
None of these choices	7.1	3.3	2.1	18.38**
Electronic newspapers	2.5	3.7	6.0	8.93*

Note: Results represent percent of sub-group participants who selected each reading media.
* $p < .05$, ** $p < .01$.

Variation based on ethnic diversity was minimal for all electronic text types. In fact, it appears that only books and newspapers obtained relations that were statistically significant. Compared to Asians (88.9%) and Whites (77.8%), Hispanics (67.5%) were less likely to select books (χ^2 (2) = 12.970, $p < .01$). Similarly, when compared to Asians (25.9%) and Whites (20.1%), Hispanics (12.5%) were less likely to select newspapers (χ^2 (2) = 6.007, $p < .05$).

Differentiation based on socio-economic status (SES) also accounted for less variation than either gender or grade-level differences. As exhibited in Table 16, participants who did not qualify as low SES were 1.6 times more likely to read books and 1.5 times more likely to read newspapers for their VIR. On the other hand, compared to middle-to-high SES participants, those who qualified for federally subsidized meals were 1.8 times more likely to read electronic magazines, 1.7 times more likely to read electronic books, and 1.6 times more likely to read comics.

Table 16. Printed and Electronic Texts Participants Reported Reading

Text Types	*Low SES(1) (%)*	*Middle-to-high SES (2) (%)*	*Chi-Square (df=2)*	*Odds-Ratio*	*95% Confidence (for odds ratio)*	
					Lower Bound	*Upper Bound*
Printed Texts						
Books	69.9	78.8	10.26**	1.60	1.20	2.14
Comics	43.8	32.2	13.75**	.61	.47	.79
Newspapers	14.9	20.6	4.77*	1.49	1.04	2.12
Electronic Texts						
Blogs (Web blogs)	21.7	15.8	5.84*	.67	.49	.93
Electronic magazines	9.1	5.2	6.15*	.55	.34	.89
Electronic books	8.3	5.1	4.64*	.59	.36	.96

* $p < .05$, ** $p < .01$.

Locating VIR Materials

Access to reading materials in the home varied considerably based on population sub-group. Less varied, however, were the locations where different sub-groups found the

reading materials they selected for their VIR. Similarly, based on population sub-groups, there was limited variation for the people (e.g., parents, friends) who helped participants find VIR materials.

Access to Reading Materials in the Home. Because 'at home' was the most frequently selected location where participants reported finding their materials, home access to VIR materials seems to be very important. Most participants reported having access in their homes to books, electronic text, magazines, and newspapers. Table 17 displays the percentage of all students who reported having access in their homes to respective reading materials. These data are listed in rank order.

Table 17. Reading Media Participants Have Access to in Their Homes

Reading media Available in Homes	*All Subjects (%)*
Books	92.6
Electronic text (Internet, email, etc.)	86.8
Magazines	78.2
Newspapers	66.3
Comics	48.2

By examining the data in Table 18, it is evident that, compared to males, females were more likely to report having access to electronic texts (1.7 times more likely), books (1.6), and magazines (1.6). In contrast, however, males were 1.5 times more likely to report having access to comics in their homes. Similarly, the results displayed in Table 19 reveal a statistically significant difference in that older participants reported having greater access to newspapers, electronic text, and magazines in their homes.

Table 18. Reading Media Participants Have Access to in Their Homes, Disaggregated by Gender

Reading media Available in Homes	*Female (1) (%)*	*Male (2) (%)*	*Chi-Square*	*Odds-Ratio*	*95% Confidence (for odds ratio)* *Lower Bound*	*Upper Bound*
Books	94.3	91.1	6.11*	.62	.42	.91
Electronic text (Internet, email, etc.)	89.7	84.1	10.98**	.61	.45	.82
Magazines	82.3	74.5	14.44**	.63	.49	.80
Comics	42.6	53.3	18.34**	1.54	1.26	1.87

* $p < .05$, ** $p < .01$.

Table 19. Reading Media Participants Have Access to in Their Homes, Disaggregated by Grade Level

	Grade Level			
Reading media Available in Homes	*6th (%)*	*7th (%)*	*8th (%)*	*Chi-Square (df=2)*
Electronic text (Internet, email, etc.)	81.7	88.3	90.4	19.91**
Magazines	72.5	81.3	81.2	16.43**
Newspapers	58.9	68.8	70.9	21.11**

** $p < .01$.

Ethnic and socio-economic diversity appear to provide evidence of the differences on access to reading materials in the homes of this study's participants. According to Pearson's chi-square tests, for magazines, newspapers, books, and electronic texts, the access Hispanics reported was statistically significantly less than Asians and Whites. Ethnic variation is displayed in Table 20. Likewise, compared to low socio-economic (SES) students, middle-to-high SES MSSs reported statistically significantly more access to reading materials in their homes. In fact, as is displayed in Table 21, compared to low SES students, those who did not qualify as low SES students were much more likely to report having access to the following reading materials: (a) Newspapers (3.0 times more likely); magazines (3.0); books (2.6); and, electronic texts (2.2).

Table 20. Reading Media Participants Have Access to in Their Homes, Disaggregated by Ethnicity[2]

	Ethnicity			
Reading media Available in Homes	*Asian (%)*	*Hispanic (%)*	*White (%)*	*Chi-Square (df=2)*
Books	98.8	83.3	93.0	19.84**
Electronic text (Internet, email, etc.)	91.4	80.0	87.0	6.26*
Magazines	77.8	57.5	80.2	33.21**
Newspapers	66.7	43.3	68.9	32.49**

* $p < .05$, ** $p < .01$.

Note 2. Only Asian, Hispanic, and White were included in Ethnicity analysis because less than 25 participants were included in the other sub-groups (Black, Multi-racial, Native American, and No Ethnicity Provided)

Table 21. Reading Media Participants Have Access to in Their Homes, Disaggregated by Socio-economic Status (SES)

Reading media Available in Homes	*Low SES (1) (%)*	*Middle-to-high SES (2) (%)*	*Chi-Square*	*Odds-Ratio*	*95% Confidence (for odds-ratio)*	
					Lower Bound	*Upper Bound*
Books	85.9	94.0	22.36**	2.60	1.73	3.91
Electronic text (Internet, email, etc.)	77.9	88.6	22.84**	2.21	1.59	3.07
Magazines	60.1	82.0	63.90**	3.01	2.28	3.98
Newspapers	44.6	70.1	70.44**	3.02	2.32	3.94

** $p < .01$.

Where participants find materials for their VIR. Study participants responded to the question, 'Where do you find the materials you use for free choice reading?' According to their responses, locating materials (a) 'at home' (78.5%) led the way, followed by (b) 'at the school library' (58.6%), (c) 'at a bookstore' (54.4%), (d) 'at the public library' (50.2%), (e) 'from the Internet' (47.0%), and (f) in their classrooms (38.3%). As is displayed in Table 22, relations obtained due to gender variation were significant statistically. When compared to their male counterparts, for example, the increased likelihood of females to locate materials for their VIR from a bookstore, the school and public library, and their classrooms were statistically significant. Although not statistically significant, 'from the Internet' is the only location from which males appear to possibly be more likely to locate materials for their VIR. Data showing gender differences are displayed in Table 22.

Table 22. Where Participants Reported Finding VIR Materials, Disaggregated by Gender

Where Participants Find VIR Materials	*Female (1) (%)*	*Male (2) (%)*	*Chi-Square (df=1)*	*Odds-Ratio*	*95% Confidence (for odds ratio)* *Lower Bound*	*Upper Bound*
At home	80.5	76.7	3.33	.80	.63	1.02
At the school library	64.8	53.0	22.92**	.61	.50	.75
At a bookstore	63.0	46.6	43.08**	.51	.42	.63
At the public library	55.1	48.0	13.77**	.69	.57	.84
From the Internet	46.6	47.2	.05	1.02	.84	1.25
In my classrooms	41.8	35.1	7.48**	.76	.62	.92
Other	5.8	3.4	5.10*	.58	.36	.94

* $p < .05$, ** $p < .01$.

Relative to differences that may be explained by gender variation, differentiation was less prominent when contrasting grade level, ethnic, and socio-economic (SES) variations. According to grade-level sub-group variation, two obtained relations were statistically significant: (a) 8th graders (39.3%) were much more likely than their 7th (31.6%) and 6th (29.1%) grade peers to locate VIR materials on the Internet (χ^2 (2) = 19.383, $p < .01$); and, (b) 8th graders (43.6%) were much more likely than their 6th (37.5%) and 7th (33.1%) grade peers to locate VIR materials in their classrooms (χ^2 (2) = 12.556, $p < .01$). Chi-square tests for ethnic sub-groups only obtained one relation that was statistically significant: Hispanics (36.7%) were much less likely to locate VIR materials 'at a bookstore' (χ^2 (2) = 23.888, $p < .01$) than Whites (55.2%) and considerably less likely than Asians (70.4%).

Furthermore, by examining relations based on socio-economic variation, low SES students (45.3%) reported that they found their VIR materials in their classrooms statistically significantly more than other MSS students; in fact, low SES participants were 1.4 times more likely to find VIR materials in their classrooms. On the other hand, compared to low SES students, other MSS were 2.0 times more likely to locate their VIR materials from the bookstore and 1.8 times more likely to locate their materials 'at home.'

People who Help Middle School Students Find VIR Materials. According to participant responses, friends (47.0%), parents (44.5%), teachers (34.6%), and librarians (27.8%) were the people most likely to help participants find VIR materials. Nevertheless, at 36.7%, 'no one helps me' was a common response. Differentiating by gender, compared to males, females were 3.2 times more likely to report having their friends help them find VIR material, and males were 1.3 times more likely to have no one help them find their VIR materials. Differentiating by grade level, 6th graders (51.3%) were much more likely than 7th (42.9%) and 8th (39.4%) to report having their parents help them find VIR materials. Eighth graders (39.4%), on the other hand, were much more likely to report having their teachers help them than either their 7th (30.0%) or 6th (33.7%) peers (χ^2 (2) = 10.450, $p < .01$). Finally, from examining ethnic sub-group variation for this measure, one category was statistically significant: Hispanics (30.8%) reported that their parents help them much less frequently than Asians (45.7%) and Whites (46.1%) (χ^2 (2) = 10.449, $p < .01$).

Engaging in or Not Engaging in VIR

'For fun and enjoyment,' 'to relax,' and 'to avoid being bored' were the most commonly selected choices participants picked in response to the question, 'Why do you do free choice reading?' On the other hand, because they 'would rather be with friends,' because they 'like other activities better,' and because 'reading is boring or not fun' were the most commonly selected reasons for the participants (N=97) who reported to 'never' engage in voluntary independent reading. A more detailed look at these data listed in rank order is provided in Tables 23 and 24.

Table 23. Reasons Why Participants (N=1,602) Engage in VIR

Reasons	*All Subjects (%)*
For fun/enjoyment	68.4
To relax	59.4
To avoid being bored	53.7
To fill up my time	40.3
To escape	34.6
I like the plot/story line	27.6
To learn information	19.7
Other	15.7
To learn about people	15.5

Table 24. Reasons Why Participants (N=97) Do Not Engage in VIR

Reasons	*All Subjects (%)*
I'd rather be with friends	92.8
I like other activities better	77.3
Reading is boring/not fun	69.1
I'm too busy/no time	40.2
I have too much school work	36.1
I can't find good reading material	33.0
I'm not good at reading	20.6
Other	16.5
I have no place to read	6.2

Socio-economic status (SES) is reported first: The only reason for engaging in VIR for which there was a statistically significant relation based on SES was 'for fun and enjoyment.' More specifically, participants who did not qualify as low SES (70.1%) were 1.6 times more likely to select 'for fun and enjoyment' than low SES participants (59.8%) as a reason for choosing to engage in VIR.

When the reasons for engaging in VIR were analyzed according to gender, it was evident that females were more likely to engage in VIR for the following reasons: (a) 'to escape' (1.7 times more likely); (b) 'for fun and enjoyment' (1.7); 'to relax' (1.5); and, because they 'like the plot or story line' (1.4). Interestingly, only one reason, 'to learn information,' was statistically significant in the reverse direction: Compared to females (16.7%), males (22.3%) were 1.4 times more likely to select 'to learn information' as a reason for engaging in VIR. These data are displayed in Table 25.

Table 25. Reasons Why Participants Engage in VIR, Disaggregated by Gender

Reasons	*Female (1) (%) (N=759)*	*Male (2) (%) (N=843)*	*Chi-Square (df=1)*	*Odds-Ratio*	*95% Confidence (for odds ratio)*	
					Lower Bound	*Upper Bound*
For fun/enjoyment	74.0	63.2	21.61**	.60	.49	.75
To relax	64.8	54.6	17.42**	.65	.53	.80
To escape	41.1	28.7	27.15**	.58	.47	.71
I like the plot/story line	31.5	24.1	10.97**	.69	.55	.86
To learn information	16.7	22.3	7.84**	1.43	1.11	1.83
Other	18.7	12.9	10.09**	.65	.49	.85

** $p < .01$.

It is noteworthy that over twice as many males (N = 69) than females (N = 28) reported 'never' engaging in VIR. Specifically, females (50.0%) were 2.8 times more likely to report being unable to 'find good reading material' than males (26.1%) and, (2) females (53.6%) were also 2.8 times more likely to report having 'too much school work'.

Differentiating Reasons based on Grade Level Variation. By examining the results of why participants reported engaging in VIR based on grade level variation, only one reason, because they 'like the plot or story line,' was statistically significant: 8th graders (33.%) selected this reason at a rate higher than either 7th (25.9%) or 6th graders (23.6%) (χ^2 (2) = 13.957, p < .01). As for the reasons participants reported for not engaging in VIR, none were statistically significant.

Disaggregating Reasons by Ethnicity. An analysis of the reasons for engaging in VIR based on participant ethnic differences, with two exceptions ('to learn about people' and 'other'), Asians selected each response choice at higher rate. Nevertheless, only three of the reasons were statistically significant: (a) because they 'like the plot or story line' (χ^2 (2) = 10.366, $p < .05$); (b) 'to relax' (χ^2 (2) = 9.066$p < .05$); and (c) to fill up their time (χ^2 (2) = 7.154, $p < .05$). The statistically significant relations obtained are displayed in Table 26.

Table 26. Reasons Why Participants Engage in VIR, Disaggregated by Ethnicity

	Ethnicity			
Reasons	*Asian (%) (N=81)*	*Hispanic (%) (N=120)*	*White (%) (N=1335)*	*Chi-Square (df=2)*
To relax	72.8	51.7	59.1	9.07*
To fill up my time	54.3	41.7	39.4	7.15*
I like the plot/story line	35.8	16.7	28.7	10.37*

* $p < .05$.

Only the 97 participants who reported to 'never' engage in VIR were invited to respond to the question, 'Why don't you do free choice reading?' Thus, data were insufficient to draw conclusions with respect to ethnic sub-group variation, particularly with only three Asians responding to the question. Nevertheless, when comparing Hispanics and Whites, two categories were statistically significant. When compared to Hispanics (41.7%), Whites (74.4%) were more likely to select the response 'reading is boring or not fun' (χ^2 (2) = 6.999, p < .05). Likewise, Whites (39.7%), more so than Hispanics (8.3%), were more likely to report not being able to 'find good reading material' (χ^2 (2) = 6.173, p < .05).

Enjoyment Level of Various Reading Types, Including Assigned Reading versus VIR

Study participants were also asked to specify how much they agreed with a number of statements that were designed to ascertain their level of enjoyment for various kinds and genres of reading, as well as enjoyment level of electronic versus printed media materials. In Table 27, the four response choices, strongly agree and agree, and disagree

and strongly disagree were combined into two groups: agree or disagree. Thus, the highest percentage of participants reported enjoying reading electronic texts (89.2%), voluntary independent reading (85.3%), and fiction (82.2%); and, the lowest percentage of participants reported enjoying reading nonfiction (55.7%) and reading materials assigned by their teachers or parents (41.8%). Although no statistical analyses were conducted, the number of participants reported engaging in VIR on weekend and vacation days did not appear to be statistically significant. In Table 27 the data are listed according to rank order.

Table 27. Participants' Agreement[3] with Statements Describing Reading Enjoyment and Relative Amount They Read on Non-school Days, Disaggregated by Sub-group

Statements	*All Subjects (%)*
I enjoy reading electronic texts.	89.2
I enjoy free choice reading (VIR).	85.3
I enjoy reading fiction.	82.2
I enjoy reading printed texts.	81.5
I enjoy reading.	81.5
I enjoy reading nonfiction.	55.7
On weekend days I do more VIR.	49.6
On vacation days I do more VIR.	43.1
I enjoy reading assigned by my teachers/parents.	41.8

Note 3. Response choices consisted of Strongly Agree, Agree, Disagree, and Strongly Disagree. Results describe percentage of participants who selected Strongly Agree or Agree.

Looking at population sub-groups for this dichotomous agree or disagree classification for each of the statements, no statistically significant differences based on differences due to gender, ethnicity, or socio-economic status were found. For grade-level sub-groups, however, participant responses to two statements are worth noting. First, at 53.8%, 6th graders indicated that they enjoy reading materials that are assigned by their teachers or parents at a higher rate than their 7th (37.4%) or 8th (33.8%) grade counterparts. Second, at 37.8%, 6th graders were less likely to report enjoying 'reading nonfiction' than either 7th (52.4%) or 8th (56.6%) graders.

Disaggregating Assigned Reading versus VIR According to Population Sub-groups. Based on Pearson's chi-square tests, the differences disaggregated by ethnic and socio-economic sub-groups were not statistically significant. However, differences in

responses based on gender and grade level variation were statistically significant and, hence, worth a closer look.

First, as displayed in Table 28, females reported enjoying voluntary independent reading (VIR) at a higher rate than their male counterparts. Yet, the difference between females and males regarding their enjoyment level of assigned reading was not statistically significant.

Table 28. Participants' Agreement with Statements Describing Reading Enjoyment and Relative Amount They Read on Non-school Days, Disaggregated by Gender

Reading Type	*Female (%) (N=742)*	*Male (%) (N=828)*	*Chi-Square*
Voluntary Independent Reading			23.14**
Strongly Agree	50.7	40.7	
Agree	36.9	42.6	
Disagree	7.8	10.1	
Strongly Disagree	2.4	4.9	

** $p < .01$.

Second, differences in grade level sub-groups appear to provide distinctions between younger and older middle school students. As is evident in Table 29, it appears that 6th graders reported enjoying assigned reading more than 7th and 8th graders ($\chi^2 = 62.748$, $p < .01$). Likewise, 6th graders reported enjoying voluntary independent reading more than their 7th and 8th grade counterparts ($\chi^2 = 25.174$, $p < .01$).

Table 29. Participants' Agreement with Statements Describing Enjoyment Level of Voluntary Independent Reading and Assigned Reading, Disaggregated by Grade Level

Reading Type	*6th (%) (N=547)*	*7th (%) (N=479)*	*8th (%) (N=559)*	*Chi-Square*
Voluntary Independent Reading				25.17**
Strongly Agree	51.1	43.7	41.3	
Agree	37.1	41.9	41.0	
Disagree	9.4	7.8	11.5	
Strongly Disagree	1.8	4.3	5.0	
Assigned Reading				62.75**
Strongly Agree	7.4	4.3	2.1	
Agree	46.4	33.1	31.7	
Disagree	35.3	45.8	46.6	
Strongly Disagree	10.0	15.2	18.6	

** $p < .01$.

Associations between the VIR Time and Selected Performance Indicators

Results presented in this subsection are designed to provide data to answer the third research question: 3. What are the relationships between the amounts of time students report to be engaged in voluntary independent reading (VIR) and selected performance indicators (e.g. academic performance; reading, writing, and math proficiency levels)?

Similar to the previous subsection of this chapter, for this third research question, the results of corresponding demographic subgroup relationships that were not statistically significant are not included.

VIR Time Disaggregated by Selected Performance Indicators. On average, participants reported spending approximately two hours and twenty minutes (M = 141.74 minutes) engaged in the voluntary independent reading (VIR) of printed and electronic texts during the 24-hours preceding their survey participation. Table 30 provides a detailed view of the reported VIR of combined printed and electronic texts based on the population sub-groups as differentiated by their respective performances on reading, writing, and math tests, and academic performance based on grades earned. To display all analyzed categories, all results are displayed in Table 30. The two subsequent tables, Tables 31 and 32, however, only include data that were statistically significant.

Table 30. ANOVA Summary of the Number of Minutes Participants Engaged in VIR of Combined (Printed and Electronic) Texts during 24 hours Preceding Survey

	No. Minutes VIR Combined Text for 24 hrs. pre-Survey		*95% Confidence Interval for Mean*			
Population Sub-Group	*M*	*SD*	*Lower Bound*	*Upper Bound*	*F*	*df*
All Groups (N=1,603)	141.74	126.18	135.56	147.93		
Reading					6.96**	1, 1520
Met (N=1,190)	146.63	122.25	139.68	153.58		
Did Not Meet (N=413)	127.66	136.04	114.50	140.82		
Writing					.01	1, 554
Met (N=405)	157.09	127.52	144.63	169.54		
Did Not Meet (N=150)	155.75	137.03	133.65	177.86		
Math					1.88	1, 1602
Met (N=1,160)	139.07	118.98	132.22	145.93		
Did Not Meet (N=443)	148.74	143.24	135.36	162.11		
Academic Performance: Course Grades					8.42**	1, 1602
B- or above on Math and LA Marks (N=1048)	154.28	141.66	142.47	166.09		
C+ or below on Math or LA Marks (N=555)	135.10	116.68	128.03	142.18		

** $p < .01$.

Differences between high and low reading performers and high and low academic performers were statistically significant. By examining these data, it is evident that higher performing readers (M = 146.63 minutes) reported reading significantly more than their lower performing counterparts (M = 127.66) (F (1, 1520) = 6.957, N = 1603, $p < .01$). Similarly, it was evident that the participants who earned higher grades (M=154.28) also reported reading significantly more than their lower performing peers (M = 135.10) (F (1, 1602) = 8.422, N = 1603, $p < .01$).

By separating printed text VIR time from electronic text VIR time, results can be further detailed. However, analyzing participant sub-group variation based on achievement and academic performance, few results were found to be statistically significant. In fact, for printed texts, the relationships between sub-groups based on varying performance levels on the state writing and math achievement test, as well as academic performance, were not statistically significant. Nevertheless, the difference in VIR minutes of printed texts as reported by higher achieving readers (M = 65.85) compared to lower achieving readers (M = 45.31) was statistically significant (F (1, 1546) = 22.357, N = 1547, $p < .01$). These data are described in Table 31.

Table 31. ANOVA Summary of the Number of Minutes Participants Engaged in VIR of Printed Texts during 24 hours Preceding Survey

	No. Minutes VIR Printed Text for 24 hrs. pre-Survey		*95% Confidence Interval for Mean*			
Population Sub-Group	*M*	*SD*	*Lower Bound*	*Upper Bound*	*F*	*df*
Reading					22.36**	1, 1546
Met (N=1,162)	65.85	76.54	61.45	70.26		
Did Not Meet (N=385)	45.32	65.10	38.79	51.84		

** $p < .01$.

Also examined were the sub-group performance variations differentiated by the amounts of time participants reported engaging in the VIR of electronic texts. Although participants who met the state benchmark in reading achievement (M = 94.58) reported

Table 32. ANOVA Summary of the Number of Minutes Participants Engaged in VIR of Electronic Texts during 24 hours Preceding Survey

	No. Minutes VIR Electronic Text for 24 hrs. pre-Survey		*95% Confidence Interval for Mean*			
Population Sub-Group	*M*	*SD*	*Lower Bound*	*Upper Bound*	*F*	*df*
Math					21.23**	1, 1520
Met (N=1,121)	80.48	93.50	75.00	85.96		
Did Not Meet (N=400)	107.57	119.47	95.83	119.32		
Academic Performance					28.10**	1, 1520
B- or above on Math and LA Marks (N=1,007)	77.82	92.92	72.98	83.57		
C+ or below on Math or LA Marks (N=514)	106.77	114.55	96.84	116.70		

** $p < .01$.

engaging in more VIR time on electronic texts when compared to their higher performing peers (M = 85.34), the difference was not statistically significant. Similarly, writing performance variation was not statistically significant either. However, as is evident in Table 32, the relations obtained between lower achieving math students (M = 107.57) and their higher achieving peers (M = 80.48) was statistically significant (F (1, 1520) = 21.226, N = 1521, p < .01). Likewise, the relations obtained between students who

performed worse academically (M = 106.77) versus those who performed better (M = 77.82) was statistically significant (F (1, 1520) = 28.098, N = 1521 $p < .01$).

CHAPTER V

DISCUSSION

This study employed a web-based survey to investigate the voluntary independent reading (VIR) behaviors of a sample of 1,603 suburban middle school students (MSS) in Oregon. The findings of the study were disaggregated by demographic subgroups and the relations obtained between amount of VIR time and selected performance indicators were examined. In this study, VIR was defined as a reading activity that involves students choosing to read by themselves for their own purposes, free of influence or control by others. VIR is viewed as self-directed, choice reading for which there are no expectations or accountability. This chapter includes a summary of the findings interpreted within the theoretical and empirical framework of the research literature reviewed previously. Finally, the section concludes with limitations, implications, and recommendations.

Based on the review of past published research, this study appears to contribute new findings on the current state of the VIR behaviors of MSS, particularly findings disaggregated by demographic subgroups. Perhaps most noteworthy is how this study reveals the extent to which students use the Internet and other electronically-based media to engage in VIR.

Findings Interpreted within the Theoretical and Empirical Framework

The study's findings are summarized and then compared to past published VIR research. Prior to examining the findings, however, it is important to remember the various claims of Walsh (2006 and 2007), Coiro (2007), and Alvermann (2002), who suggested that: (a) when it comes to current reading practices, educators are presently 'out of touch' with today's youth; (b) students' access reading material through a wide

variety of sources, including electronic text; (c) today's educators prioritize print-based media more than other electronic-based media, despite students' growing interest in the Internet and other electronic text; (d) by accessing interactive electronic-based texts, students are able to combine visual, digital, and written text as they synthesize information to create new knowledge and develop their understanding; and, (e) the Internet and other digital media (e.g. cell phones) appear to allow for a more interactive literacy experience, perhaps causing an increased blurring of the lines between the amounts of time students spend reading and the time they spend writing. Moreover, reading comprehension of online texts requires a different skill set than the comprehension strategies students draw upon when using off-line texts (e.g. online comprehension skills seem to require more of a focus on locating, organizing, evaluating, analyzing, synthesizing, and communicating information).

Frequency and Time

Nearly 94% of middle school students (MSS) in this study engaged in voluntary independent reading (VIR), and they averaged over two-hours and twenty minutes each day. Of their total daily VIR time, MSS reported spending approximately 60% of it reading electronic texts and 40% reading printed texts. Females engaged in VIR more often than males, and they did so for an average of 37 minutes more each day. They engaged in significantly more VIR of both electronic and printed text. In fact, compared to females, over twice as many males (8.2%) reported that they never engaged in VIR. Older MSS reported spending significantly more total time engaged in VIR, though this time difference was entirely due to their increased VIR time of electronic texts. Students who were of lower socioeconomic level read less often than their peers. Further, cell

phone access was an important factor: Compared to MSS without cell phones, those with phone access spent 45-minutes more daily time engaged in VIR; and, those whose cell phones had Internet access spent nearly an hour more each day compared to those students without cell access. In sum, MSS who were female, older, of higher socioeconomic level, and who had cell phone access engaged in VIR more often and for more total time.

Here it seems appropriate to suggest a degree of caution when comparing the findings of this study to those of previously published research. Differences with past research findings may be attributed, in part, to what appears to be a broadened definition the VIR construct used in this study, which specifically included the reading of web-based and other electronic-based texts (e.g. cell phones). Nevertheless, because the past research that was reviewed did not omit the VIR of digital text from its VIR construct definitions, the following material provides an interpretation of this study's results within the framework of past research.

When compared to past research, a much higher percentage of this study's MSS sample (94%) reported engaging in VIR. In contrast, Hughes-Hassell and Rodge (2007) and Mellon (1990) reported VIR rates of 72% and 70% respectively; further, Cullinan (2006) did not provide a specific quantity, but she asserted that MSS do not choose to engage in VIR very often. Interestingly, however, the 6% of MSS in Hughes-Hassell and Rodge's study who reported that they "do not read at all" was the same percentage of MSS in this study who reported the same, though the former study measured all reading and the latter only VIR. On the other hand, past published research, similar to the results in this study, found that females reported engaging in VIR more frequently than males

(Hughes-Hassell& Rodge, 2007; Poerschke, 2005). None of the past published research reviewed in this study disaggregated reading frequency by grade level, ethnicity, or socioeconomic level; thus, no comparison data were available for these subgroups.

As for the total amounts of time MSS reported engaging in VIR, no past research reported findings that even closely approximated the more than two hours and twenty daily minutes reported by participants in this study. At 79 minutes a day, (a) Greaney's (1980) study of Irish 5th graders came closest, but (b) Shapiro and Whitney's (1997) 4th and 5th grade participants averaged 20-minutes per day and (c) Cullinan's (2006) meta-analysis found that MSS averaged seven to ten minutes daily. Looking at these results disaggregated by gender, the findings that females spend more total time than males engaged in VIR aligned with past research (Hughes-Hassell & Rodge, 2007; Poerschke, 2005). Although no past research examined differences in VIR time disaggregated by grade level, Cullinan's (2006) meta-analysis found that during the middle school years, VIR time drops off. However, in contrast to Cullinan's results, findings from this study revealed that by comparing 6th graders to 7th graders, and 6th and 7th graders to 8th graders, means for VIR time were statistically significant, and even higher for electronic texts. No past research reported findings, however, differentiated results by ethnicity or socioeconomic level.

With a daily average of over 60 minutes of printed text VIR and almost 90 minutes of electronic text VIR, this study's data suggest that Walsh (2006 and 2007), Coiro (2007), and Alvermann (2002) seem to be right: if educators and researchers base their understanding of MSS VIR behaviors on much of the past published research, they will indeed be out of touch with the VIR behaviors of today's youth. Presently, MSS

appear to read much more electronic text than before, especially those who own cell phones with Internet access; yet, in many classrooms, much of the instruction still seems to prioritize learning through printed text, and educators only appear to be in the early stages of tapping into the interactive potential of new digital literacies. Further, the research on the differences between the comprehension skills for printed and electronic texts is sparse (Coiro, 2007). Thus, it seems essential to increase the focus on locating, evaluating, synthesizing, and communicating digital information.

Preferred Topics

For their voluntary independent reading (VIR), this study's sample of middle school students (MSS) preferred topics such as: (a) text by or about friends, (b) adventure and action, (c) interesting novels and stories, and (d) comedy, humor and jokes. Findings suggested that gender was the most important factor determining topic preferences. Some preferences were more obvious: females were much more likely to read about fashion and beauty, romance and love stories, entertainment and celebrities, cooking and nutrition, arts and crafts, and poetry, drama and plays; males, on the other hand, were much more inclined to read about war and war stories, sports and sports figures, adventure and action, comics and graphic novels, texts about video and computer games, and facts, statistics, and world records. Some topic preferences were less obvious, however, as females were more apt to read text by or about their friends, stories about people their age and teen issues, interesting novels and stories, music and musicians, and mystery and suspense. In contrast, males tended to read more about health and fitness, history and historical fiction, news and current events, how-to books and manuals, and comedy, humor, and jokes.

Disaggregating by other population categories was less revealing. Nevertheless, older MSS were more likely to select text by or about their friends, stories about people their age and teen issues, as well as topics such as romance and love stories, fashion and beauty, entertainment and celebrities, and news and current events. Younger MSS, instead, tended to read comics and graphic novels. Ethnic topic preferences were somewhat varied as well: Asians more likely preferred interesting novels and stories, as well as adventure and action; and, Hispanics were more apt to prefer reading about sports and sports figures, health and fitness, text about movies and television, music and musicians, entertainment and celebrities, horror and supernatural, and arts and crafts. Although Whites did not select any specific category significantly more, compared to Asians and Hispanics, they were less inclined to select health and fitness, travel and weather, and arts and crafts. Finally, socioeconomic variation suggested the following: MSS of low socioeconomic (SES) levels tended more to read about music and musicians, horror and supernatural, arts and crafts, text about video and computer games, and poetry, drama, and plays; whereas, MSS who did not qualify as low SES were more likely to read interesting novels and stories, as well as about topics such as news and current events, and adventure and action.

For the topics MSS prefer, although analyses in all categories were not possible, it appears that this study's findings align relatively closely with other studies. The leading topic overall for this study, 'text by or about friends,' was not a selection offered to research participants of past published studies. Perhaps most noteworthy, past research, like this study, found that disaggregating by gender resulted in significant variation. Past

empirical studies did not differentiate by ethnicity, grade level, or socioeconomic level, so comparisons are not possible.

Although topic alignment was far from perfect, Table 33 displaying females and Table 34 displaying males provide this study's topic results compared to those in the studies of Poerschke's (2005) and Hughes-Hassell and Rodge's (2007). It is important to keep in mind that the samples of Poerschke and Hughes-Hassell and Rodge consisted of high school students and fifth through eighth graders respectively; also, while Poerschke reported percentages, the data reported by Hughes-Hassell and Rodge was limited to relative comparisons between females and males. All topic categories selected by at least half of this study's participants are included in these two tables.

Table 33. A Three-Study Comparison of the Topics Females Selected for Their VIR

VIR Topics	*(a) Percent of Females and/or (b) Relative Amount Compared to Males in Each Study who Selected Respective Topic*		
	McDougal (2011)	*Poerschke (2005)*	*Hughes-Hassell & Rodge (2007)*
Text by/about friends	81	*	*
Interesting novels/stories	65	*	*
Adventure/Action	57	*	*
Mystery/Spy/Suspense	53	*	*
Comedy/Humor/Jokes	53	*	*
Stories about people my age/Teen issues	52	47	*
Movies/Television	44 / < males	*	> males
Entertainment/Celebrities	41	67	*
Science fiction/Fantasy	35	33	*
Music/Musicians	34 / > males	*	> males
Comics/Graphic novels	25 / < males	*	< males
Reading texts about vide/computer games	22 / < males	*	< males
Science/Animals/Nature	19	34	*

* Either not a category included in respective study, or less than 33% of participants selected these topics.

The data in Table 33 suggest that for the females in the three studies, approximately (a) 50% selected stories about people their age or teen issues, (b) 34% selected science fiction and fantasy; and, that females selected more (c) music and musicians than males, and less (d) comics and graphic novels and (d) texts about video or computer games than males. Considerable differences were found between the studies on the portion of participants who selected (a) entertainment and celebrities and (b) science, animals, and nature.

Table 34. A Three-Study Comparison of the Topics Males Selected for Their VIR

VIR Topics	*(a) Percent of Males and/or (b) Relative Amount Compared to Females in Each Study who Selected Respective Topic*		
	McDougal (2011)	*Poerschke (2005)*	*Hughes-Hassell & Rodge (2007)*
Text by/about friends	68	*	*
Adventure/Action	68	*	*
Comedy/Humor/Jokes	58	*	*
Sports/Sports figures	48	63	*
Movies/Television	46 / > females	*	< females
Reading texts about video/computer games	44 / > females	*	> females
Comics/Graphic novels	38 / > females	*	> females
Science fiction/Fantasy	37	43	*
Music/Musicians	26 / < females	34	< females
Science/Animals/Nature	22	44	*
Entertainment/Celebrities	15	44	*
Stories about people my age/Teen issues	15	38	*

* Either not a category included in respective study, or less than 33% of participants selected these topics.

The data in Table 34 show that for the males in the three studies, approximately (a) 40% selected science fiction and fantasy, (b) 30% selected music and musician, a category also selected less by males than females; and, compared to females, males selected more (c) texts about video and computer games, (d) comics and graphic novels, and less (e) music and musicians. Considerable differences were found between the studies on the portion of participants who selected: (a) sports and sports figures, (b) movies and television, (c) science, animals, and nature, (d) entertainment and celebrities, and (e) stories about people their age or teen issues.

Preferred Media

For middle school student (MSS) voluntary independent reading (VIR) in this study, over two-thirds indicated a preference for books, text messages, email, and Internet websites, and over half selected magazines and social network Internet websites such as Facebook. Other noteworthy media preferences included instant messages, comics, and chat rooms. Conversely, the least popular media selections for MSS were newspapers, Blogs, and electronic books and electronic newspapers. A substantial amount of the media preference variation can be explained by gender differences. For example, females were much more likely to indicate a preference for email, magazines, books, instant messages, text messages, and social networking websites (e.g. Facebook). In contrast, even though comics and newspapers were not selected by the majority of the participants, relative to females, males' were more likely to select both comics and newspapers. Perhaps most noteworthy, however, was that males were less likely to select most media, which seems to suggest that males are simply less likely to engage in VIR. Grade-level differences also explained a significant amount of the variance. Findings showed that (a)

older MSS were more inclined to select nearly every type of electronic text, plus magazines and newspapers, whereas (b) younger MSS were more likely to select books and comics. Ethnic and socioeconomic variation were minimal, though findings suggested Hispanics and MSS of lower socioeconomic level were less likely to select newspapers and books, and lower socioeconomic students were more inclined to choose comics.

Because there are a limited number of media options, comparing percentages of participants in each study who selected respective media categories may be more revealing. Table 35 displays the media selected by the participants of five different studies.

Table 35. Reading Media Participants Select for VIR, Disaggregated by Gender

Text Types	*Study*				
	McDougal (2011)	*Hughes-Hassell & Rodge (2007)*	*Poerschke (2005)*	*Ivey & Broaddus (2001)*	*New Literacies Research Team (2009)*
Printed Texts					
Books	77	30	65	*	*
Magazines	59	72	86	77	*
Comics	34	44	46	49	*
Newspapers	20	20	*	28	*
Electronic Texts			85		
Text messages	73	*	*E*	*	*
Email	69	*	*E*	*	71
Internet websites	69	37	*E*	*	*
Social Network Internet websites (Facebook, Twitter, MySpace, etc.)	55	*	*	*	*
Instant messages	40	*	*E*	*	*
Chat rooms	26	*	*E*	*	*
Web logs	17	*	*E*	*	39
Electronic books	6	*	*E*	*	*
Electronic magazines	6	*	*E*	*	*
Electronic newspapers	4	*	*E*	*	*

* Categories not included in respective study.

E Participants reported enjoying these categories, but percentage data were not provided.

With few exceptions, a cross-examination of the findings from these five studies revealed many consistencies with respect to the media students selected. Percentages for all four printed text categories were relatively similar: (a) Magazines, (b) newspapers, (c) books, for two of three studies, and (d) comics. Although comparative data were much

sparser for electronic text sub-categories, the data available suggest that participants in each study (no electronic data for Ivey & Broaddus study) reported enjoying electronic texts. For the available specific electronic text categories, findings were comparable for email and blogs, but inconsistent for Internet websites. Although somewhat telling, like with topic analyses, it would be very helpful to have data collected from participants at more times and in more places so that conclusions can be drawn more confidently. Nevertheless, these data do suggest that books, magazines, the Internet, and a variety of digital media are all very popular. Further, these findings seem to align with the findings for printed and electronic text VIR time.

Despite the fact that none of the other studies examined various media disaggregated by gender, grade level, ethnicity, or socioeconomic level, the hypothesis stated at the outset of this study did bear out. Specifically, as Poerschke (2005) and Hughes-Hassell and Rodge previously found, MSS do access a wide variety of media, including electronic text, when they spend time engaged in VIR.

Locating of and Access to Materials

Over three-quarters of middle school students (MSS) who participated in this study reported locating their voluntary independent reading (VIR) materials at home, though other common places were libraries and classrooms, bookstores, and from the Internet. Findings suggest that females were much more likely to find their VIR materials in bookstores, at libraries, and in classrooms. In fact, with the exception of 'from the Internet,' females were more likely to find materials in every possible location, which actually suggests that females, relative to males, are simply more inclined to seek VIR materials altogether.

Because locating materials ‘at home’ led all other categories, it seems worthwhile to examine which media types MSS have access to in their homes. Nearly all MSS reported having access to books and electronic texts in their homes, over three-quarters reported access to magazines, two-thirds to newspapers, and almost half had access to comics. Although one might expect minimal variation due to gender or grade-level differences, females reported more home access to magazines, electronic texts, and books, and males had more access to comics. Older students indicated more home access to newspapers, electronic texts, and magazines. Nonetheless, one might expect much more home access variation based on socioeconomic level and ethnicity, and the data suggest that these associations are stronger than those of either gender or grade level. Aligned exactly were MSS of low socioeconomic level and Hispanics: Both groups were much less likely to have access to newspapers, magazines, books, and electronic texts.

As for the people who help MSS find their VIR materials, over a third reported that no one helps them. When compared to their counterparts, older students and males were less likely to receive assistance. Although not surprising, females were much more likely to have their friends help them and younger students were much more likely to receive help from their parents. Also worth highlighting was that, relative to Asians and Whites, far fewer Hispanics indicated that they received help from their parents.

Only two studies offered comparable data on where students locate their reading material. Hughes-Hassell and Rodge’s (2007) study, which did not actually report the percentage of fifth through eighth graders who accessed reading material at home, reported that 71% and 53% of participants found their material in the school library and public library, respectively, which was comparable to the 57% and 50% in this study.

Less similar, however, were the 53% and 43% in the Hughes-Hassell and Rodge study who found their materials in their classrooms and bookstores, respectively, compared to the 38% and 54% in this study.

I hypothesized that MSS who reported having more access to reading materials in their homes would likely spend more total time engaged in VIR than MSS with less access to materials in the home. This hypothesis was based on two studies (Worthy & McKool, 1996; Worthy, Moorman, & Turner, 1999). According to the two previously referenced studies, including a similar study by Ivey and Broaddus (2001), in-home access to quality reading material is critical. However, aside from the data collected in this study, no other research examined in-home access to various reading material. Closely related, however, in the New Literacies (2009) study, 80% of students reported having access to the Internet in their homes, which compares closely to the 87% reported the same in this study.

Reasons for Engaging or Not Engaging in VIR

With nearly 94% of this study's middle school students (MSS) indicating that they engage in voluntary independent reading (VIR), examining their reasons for doing this is important. The majority of MSS reported that they engaged in VIR for fun and enjoyment, to relax, and to avoid being bored. When compared to males, females reported being much more likely to read voluntarily and independently to escape, for fun and enjoyment, to relax, and because they like the plot or story line; and, males were more likely than females to engage in VIR to learn information. Older MSS, along with Asians, were more likely to do VIR because they like the plot or story line. Compared to Hispanics and Whites, Asians also were also more likely to engage in VIR to relax and to

fill up their time. Moreover, compared to their counterparts of lower socioeconomic level, middle-to-high socioeconomic level were considerably more likely to engage in VIR for fun and enjoyment.

Alternatively, only one out of every 16.5 MSS reported not engaging in VIR. Perhaps most noteworthy was that out of 97 non-VIR participants, over 70% (68 students) were male. In addition, thirteen of every fourteen selected the reason 'because they would rather be with friends;' two-thirds selected that they like other activities better and because reading is boring or not fun for them; and at least one-third indicated that they are too busy or had no time and because they had too much school work. Females responded at much higher rates than males for not being able to find good reading material and for having too much school work. Further, when compared to Hispanics, Whites were more likely to select the response, "because reading is boring or not fun," and because they could not find good reading material. Additionally, it seems noteworthy to point out that 'because reading is difficult' was not an option available for participants to select; nevertheless, it seems likely that reading is 'difficult' would be a likely explanation for reading not being fun.

Comparable data in the literature on reasons for engaging or not engaging in VIR was sparse, and almost no data disaggregated by population subgroup existed in the research literature. Hughes-Hassel and Rodge (2007) reported that 78% females and 64% of males reported reading for pleasure; and 46% of all students reported that reading was a way to relieve boredom or escape. In this study, it seems that 'for fun and enjoyment' is the reason most closely related to the construct Hughes-Hassell and Rodge measured. Interestingly, at 74% for females and 63% for males, the percentages of participants who

reported engaging in VIR 'for fun and enjoyment' were almost identical to the aforementioned study's findings. Additionally, for this sub-category, one other comparison can be made: Mellon (1990) did not report a percentage, but he asserted that students commonly mentioned reading to escape, for entertainment, and to learn information. This study specifically found that 35% engaged in VIR to escape, and 20% did so 'to learn information.'

Enjoyment Level of Kinds of Reading, Including VIR versus Assigned Reading

More than twice as many middle school students (MSS) in this study reported enjoying voluntary independent reading (VIR) when compared to enjoying the reading assigned by their teachers and parents. However, this difference was not as great for younger MSS. Further, more females reported enjoying VIR than males. Also, almost nine of every ten respondents reported enjoying reading electronic texts, whereas only eight of ten reported enjoying printed texts. MSS also prefer fiction over nonfiction. Thus, to understand MSS readers, it seems important to recognize their preferences for VIR, electronic texts, and for fiction, and to recognize that their reading preferences change as they become older.

I hypothesized that MSS would report enjoying VIR more than the reading assigned to them by their teachers, which was an assertion based on much research (Cuevas, 2003; Ivey & Broaddus, 2001; Mercurio, 2002; Pflaum & Bishop, 2004). Aligned with the hypothesis, 85.3% of this study's participants reported enjoying VIR, whereas only 41.8% reported enjoying the reading assigned by their teachers or parents. The 85% in this study were generally comparable to the 72% in the Hughes-Hassell and Rodge (2007), the 70% in the Mellon (1990), and the 63% in the Ivey and Broaddus

(2001) studies who reported they engaged in reading as a leisure activity. Disaggregating by gender, 78% of the females and 64% of the males in the Hughes-Hassell and Rodge study reported reading for pleasure, compared to the 88% and 83%, respectively, of this study.

Associations between VIR Time and Selected Performance Levels

According to this study's findings, data suggest a strong association between the amounts of time middle school students (MSS) spent engaged in voluntary independent reading (VIR) and their reading performance as measured on a standardized reading assessment. They also suggest a strong association between the amounts of VIR time and classroom academic performance. For both relations, MSS who spend increased time engaged in VIR are more likely to perform at a higher level on standardized reading tests and in the classroom. It is important to keep in mind, however, that these data do not suggest a causal relationship; they merely provide evidence for a positive association. On the other hand, the data for writing and math achievement did not suggest a similar association with VIR time.

By separating printed text from electronic text VIR time, further analyses are revealing. First, a very positive association exists between time spent engaged in printed text VIR and performance on the state reading assessment. In other words, those MSS who reported reading more printed text were more likely to have met the state reading benchmark. Then again, it is worth mentioning that there was not a statistically significant association between VIR time of electronic text and reading achievement. Nevertheless, it is worth noting that a negative association was evident between MSS who spent more time engaged in electronic text VIR and math achievement, whereas a

positive association was evident between MSS who spent more time engaged in electronic text VIR and academic performance. To be clear, increased electronic text VIR time was positively associated with increased math achievement and increased academic performance. Again, however, these are merely associations, not evidence of a causal relation.

Because no past research revealed findings proving a causal relationship between increased VIR time and reading achievement or academic performance, this study, too, was only designed to determine whether an association between these variables exists. I hypothesized that the MSS who spend more total time engaged in VIR would likely have higher proficiency levels, as measured by their (a) reading, (b) writing, and (c) math assessment data, than middle school students who engaged in less VIR. This hypothesis was based on the empirical results of many studies (Allington & McGill-Franzen, 2003; Cullinan, 2006; Guthrie & Wigfield, 2000; Hughes-Hassell & Rodge, 2007; Krashen, 1993; Short, 1995; Stanovich & Cunningham, 1993; Won & Han, 2010). As hypothesized, this study yielded data suggesting a strong association between the amounts of time participants reported that they spent engaged in VIR and reading achievement. The results of this study provide further evidence of the relation between time spent reading and reading achievement. However, this study did not show a positive relation between VIR time and writing achievement. And, unlike the findings of Won and Han (2010), this study did not obtain a statistically significant relation between VIR and math achievement.

A final hypothesis of this study was that a positive association would exist between academic performance and time spent engaged in VIR. This hypothesis too, was

based on a number of studies (Allington & McGill-Franzen, 2003; Cullinan, 2006; Hughes-Hassell & Rodge, 2007; Krashen, 1993; Short, 1995). As expected, this study yielded data suggesting a strong association between total VIR time and academic performance.

Limitations

One primary disadvantage of survey methodology is that the survey instrument relies on volunteer participants. In this study, participants could opt out in a variety of ways. Consequently, the sampling of responses may be biased, particularly because the missing data may not have been random. Likewise, as is problematic with survey methodology in general, the accuracy of the measurement for this study relied on the volunteer participant self-reported data. Although 81.3% of the district's middle school students (MSS) and over 76% of the MSS population that resided within the district's geographic boundaries participated, data were obviously missing from nearly a quarter of all students within the sampling frame's geographic boundaries. Additionally, for several questions, this survey methodology relied on participant memory of their past voluntary independent reading (VIR) behaviors and experiences. Moreover, with this particular sampling method, it is difficult to generalize the findings to middle school students (MSS) beyond the sampling frame, and beyond the specific point of time in which the survey was administered. Thus, although generalizations of these findings can be cautiously made across middle school students who reside in different places or at different times, it must be recognized that the confidence of such generalizations is limited. Further, the absence of control and experimental groups, not to mention randomly-assigned sampling, could be considered another disadvantage.

Another disadvantage of this study was the potential validity and reliability of the survey instrument and each individual survey item. Although this survey instrument was validated using a two-step focus group testing process, it is certainly possible that flaws remained. Among the other disadvantages, because of the closed-ended survey response format, individual participants were not able to provide in-depth, qualitative information as they responded to each survey question. Instead, they were repeatedly asked to select from the menus of selections offered on the survey questionnaire. Although a concerted effort was made to ensure that the instrument was designed so the data could fully represent the VIR behaviors of MSS, it was obviously possible that response choices did not entirely represent the precise construct map or outcome space to accurately measure the VIR behaviors of the study sample.

Reliability and validity. One key way to reduce measurement error in survey research is to design questions that are technically adequate with respect to reliability and validity, and then to pilot the survey items on a sample of students that are similar to the respondents in the study (Fowler, 2002). Nevertheless, Fowler (2002) asserts that to ensure measurement reliability, survey conditions must be consistent, question items for each respondent must by identical, and questions must be interpreted consistently by the respondents. Further, to ensure that the measures are valid, care must be taken so the instrument is designed with the appropriate content and the response choices represent the range possible of responses of the respondents (Wilson, 2005). Although the researcher administered an identical web-based survey to every participant, and made every attempt to ensure consistency with each of the 73 survey sessions, it is likely that slight variations in the sessions occurred. For example, the conditions of the survey for

the respondents may have caused some variation (e.g. by school, by teacher, by day of the week, by what may have been happening at the time of the survey). Potentially more problematic, however, was that it is unlikely that all of the 1,603 survey respondents interpreted the questions identically. Moreover, as with any survey-based research, there may have been additional threats inherent to the reliability and validity of the study. Nonetheless, attempts were made to minimize such threats.

Similarly, to address potential threats to validity, steps were also taken to ensure that this study had sound validity. Although care was taken to have a valid list of response choices for each question, it is likely that for some of the 1,603 participants, response choices that precisely matched their preferences or experiences were not provided. Furthermore, the following threats to this study's validity remained concerns: (a) there may have been aspects of students' VIR behaviors that were not actually measured by the survey instrument (e.g., reading when playing board games, reading closed captions on television); (b) some participants may have misread some of the question items; (c) some of the respondents may not have been focused on the questions and/or response choices as they participated in the web-based survey; (d) some of the participants may not have been at a proficient enough reading level to be able to understand all of the survey items and/or response choices; and, (e) respondents may not have accurately estimated, remembered, or interpreted their own voluntary independent reading behaviors, preferences, or attitudes.

It also seems prudent to note that because all measures are subject to error, this study's reliance on measures such as course grades, standardized assessment results, and demographic divisions could be deemed a limiting factor. These measures designed to

measure academic achievement, skill proficiencies, and demographic characteristics, respectively, are each subject to error for various reasons.

Threats to external validity. This study was not designed to describe the voluntary independent reading (VIR) behaviors of all middle school students (MSS), only the students in this particular sampling frame, and, more specifically, those who actually participated in the study. The convenience sampling design makes it difficult to generalize with high confidence beyond this particular sample or sampling frame, as the results are dependent on the specific characteristics of this population at the particular point in time the survey was administered (McMillan & Schumacher, 2006). It does seem reasonable, however, that generalizations may be possible to similar MSS (e.g. socioeconomic level; ethnicity; reading, writing, math proficiency level; academic ability) in other locations. Although the ability to generalize the results of this study may be limited, by paying careful attention to the demographics of this study sample, generalizing this study's findings to other similar middle school populations may be reasonable. Nevertheless, to reduce threats to external validity and be able generalize with more confidence to other middle school student populations, replication of this study in other locations and at other times is needed.

Recommendations for Improvement. Although this is not an exhaustive list, suggestions for improving future replicated or similar studies include the following:

1. Use multiple methods to assess the voluntary independent reading time (e.g. reading logs, observation of participants, and interviews).

2. Conduct more exploratory interviews to ensure that the list of topic choices is accurate (this method could be applied to categories such as media, where materials are found, who helps find materials, and reasons for engaging or not engaging in VIR).

3. Similarly, conduct more exploratory interviews to ensure that the list of topic choices are properly combined and/or separated.

4. Measure performance levels with additional assessments or by incorporating more course grades.

5. Further divide population profiles into other subgroups and measure their preferences, experiences, and VIR time (e.g. ELL status, parent's education attainment level).

6. And, include more representatives for various subgroups (e.g. ethnic groups, participants who do not engage in VIR, participants from a wider geographic area and/or more diverse backgrounds).

Recommendations and Implications

In response to the limitations, one obvious recommendation is to conduct randomized control trial studies to ascertain whether a causal relationship exists between voluntary independent reading (VIR) time and reading achievement. Secondly, another suggestion is to have educational researchers replicate this study in various places and times, and with elementary and high school students, in addition to middle school students. Third, another future direction for research is to more closely examine and analyze students' VIR behaviors. It would be a worthy endeavor, for example, to conduct exploratory interviews of the MSS who are not inclined or less likely to engage in VIR to find ways to increase the likelihood that they spend more time engaged in VIR.

Additionally, it may be worthwhile to experiment with increasing access to the Internet via cell phones for certain population subgroups, thus examining whether such an intervention resulted in increased VIR time.

A finding of this study was that increased VIR time is positively associated with higher levels of reading achievement and academic performance. With this in mind, to increase these outcomes, it would be beneficial to examine what background factors, what instructional programs, and what other environmental factors lead to increased VIR. In other words, by maximizing our understanding and control over factors that lead to increased VIR, it would seem logical that reading achievement, academic performance, and perhaps general knowledge would be positively enhanced. Finally, one implication is clear, further study of the VIR behaviors of students is critical. With further study, we can better understand our students, and we can more effectively design programs and positively affect student achievement.

Perhaps the primary implication of this study is that by examining the results, parents, educators, policymakers, and researchers can better understand middle school students' (MSS) voluntary independent reading (VIR) behaviors. Increased understanding may lead to better decision-making, improved program design, and increased reading and academic achievement. One important understanding, for example, is that with nearly 90 minutes of daily electronic text VIR time, parents, educators, and researches should aim to discover how they can further increase MSS learning and achievement through VIR. Worth noting is that if this study's results are valid, by devoting an average of two hours and twenty minutes a day to VIR, MSS conceivably spend close to 15% of their waking hours engaged in this behavior. Moreover, it seems

critical for parents, educators, and researchers to ensure MSS have ample access—at home, at school, and in their hands—to a variety of reading media on the variety of topics which may interest them.

By looking at population subgroups and by exploring individual MSS VIR behaviors, parents, educators, and researchers may be able to increase the total VIR time of those less likely to commit their time accordingly. In this vein, one important implication is that educators adapt their instructional programs to accommodate MSS VIR tendencies as appropriate. With this in mind, for example, because males are less inclined to engage in VIR, it might be beneficial for parents and educators to start book clubs or reading groups for male students on topics of interest such as war and war stories, sports and sports figures, adventure and action, or texts about video and computer games. This same strategy could be applied to other population subgroups as well. Similarly, educators should consider suggesting learning extension possibilities in which MSS become more inclined to incorporate such learning in their VIR.

Moreover, it would be important to ensure that gaps such as access to VIR materials and varied levels of support by educators and parents be improved so the needs of MSS of low socioeconomic level and ethnic groups who have less access and who engage in less in VIR (e.g. Hispanics) can be more effectively addressed. Similarly, it would be beneficial to ensure that parents and educators learn more about the tendencies of individual MSS, as well as tendencies of population profiles in general, to increase VIR time. Further, because ownership of cell phones that can access the Internet is associated positively with total time spent engaged in VIR, it would be worth exploring ways to increase access to cell phones with Internet accessibility. More generally, to

understand MSS readers, results from this study suggest the importance of recognizing MSS greater preferences for VIR over assigned reading, for electronic texts over printed texts, and for fiction over nonfiction, and to recognize that some of their reading preferences change as they move vertically from sixth to eighth grade.

Finally, this study seems important because of the positive association between VIR time and selected performance indicators such as reading achievement and academic performance. Not only are these relationships well documented in the theoretical and empirical research literature, but findings in this study provide further evidence in support of such theoretical assertions. Further, this study has wider implications because it appears to shed light on important variables (e.g., VIR time, VIR behaviors, associations with performance indicators), which may help educators, researchers, and policymakers increase student achievement and academic performance.

APPENDIX A

SUMMARY OF RESEARCH ON VOLUNTARY INDEPENDENT READING

Study	Focus	Participants	Method	Findings
Hughes-Hassell & Rodge (2007)	Leisure reading of Grade 5-8	N = 1,340 5th, 6th, 7th, & 8th graders. 66% Latino, 37% African American. 86% free-reduced lunch	20 item questionnaire teacher administered	1. 72% engaged in reading as leisure activity; 2. 78% females vs. 64% males read for pleasure; 3. 69% read >2 books/month; 4. 72% read magazines; 5. 37% read Internet; 6. 30% read books/pleasure; 7. Males = sports figures; 8. Females = celebrities.
Ivey & Broaddus (2001)	Classroom reading of Grade 6	N = 1,760 6th graders. 71% Caucasian, 12% African American. 95% from schools < ½ free-reduced lunch	10 item questionnaire teacher administered 39 item follow-up interviews with 31 students	1. 63% enjoyed free reading in the classroom setting; 2. 42% motivated by good materials they help choose; 3. 28% self-motivated readers; 4. 19% motivated by others; 5. 77% read magazines; 6. 49% read comic books; 7. 28% read newspapers.

Study	Focus	Participants	Method	Findings
Poerschke (2005)	Reading choices & interests of Grade 9-12	N = 8,948 9th, 10th, 11th, & 12th graders.	25 - item questionnaire teacher administered	1. Students access variety of text categories; 2. Diverse reading interests; 3. Females read > males in seven of nine categories. 4. Good readers read > average readers > struggling readers; 5. 86% read magazines; 6. 85% read electronic texts; 7. 65% read books/newspapers; 8. 46% read comics/graphic novels; 9. 30% read poetry.
Shapiro & Whitney (1997)	Self-reported leisure activities of Grade 4-5.	N = 90 4th & 5th graders. 58% free-reduced lunch.	Participants filled out clock sheets over 3-week period. Divided into avid and non-avid readers. Researchers interviewed participants.	1. Student reading averaged 20-minutes per day; 2. Avid readers enjoyed reading > non-avid readers; 3. Avid readers' anxiety about reading < non-avid readers; 4. Avid readers' motivation to read > non-avid readers; 5. Avid readers book/library access > non-avid readers;

Study	Focus	Participants	Method	Findings
(Cont'd)				(Cont'd)
Shapiro & Whitney (1997)				6. Avid readers read by parent until older > non-avid readers; 7. Avid readers encouraged to read > non-avid readers; 8. No difference: Amount observed parents reading;
New Literacies Research Team (2009)	Internet use & online reading of Grade 6-8.	N = 1,020 6^{th}, 7^{th}, & 8^{th} graders. 54% Caucasian, 17% Hispanic, 13% African American.	67 item questionnaire How administered not made explicit (appears to have been administered by the researchers).	1. 80% home Internet access; 2. 58% Internet use > Internet use previous year; 3. 71% Internet use at home > Internet use at school; 4. 71% read email; 5. 39% read web blogs; 7. 80% read about movies/music/sports; 8. 25% read comics/manga; 9. 43% read current events; 10. 55% read about hobbies.

APPENDIX B

THE VOLUNTARY INDEPENDENT READING SURVEY QUESTIONNAIRE FOR MIDDLE SCHOOL STUDENTS

The web-based survey questions administered to the 1,603 subjects who participated in this study are provided in this Appendix. Preceding the study's listed survey questions are two practice questions designed to increase the likelihood participants may know how to answer accurately certain question types. Included here is the request for participants to provide their identification number. Additionally, a review of the definitions of reading and free choice reading are listed.

Preliminary to the Survey Questions

These preliminary items are not part of the data collection, but were provided by the researcher so that participants could learn how to respond accurately to certain types of questions, provide identification information, recall key definitions, and provide their consent to participate.

First, to instruct participants that they could select more than one response choice for a 'Select all that apply' question, the researcher gave the participants the following question:

Survey Item:

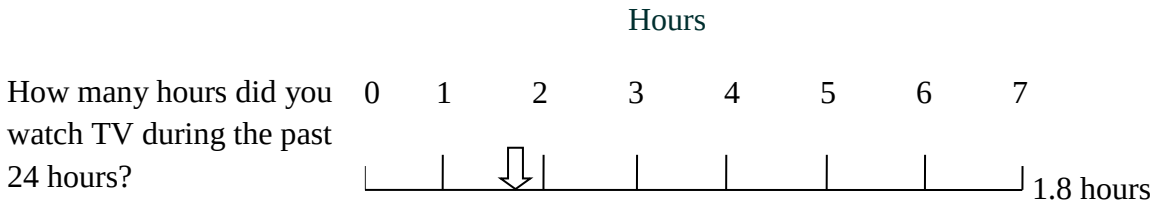
What are some of the activities you do during your free time? (Select all that apply)

□ Watch TV
□ Play sports
□ Use a computer
□ Spend time with friends
□ Talk on the phone
□ Play video games
□ Other: [Text box]
□ None of these choices

Second, to instruct participants how to report the amounts of time they engaged in a designated activity during the past 24 hours, the researcher taught students how a question with a slider-scale worked. By learning how to respond accurately to slider-scale response question, the researcher hoped that participants would be able to respond accurately to the two questions asking students to accurately provide the amounts of time they engaged in voluntary independent reading.

Survey Item:

Position slider to specify the number of hours you watched TV during the past 24 hours.



Third, to link participants' survey response data to their respective extant data, subjects were asked to volunteer their six-digit student identification number.

Survey Item:

Enter your six-digit Student Identification Number.

Student ID Number

Fourth, on the web-based survey, students were reminded of two key definitions:

Free choice reading is the unassigned reading you choose to do in your free time.

When you see the term 'reading' in this survey, remember that this means any reading material, not just books. Electronic texts, for example, can be found on the computer, the Internet, through email and text messages, social network websites such as Facebook and

Twitter, and from other sources. Printed texts can include books, magazines, newspapers, comics, and other paper-based sources.

Survey Item:

You are invited to take this survey designed to explore the reading that you do during your free time. You will be asked how much you read and how much you enjoy reading. You will also be asked what topics and materials you prefer to read. By completing this survey you are agreeing to participate in this research project. Answering the questions will likely take between five and fifteen minutes. Taking this survey is not required. Your parent(s)/guardian(s) have been informed of your opportunity to be a part of this research project. Answering the questions will be similar to in-class activities such as reading questions and selecting response choices.

Your individual responses will not be shared with anyone and they will only be used for this research project. Your responses to the survey questions will be very helpful for this research project. You may find it interesting to learn more about your own reading behaviors and interests. Whether or not you complete the survey will have no effect on your grade or anything else. The researcher plans to write a report about the results, but he will not use your name or your individual responses. To be a part of this research project, you must simply complete your survey.

- ○ I understand the above statement and choose to participate in this survey project.
- ○ I will not participate in this survey.

Set of Survey Items:

Specify how much you agree with each statement.

Note: Free choice reading is the unassigned reading you choose to do during your free time.

	Strongly Agree	Agree	Disagree	Strongly Disagree
I enjoy reading.	○	○	○	○
I enjoy reading assigned by my teachers/parents.	○	○	○	○
I enjoy free choice reading.	○	○	○	○
I enjoy reading fiction (novels, stories, etc.)	○	○	○	○
I enjoy reading nonfiction (true/real life, facts, information, etc.)	○	○	○	○
I enjoy reading electronic texts (Internet, email, text messages, etc.)	○	○	○	○
I enjoy reading printed texts (books, magazines, newspapers, etc.)	○	○	○	○
On weekend days I do more free choice reading than on school days.	○	○	○	○
On vacation days I do more free choice reading than on school days.				

Survey Item:

When you do free choice reading, which topics do you select? (Select all that apply)
Note: Free choice reading is the unassigned reading you choose to do in your free time.

□ Text by or about your friends (email, text messages, interactive websites such as Facebook)
□ Fashion/Beauty
□ Stories about people my age/teen issues
□ Interesting novels/stories
□ Reading texts about video/computer games
□ Comics/Graphic novels
□ News/Current events
□ Religion/Spiritual
□ Romance/Love stories
□ Movies/Television
□ Poetry/Drama/Plays
□ Adventure/Action
□ Music/Musicians
□ Ads/Advertisements
□ War/War stories
□ History/Historical fiction
□ How-to books/Manuals
□ Mystery/Spy/Suspense
□ Autobiographies/Biographies
□ Cooking/Nutrition/Diet
□ Science/Animals/Nature
□ Comedy/Humor/Jokes
□ Horror/Supernatural
□ Facts/Statistics/World records
□ Science fiction/Fantasy
□ Art/Crafts
□ Health/Exercise/Fitness
□ Travel/Weather
□ Sports/Sports figures
□ Entertainment/Celebrities
□ Other: [Text Box]
□ None of these choices

Set of Survey Items:

Specify the frequency for each question.

	Never	Less than once a week	Once a week	A few times each week	Once a day	More than once a day
How often do you see your parent(s)/guardian(s) reading?	○	○	○	○	○	○
When you were a young child, how often did your parent(s)/guardian(s) read to or with you?	○	○	○	○	○	○
How often do you do free choice reading?	○	○	○	○	○	○

Conditional Survey Item:

[Participants who select ‘Never’ to ‘How often do you do free choice reading?’ are invited to respond to the following question.]

Why don't you do free choice reading? (Select all that apply)
Note: Free choice reading is the unassigned reading you choose to do in your free time.

□ I’d rather be with friends
□ I can’t find good reading material
□ I like other activities better
□ I’m not good at reading
□ Reading is boring/not fun
□ I’m too busy/no time
□ I have too much school work
□ I have no place to read
□ Other: [Text Box]

Conditional Survey Item:

[Participants who select a response choice other than ‘Never’ to ‘How often do you do free choice reading’ are invited to respond to the following question.]

Why do you do free choice reading? (Select all that apply)

□ For fun/enjoyment
□ To avoid being bored
□ To learn information
□ To learn about people
□ To fill up my time
□ To relax
□ To escape
□ I like the plot/story line
□ Other: [Text Box]

Printed texts are reading materials printed on paper (books, newspapers, magazines, etc.)

Survey Item:

When you do free choice reading, which printed texts do you read? (Select all that apply)

□ Magazines
□ Books
□ Other: [Text Box]
□ Newspapers
□ Comics
□ None of these choices

Survey Item:

During the past 24 hours, how much time did you do free choice reading of printed texts?

Note: Free choice reading is the unassigned reading you choose to do in your free time.

□ I didn't read printed texts

□ Between 0 and 60 minutes

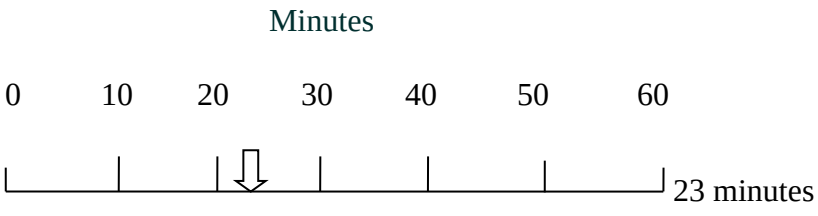
□ An hour or more

Conditional Survey Item:

[Participants who select response choice 'Between 0 and 60 minutes' to the question 'During the past 24 hours, how much time did you do free choice reading of printed texts? are invited to respond to the following survey item.]

Position slider to specify number of minutes you did free choice reading of printed text during past 24 hours.

How many minutes did you do free choice reading of printed text during the past 24 hours?

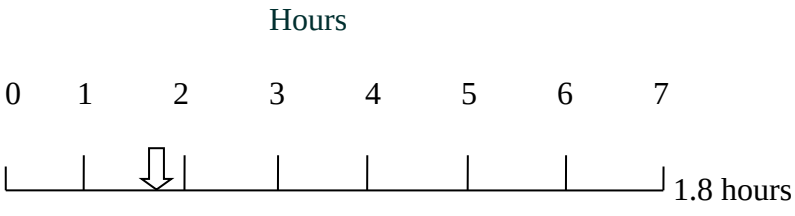


Conditional Survey Item:

[Participants who select response choice 'An hour or more' to the question 'During the past 24 hours, how much time did you do free choice reading of printed texts? are invited to respond to the following survey item.]

Position slider to specify number of minutes you did free choice reading of printed text during past 24 hours.

How many hours did you spend doing free choice reading of printed text during the past 24 hours?



Electronic texts are non-printed reading materials (Internet, email, text messages, etc.)

Survey Item:

When you do free choice reading, which electronic texts do you read? (Select all that apply)

□ Internet websites
□ Interactive Internet websites (Facebook, Twitter, MySpace, etc.)
□ Instant messages
□ Text messages
□ Email
□ Blogs (Web blogs)
□ Electronic newspapers
□ Electronic books
□ Electronic magazines
□ Chat rooms
□ Other: [Text Box]
□ None of these choices

Survey Item:

During the past 24 hours, how much time did you do free choice reading of electronic texts?

Note: Free choice reading is the unassigned reading you choose to do in your free time.

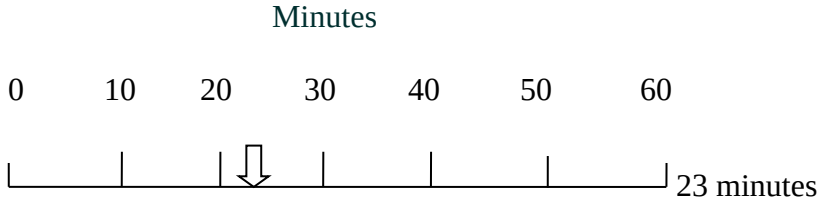
□ I didn't read electronic texts
□ Between 0 and 60 minutes
□ An hour or more

Conditional Survey Item:

[Participants who select response choice 'Between 0 and 60 minutes' to the question 'During the past 24 hours, how much time did you do free choice reading of electronic texts? are invited to respond to the following survey item.]

Position slider to specify number of minutes you did free choice reading of printed text during past 24 hours.

How many minutes did you do free choice reading of electronic text during the past 24 hours?

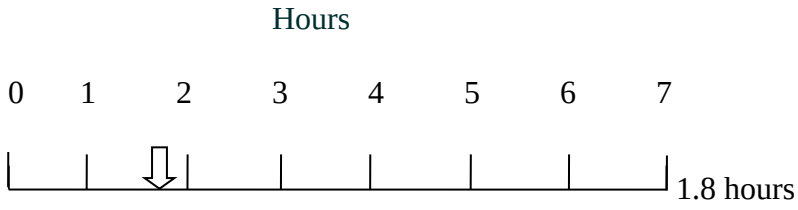


Conditional Survey Item:

[Participants who select response choice ‘An hour or more’ to the question ‘During the past 24 hours, how much time did you do free choice reading of electronic texts? are invited to respond to the following survey item.]

Position slider to specify number of minutes you did free choice reading of electronic text during past 24 hours.

How many hours did you spend doing free choice reading of electronic text during the past 24 hours?



Survey Item:

Do you have a cell phone? ○ Yes ○ No

Conditional Set of Survey Items:

[Participants who respond by selecting ‘Yes’ to the question ‘Do you have a cell phone?’ will be invited to respond to the following two questions.]

Does your cell phone receive text messages? ○ Yes ○ No

Does your cell phone have Internet access? ○ Yes ○ No

Survey Item:

What reading materials are available to you in your home? (Select all that apply)

□ Electronic text (Internet, email, etc.)
□ Books
□ Comics
□ Magazines
□ Newspapers
□ Other: [Text box]
□ No materials are available

Survey Item:

Where do you find the reading materials you use for free choice reading? (Select all that apply)

□ In my classrooms
□ At the school library
□ Other: [Text box]
□ At the public library
□ At home
□ I don’t enjoy reading
□ At a bookstore
□ From the Internet

Survey Item:

Who helps you find the reading materials you use for free choice reading?

□ No one helps me
□ My friends
□ The librarian
□ My parents
□ My teachers
□ Other: [Text box]

APPENDIX C

A TRANSCRIPT AND POWERPOINT SLIDE SHOW USED IN THE INTRODUCTORY PRESENTATIONS

To increase reliability, the same PowerPoint presentation and a nearly identical introductory speech was used for each of the 73 survey sessions. The slide show is included in this Appendix, following the verbatim transcript from one of the sessions. This introductory presentation was not read to students, but rather presented in more of an instructional format.

Verbatim Transcript from a Session of One Introductory Presentation

[First PowerPoint slide is displayed.] My name is Mr. McDougal and I'm the [job title] of [school name] in [city]. I'm also a student at the University of Oregon where I'm studying to earn my doctoral degree in education. As a doctoral student, at the very end we do a research project on any topic that we want in the field of education. So, the topic I've chosen is to try to find out what I can about what middle school students read during their free time—when they don't have to read. So, they might choose to read, they might not, but that's what I'm trying to find out. You all know—as researchers—that it's really important to have a research topic, but it's also probably even more important to have research questions or ways to focus your research so you don't end up just kind of aimlessly researching anything that happens to be about middle school reading.

I have three research questions I want to just mention briefly to you. [Second PowerPoint slide is displayed.] The first one I'm trying to answer has to do with trying to find out the topics middle school students read in their free time. It could be about

sports, celebrities, cooking and nutrition, interesting novels; it could be current events, history, historical fiction, all kinds of things including texts written by friends, or people that you know, Facebook, text messages, MySpace, things like that. There are all kinds of different topics and genres and you'll find that there are some questions that I ask on the survey to try to find out what kinds of topics you use for your reading.

The second thing is that I'm going to try to find out about the reading materials that you use. When I was going to school, I could read newspapers, books, and magazines. As you know now though, there are so many more things that you can choose from. You can read on the Internet, different websites, again - Facebook, MySpace, all the interactive websites, or look things up on Google, and things like that. You can also read things on your cell phone: Text messages, some people have access to the Internet on their cell phone. And, nowadays you can even hold one of those electronic books like 'Kindle' and read that way. So, some people have access to those things, but there are a whole lot of different reading materials that students access. Some of this new research that I'm trying to do will hopefully help everybody learn about reading and how it's changed a little bit for middle school students compared to what it was like ten years ago, before all of this electronic text was as available as it is.

I'm going to try to find out about how often you do your free choice reading, and also the total amount of time that you spend doing free choice reading. And, when I say total amount of time, what I'm going to be looking for is the time you spent doing free choice reading in the last 24-hours. So, when you have a question like that, you might look at the clock and think it's ten o'clock right now. So, from ten o'clock yesterday,

after school in the evening, and this morning, you'll just add up the free choice reading that you did to be able to figure that out.

I'm going to end up in the end, this is my last day of administering surveys at [school name #1], last week I was at [school name #2] and before that I was at [school name #3], but in the end I'll end up surveying over 1,800 students. And so, once I have 1,800 students' responses in my database, then I can do some sorting and figure out if there's differences between the topics of what boys like to read and girls, do 6th graders spend more time reading from electronic texts than 8th graders, or vice versa. But I'll be able to figure out based on sub-groups, try to figure out if there are any differences with some of those things.

And, then the third question is really about performance indicators, I'll try to find out if the students who spend more time reading tend to get better grades in school, or is there any relationship. Students who spend more time reading, do they tend to score better on their reading or writing or math state tests? There hasn't been a lot of research on that, so that'll be something that I'm going try to figure out. Those are my research questions: Any questions about those?

Okay, so you guys are doing a good job listening. [Third PowerPoint slide is displayed.] I want to make sure we have a shared understanding of a few key terms. The first one is 'reading' and, of course, you know what reading is, but when you do the survey and answer the questions, make sure you think of 'reading' as more than just the reading of books. Reading can be of any text material, including the restaurant menu you read last night. It could be books and newspapers, magazines. It could be text messages, Facebook, Email, things you searched and looked at on the Internet. It wouldn't

necessarily be video games, but if you're reading about video games, and if there's a lot of reading involved in one, then that could also count. So, just kind of keep that in mind.

On the survey there will be different questions that have to do with electronic texts and printed text. I've underlined those words throughout, so if you could just pay attention to those. I am trying to separate out, how much printed text reading and electronic text reading students do. With printed text, it's pretty easy to add up the time that you read in the last 24-hours: books, magazines, newspapers. With electronic texts, it's a little trickier because it's so interactive. So, what I would want you to do when you count up the amount of time you spend reading electronic text is, you would count the time you're reading email, but not when you're writing it. Now, it's trickier still with text messages because you're texting, then you're reading it, texting, reading. So, what you need to end up doing, really, is estimating how much time you're spending doing the reading of it. Now, if you write or post something on Facebook, and before you actually send it, you reread it to make sure it says what you want it to say, that rereading time would count as your free choice reading. So, just kind of keep that in mind with electronic text.

The last key term that I want to mention to you is this concept of free choice reading. It's different than assigned reading. Assigned reading would be the reading that your teachers expect you to do, or your parents expect you to do: Perhaps two hours a week of anything you want, but you have to read two hours a week. Maybe you need to go do some research on the Tigris-Euphrates Valley, find out about the beginning of civilization for social studies. When you start doing that research, you might spend about five minutes doing research online, then you flip over and you start checking

email. Well, the email checking and reading, that counts as free choice reading. The research that your social studies teacher told you to do: that's assigned reading.

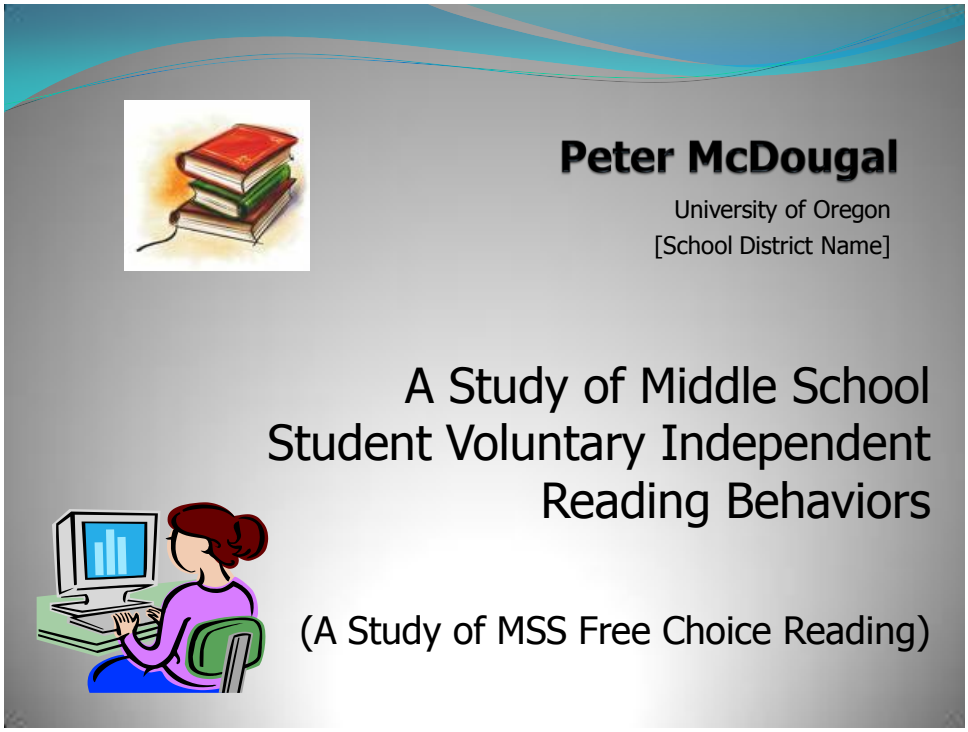
If you are in math class and you finish your assignment—I'm sure none of you ever do this—but, just in case you pull out your cell phone and check your text messages, well that would count as free choice reading because no one is expecting you to pull out your cell phone and check your text messages. So, you could add that into your reading time. And, with that said, any responses that you put into the survey, no one is going to track you down and try to figure out how much time you were actually spending on Facebook or doing email or texting. The data you enter will remain anonymous and we won't actually be trying to figure out the individual data so you can answer as honestly as you can.

And, then the last thing I just want to mention is that this is your choice to do this survey. You don't have to; it's voluntary. I found that almost everybody [has done] the survey, like 98%. But, no one's going stand over your shoulder and make you do it. It is a choice, so just be aware of that. Any questions about anything yet?

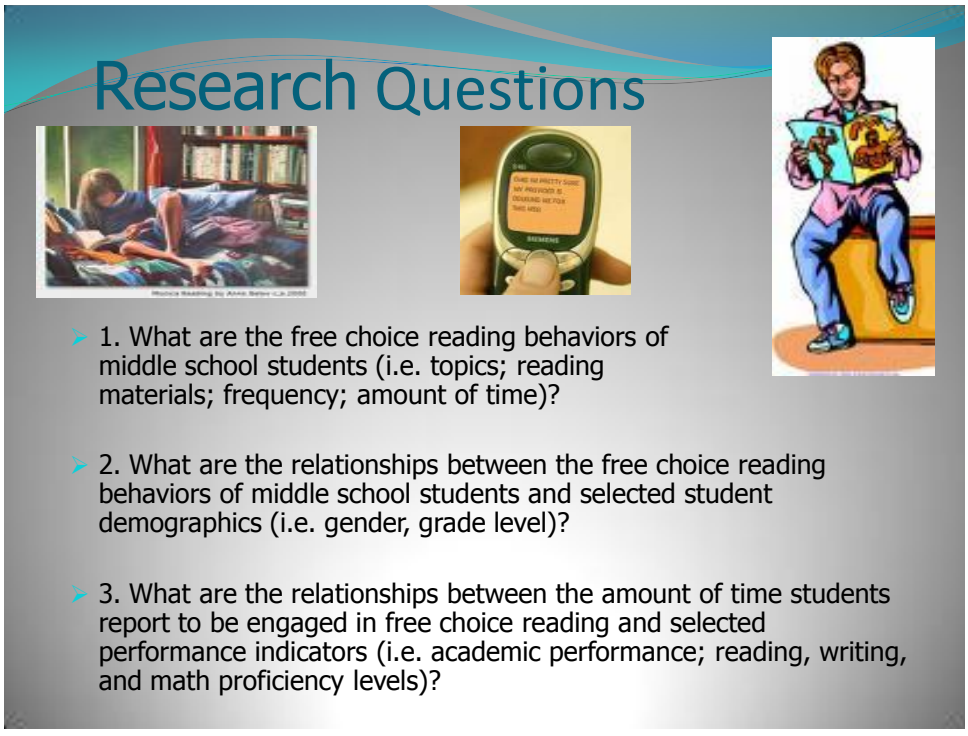
[Fourth PowerPoint slide is displayed. Participants were instructed how to navigate to the web-based survey.]

Accompanying PowerPoint Slide Show Presentation

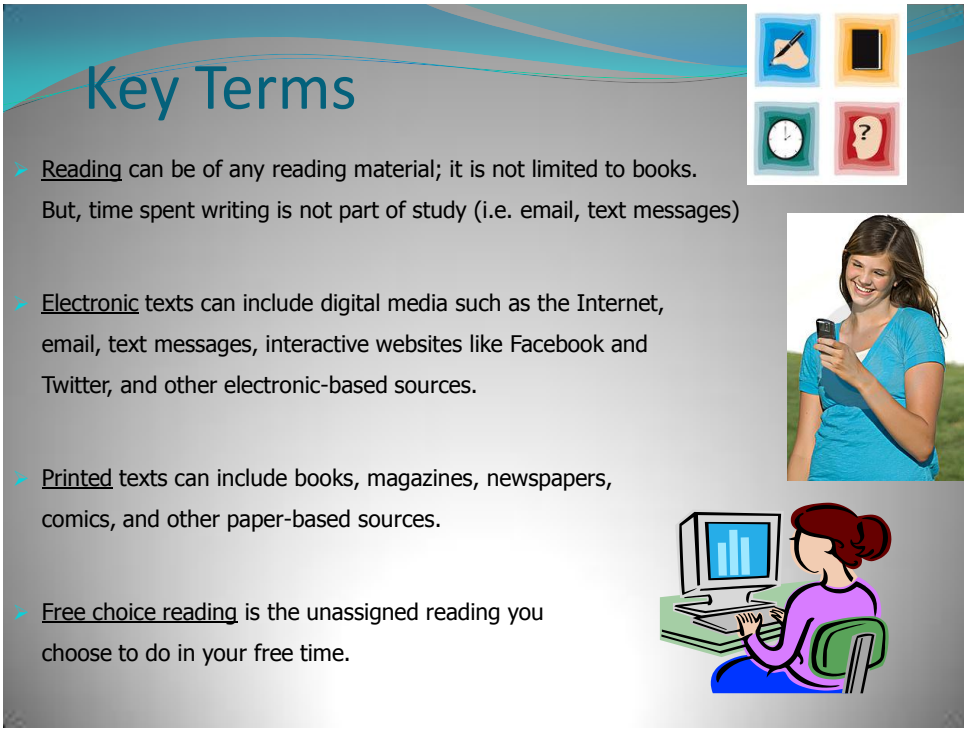
First PowerPoint slide:



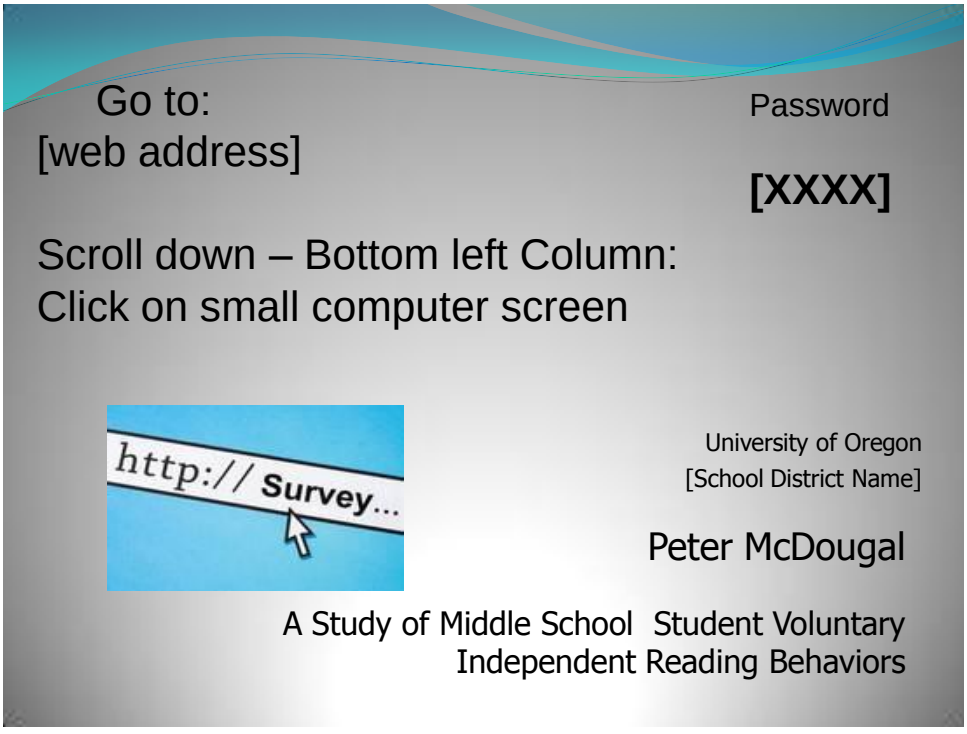
Second PowerPoint slide:



Third PowerPoint slide:



Fourth PowerPoint slide:



APPENDIX D

SURVEY ITEMS DERIVED FROM ITEMS FOUND IN PREVIOUS STUDIES

Original Item: If you read, why do you like to read? (Hughes-Hassell & Rodge)

Item used in this Study: Why do you do free choice reading?

Original Item: If you don't read, why not? (Hughes-Hassell & Rodge)

Item used in this Study: Why don't you do free choice reading?

Original Item: What do you like to read? (Hughes-Hassell & Rodge)

Items used in this Study: When you do free choice reading, which printed texts do you read?
When you do free choice reading, which electronic texts do you read?

Original Item: What do you like to read about? (Hughes-Hassell & Rodge)

Item used in this Study: When you do free choice reading, which topics do you select?

Original Items: How do you find the books you like to read? (Ivey & Broaddus)

Where do you get the materials you like to read? (Ivey & Broaddus)

Item used in this Study: Where do you find the reading materials you use for free choice reading?

Original Item: Please share the types of electronic communications you enjoy. (Poerschke)

Item used in this Study: When you do free choice reading, which electronic texts do you read?

Original Item: How often do you see mom or dad reading? (Shapiro & Whitney)

Item t used in his Study: How often do you see your parent(s)/guardian(s) reading?

Original Item: Did your parents read to you? (Shapiro & Whitney)

Item used in this Study: When you were a young child, how often did your parent(s)/guardian(s) read to/with you?

Original Item: How many computers are in your home are connected to the Internet? (The New Literacies Research Team)

Item used in this Study: In your home, do you have Internet access?

APPENDIX E

FOCUS GROUP COMMUNICATIONS AND MATERIALS

Included in this appendix are (a) the letter sent to focus group students, (b) the letter sent to focus group parents, and (c) the focus group questionnaire with follow up discussion questions. The letters were sent to recipients in English and Spanish, and so both versions are included here.

Letter Sent to Focus Group Students

English version.

An Invitation to be a part of a focus group that will take and discuss a survey for

A Study of Middle School Student Voluntary Independent Reading Behaviors

(Spanish Version on Reverse Side)

Sometime in the next few weeks you will be invited to be a part of a student group that will take a survey by answering questions on a computer. After answering the questions you will be invited to be a part of a discussion about the survey questions. The questions will explore the reading that you do during your free time. The purpose of the discussion is to make sure that the survey questions and answer choices make sense. The survey questions will be given to you by an administrator at your school and a researcher named Mr. McDougal. Mr. McDougal is the [position title] at [school name] in the [school district name]. He is also a student at the University of Oregon. Mr. McDougal is researching the reading that students your age do during their free time. His research project is supervised by University of Oregon professors Dr. Ed Kame'enui and Dr. Paul Yovanoff, as well as the [school district name].

It is your choice whether or not you take the survey and participate in the discussion. Your parent(s)/guardian(s) have also been informed of your opportunity to be a part of this research project. If you choose to participate, you will go join one of your school's administrators and Mr. McDougal in a computer lab in your school. Mr. McDougal will take about five minutes to describe his research project to you and the other student participants. He will also answer any questions you and the other students have. You will then be invited to start the survey, followed by a group discussion. Answering and then discussing the survey questions will be similar to some of the activities you do in

your classes, such as reading questions, selecting responses, and participating in a discussion.

Completing the survey will probably take you between ten and fifteen minutes. The follow up discussion with six to ten total students will take about thirty minutes. The survey questions will explore the reading you do during your free time. You will be asked about things such as how much you read and how much you enjoy reading. You will also be asked what you like to read about and the reading materials you prefer. If you choose to be a part of the group discussion, there is no way to be sure that the ideas you share in the discussion will not be shared with other people by the other participants. Mr. McDougal, however, will not share your thoughts with anyone. He will only use them to make sure the survey questions and response choices make sense. Whether or not you participate will have no effect on your grades or anything else.

One of your school administrators and Mr. McDougal will be available to help you as needed when you answer the survey questions and then participate in the discussion. Your responses to the survey questions and thoughts during the discussion will be very helpful for this research project. You may even find it interesting to learn more about your own reading behaviors and interests, as well as learning about how surveys work. Mr. McDougal plans to write a report about the results, but he will not use your individual responses or any student names. The report may allow researchers and educators to understand more about the reading students your age do during their free time. To be a part of this research project, you must simply complete your survey and then join in the discussion.

If you have any questions or concerns, Mr. McDougal's contact information is available below.

Peter McDougal, [position, school]
[phone number]
[email address]
[school name]
[school district name]

Jane Stickney, [position]
[phone number]
[school district name]

Dr. Ed Kame'enui
Faculty Advisor
541.346.1644
University of Oregon

Dr. Paul Yovanoff
Faculty Advisor
541.346.1495
University of Oregon

For questions about your human rights as a research participant, or if you have any other questions, feel free to call the University of Oregon's Protection of Human Subjects at 541.346.2510.

Spanish version.

Una invitación para participar en un grupo que responderá y discutir una encuesta para

Un estudio del comportamiento de lectura voluntaria e independiente de estudiantes en escuela intermedia

(Versión en Inglés al revés)

Durante las semanas que vienen se te estará invitando a participar en un grupo de estudiantes que responderá a preguntas de una encuesta en la computadora. Después de responder a las preguntas se te estará invitando a participar en una discusión acerca de las preguntas de la encuesta. Las preguntas explorarán la lectura que haces durante tu tiempo libre. El propósito de la discusión es para asegurar que las preguntas de la encuesta y las respuestas posibles sean razonables. Las preguntas de encuesta te serán dadas por un administrador de tu escuela y un investigador educacional que se llama el Sr. McDougal. El Sr. McDougal es el [position] de [school name] del distrito escolar de [school district name]. Él también es un estudiante de la Universidad de Oregón. El Sr. McDougal está investigando sobre la lectura que estudiantes de tu edad hacen durante su tiempo libre. Su proyecto de búsqueda está bajo la dirección de profesores de la Universidad de Oregón Dr. Ed Kame'enui y Dr. Paul Yovanoff, y también el distrito escolar de [school district name].

Tú decides el participar en la encuesta y la discusión. Tu(s) padre(s)/guardián(es) serán informados también de tu oportunidad de ser una participante en este proyecto de búsqueda. Si eliges participar, tú irás con uno de los administradores de tu escuela y el Sr. McDougal a un laboratorio de computadores en tu escuela. El Sr. McDougal usará aproximadamente cinco minutos para explicar y describir su proyecto de búsqueda a ti y los otros participantes. También responderá a preguntas que tengan tú y los otros estudiantes. Después, te estará invitando a empezar la encuesta, y una discusión con el grupo seguirá. El responder y el discutir las preguntas de la encuesta será similar a varias actividades que haces tú durante tus clases, como leer preguntas, seleccionar respuestas, y participar en una discusión.

El tiempo para cumplir la encuesta probablemente durará entre diez y veinte minutos. La discusión al seguir será con seis hasta diez estudiantes, durará aproximadamente treinta minutos. Las preguntas de la encuesta explorarán la lectura que haces tú durante tu tiempo libre. Te estará preguntando de cosas como el tiempo total que lees tú y cuanto te gusta la lectura. También te estará preguntando sobre los temas que te gusta leer y tus materiales preferidos que te gusta leer. Si eliges participar en la discusión con el grupo, no hay un método para asegurar que las ideas que compartas en la discusión no sean

compartidas con otras personas por otros participantes. El Sr. McDougal, sin embargo, no compartirá tus pensamientos con nadie. El solo los usara para asegurar que las preguntas de la encuesta y las respuestas posibles sean razonables. Si participas o no, no tendrá ningún efecto en tu nota ni en nada más.

Uno de los administradores de tu escuela y el Sr. McDougal estarán disponible para ayudarte como sea necesario durante el tiempo mientras respondes a las preguntas de la encuesta y durante la discusión. Tus respuestas a las preguntas de la encuesta y pensamientos durante la discusión serán muy útiles para este proyecto de búsqueda educacional. Quizás tú lo encuentres interesante y aprenderás más de tu propio comportamiento e intereses de lectura, y también cómo funcionan las encuestas. El Sr. McDougal planea escribir un reporte sobre los resultados, pero él no usará tus respuestas individuales ni los nombres de ningún estudiante. Quizás el reporte permita a investigadores educacionales aprender más sobre la lectura que hacen los estudiantes de la escuela intermedia durante su tiempo libre. Para ser una parte de este proyecto de búsqueda, simplemente debes cumplir la encuesta y ser un participante en la discusión.

Si tienes tú cualquier pregunta o preocupación, la información para contactar al Sr. McDougal esta abajo.

Peter McDougal, [Posición, nombre de escuela]
[Número de teléfono]
[Email]
[Nombre de escuela]
[Distrito escolar]

Jane Stickney, [posición]
[Peter McDougal, [Posición, nombre de escuela]
[Número de teléfono]
[Distrito escolar]

Dr. Ed Kame'enui
Avizor de la facultad
541.346.1644
Universidad de Oregón

Dr. Paul Yovanoff
Avizor de la facultad
Dr. Ed Kame'enui
541.346.1495
Universidad de Oregón

Si tienes preguntas de tus derechos humanos como participante en la búsqueda educacional, o si tienes cualquier otra pregunta, siéntate libre de llamar a la protección de sujetos humanos de la Universidad de Oregón a 541.346.2510.

Focus Group Questionnaire with Follow up Discussion Questions

With a close examination, one can see that the follow questionnaire is slightly different from the questionnaire included in Appendix B. This focus group questionnaire consists of the original questions. The researcher made modifications in response to the focus groups' feedback. This particular questionnaire has been divided into sub-sections to make clear which questions follow.

Focus group interview.

After the focus group participants complete the web-based survey questionnaire, the researcher will lead the participants in a discussion to elicit their interpretations and/or suggestions for most of the questions. The researcher will use this *Focus Group Interview* tool to take notes during the focus group discussion process.

First section.

Specify how much you agree/disagree with each statement.	Strongly Agree	Agree	Disagree	Strongly Disagree
I enjoy reading.	○	○	○	○
I enjoy reading assigned by my teachers/parents.	○	○	○	○
I enjoy free choice reading.	○	○	○	○
I enjoy reading fiction (novels, stories, etc.)	○	○	○	○
I enjoy reading nonfiction (true/real life, facts, information, etc.)	○	○	○	○
I enjoy reading electronic texts (Internet, email, text messages, etc.)	○	○	○	○
I enjoy reading printed texts (books, magazines, newspapers, etc.)	○	○	○	○

On weekend days I do more free choice reading than on school days.	○	○	○	○
On vacation days I do more free choice reading than on school days.	○	○	○	○

Follow up questions for first section.

What did you understand you were supposed to do with this section of the survey? What does ‘reading assigned by my teachers/parents’ mean to you? [Use same/similar stem for the terms]

free choice reading

fiction nonfiction

electronic texts printed texts

What does the statement ‘On weekdays I do more free choice reading than on school days’ mean to you?

Look over the statements one more time: What suggestions do you have to make any of these statements clearer (or) more understandable?

Second section.

When you do free choice reading, which topics do you select? (Select all that apply)

o Text by or about your friends (email, text messages, interactive websites)	o Stories about people my age/teen issues	o Entertainment/Celebrities
		o Fashion/Beauty
o Interesting novels/stories	o Sports/Sports figures	o Comics/Graphic novels
o News/Current events	o Religion/Spiritual	o Puzzles/Crosswords/Games
o Romance/Love stories	o Movies/Television	o Poetry/Drama/Plays
o Adventure/Action	o Music/Musicians	o Ads/Advertisements
o War/War stories	o History/Historical figures	o How-to books/Manuals
o Mystery/Spy/Suspense	o Autobiographies/ Biographies	o Cooking/Nutrition/Diet
o Science/Animals/Nature	o Comedy/Humor/Jokes	o Horror/Supernatural
o Facts/Statistics/World records	o Science fiction/Fantasy	o Art/Crafts
o Health/Exercise/Fitness	o Travel	o Other: _____
o Text about video/computer games	o Weather	o None of these choices

Follow up questions for second section.

What did you understand you were supposed to do with this question?

What does ‘text by or about your friends’ mean to you? As needed, the researcher may clarify the intended meaning of ‘text by or about your friends.’ This clarification may be followed up with the question ‘What suggestions do you have to describe this concept in a clear, understandable way for students?

What does ‘text about video/computer games’ mean to you? [Possible follow-up similar to previous question]

What does ‘Ads/Advertisements’ mean to you?

Think of your own interests and the interests of your friends: What ‘other’ choices do you I should consider adding?

Third section.

	Never	Less than once a week	Once a week	A few times each week	Once a day	More than once a day
How often do you see your parent(s)/guardian(s) reading?	○	○	○	○	○	○
When you were a young child, how often did your parent(s)/guardian(s) read to or with you?	○	○	○	○	○	○
How often do you do free choice reading?	○	○	○	○	○	○

Follow up questions for third section.

What did you understand you were supposed to do with these questions?

How accurately do you think you estimated for these three questions?

Fourth section.

[If <u>not</u> 'Never' on FRQ (previous)] Why do you do free choice reading? (Select all that apply)

- ○ For fun/enjoyment
- ○ To avoid being bored
- ○ To learn information
- ○ To learn about people
- ○ To fill up my time
- ○ To relax
- ○ To escape
- ○ I like the plot/story line
- ○ Other: _____

Follow up questions for fourth section.

What did you understand you were supposed to do with this question?

What does 'plot/story line' mean to you?

Considering your own reasons for doing free choice reading, as well as the reasons you think your friends may have, are any important response choices missing? If so, what is missing?

Fifth section.

[If 'Never' on FRQ] Why don't you do free choice reading? (Select all that apply)

o I'd rather be with friends	o I can't find good reading material	o I like other activities better
o I'm not good at reading	o Reading is boring/not fun	o I'm too busy/no time
o I have too much school work	o I have no place to read	o Other: _____

Follow up questions for fifth section.

What did you understand you were supposed to do with this question?

Considering your own reasons for not doing free choice reading, as well as the reasons you think some of your friends might not do it, are any important response choices missing?

Sixth section.

Printed texts are reading materials printed on paper (books, newspapers, magazines, comics, etc.)

When you do free choice reading, which printed texts do you read? (Select all that apply)

o Magazines	o Books	o Other: _____
o Newspapers	o Comics	o None of these choices

During the past 24 hours, how much time did you do free choice reading of printed texts?

o I didn't read printed texts	o Between 10 and 20 minutes	o Between 40 and 60 minutes
o Between 0 and 10 minutes	o Between 20 and 40 minutes	o An hour or more

Follow-up example:

Specify the amount of time you did free choice reading of printed text during the past 24 hours.

Follow up questions for sixth section.

Are there any printed texts that you or your friends read that were not listed as answer choices?

What did you understand you were supposed to do with the two questions asking you to specify the amount of time you did free choice reading?

How accurately do you think you estimated your amount of reading time during the past 24 hours?

Seventh section.

Electronic texts are non-printed reading materials (Internet, email, text messages, etc.)

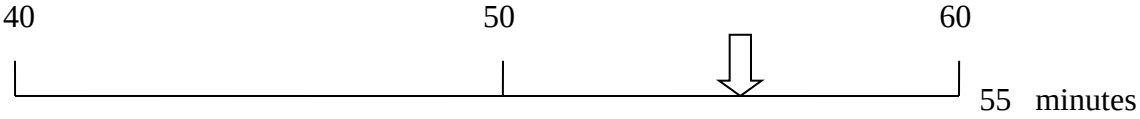
When you do free choice reading, which electronic texts do you read? (Select all that apply)

o Internet websites	o Interactive Internet websites (Facebook, Twitter, MySpace, etc.)	o Instant messages
o Text messages	o Email	o Blogs (Web blogs)
o Electronic newspapers	o Electronic books	o Electronic magazines
o Chat rooms	o Other: _____	o None of these choices

During the past 24 hours, how much time did you do free choice reading of electronic texts?

o I didn't read electronic texts	o Between 10 and 20 minutes	o Between 40 and 60 minutes
o Between 0 and 10 minutes	o Between 20 and 40 minutes	o An hour or more

Follow-up example:
Specify the amount of time you did free choice reading of electronic text during the past 24 hours.



Follow up questions for seventh section.

What does 'interactive Internet websites' mean to you?

Are there any electronic texts that you or your friends read that were not listed as answer choices?

How accurately do you think you estimated your amount of reading time during the past 24 hours?

Eighth section.

	Yes	No
Do you have a cell phone?	○	○
[If 'yes' to cell phone] Does your cell phone receive messages?	○	○
[If 'yes' to cell phone] Does your cell phone have Int access?	○	○

What reading materials are available to you in your home?

- ○ Electronic texts (Internet, email, etc.)
- ○ Books
- ○ Comics
- ○ Magazines
- ○ Newspapers
- ○ Other: _____
- ○ No materials are available

Follow up questions for eighth section.

What did you understand you were supposed to do with this question?
Are there any reading material types in your home that are not listed in the response choices?

Ninth section.

Where do you find the reading materials you use for free choice reading?

- ○ In my classrooms
- ○ At the school library
- ○ The librarian helps me
- ○ At the public library
- ○ At home
- ○ From the Internet
- ○ At a bookstore
- ○ My friends help me
- ○ Other: _____
- ○ My parents help me
- ○ My teachers help me
- ○ I don't enjoy reading

Follow up questions for ninth section.

What did you understand you were supposed to do with this question?

Are there any other places where you find reading materials that are not listed in these response choices?

This survey asked a number of questions about your free choice reading, however, there are many other possible aspects of free choice reading that could be explored. When you think about your own free choice reading, what are some important thoughts or behaviors that you were unable to share on this survey?

APPENDIX F

PARTICIPANT AND PARENT COMMUNICATIONS AND MATERIALS

This appendix includes a sample of the letters sent to the potential survey participants and the parents of these potential participants.

Letter Sent to Potential Student Participants

English version.

Invitation to participate in

A Study of Middle School Student Voluntary Independent Reading Behaviors

In the next few weeks you will be invited to take a survey by answering questions on a computer. The questions will explore the reading that you do during your free time. The survey questions will be given to you by your language arts teacher and a researcher named Mr. McDougal. Mr. McDougal is the [position] at [school name] in the [school district name]. He is also a student at the University of Oregon. Mr. McDougal is researching the reading that students your age do during their free time. His research project is supervised by University of Oregon professors Dr. Ed Kame'enui and Dr. Paul Yovanoff, as well as the [school district name].

It is your choice whether or not you take the survey. Your parent(s)/guardian(s) have also been informed of your opportunity to be a part of this research project. If you choose to participate, you will go with your language arts teacher and class to a computer lab in your school. Mr. McDougal will take about five minutes to describe his research project to you and your classmates. He will also answer any questions you and your classmates have. You will then be invited to start the survey. Answering the survey questions will be similar to some of the activities you do in your classes, such as reading questions and selecting responses.

Completing the survey will probably take you between five and fifteen minutes. The survey questions will explore the reading you do during your free time. You will be asked about things such as how much you read and how much you enjoy reading. You will also be asked what you like to read about and the reading materials you prefer. Your individual responses will not be shared with anyone and they will only be used for Mr. McDougal's research project. Whether or not you complete the survey will have no effect on your grade or anything else.

Your language arts teacher and Mr. McDougal will be available to help you as needed when you answer the survey questions. Your responses to the survey questions will be very helpful for this research project. You may even find it interesting to learn more about your own reading behaviors and interests. Mr. McDougal plans to write a report about the results, but he will not use your individual responses or any student names. The report may allow researchers and educators to learn more about the reading middle school students do during their free time. To be a part of this research project, you must simply complete your survey.

If you have any questions or concerns, Mr. McDougal's contact information is available below.

Peter McDougal, [position, school]
[phone number]
[email address]
[school name]
[school district name]

Jane Stickney, [position]
[phone number]
[school district name]

Dr. Ed Kame'enui
Faculty Advisor
541.346.1644
University of Oregon

Dr. Paul Yovanoff
Faculty Advisor
541.346.1495
University of Oregon

For questions about your human rights as a research participant, or if you have any other questions, feel free to call the University of Oregon's Protection of Human Subjects at 541.346.2510.

Spanish version.

Invitación para participar en

Un estudio del comportamiento de lectura voluntaria e independiente de estudiantes en escuela intermedia

Durante las semanas que vienen se te estará invitando a participar en una encuesta y responder a preguntas por computadora. Las preguntas explorarán la lectura que haces tú durante tu tiempo libre. Las preguntas de la encuesta te serán dadas por tu maestro(a) de arte de lenguaje y un investigador educacional que se llama Sr. McDougal. El Sr. McDougal es el [position] de [school name] del distrito escolar de [school district]. Él también es un estudiante de la Universidad de Oregón. El Sr. McDougal está investigando el tipo de lectura que estudiantes de tu edad hacen durante su tiempo libre. Su proyecto de búsqueda está bajo la dirección de profesores de la Universidad de Oregón Dr. Ed Kame'enui y Dr. Paul Yovanoff, y también el distrito escolar [school district name].

Tú decisión el participar en la encuesta. Tu(s) padre(s)/guardián(es) han sido informado(s) también de tu oportunidad de participar en este proyecto de búsqueda. Si eliges participar, tú irás con tu maestro(a) de arte de lenguaje y tu clase a un laboratorio de computo en tu escuela. El Sr. McDougal responderá a preguntas que tengan tú y tus compañeros de clase. Después, te será invitado a empezar la encuesta. El responder a las preguntas de la encuesta será similar a varias actividades que haces tú durante tus clases, como leer preguntas y seleccionar respuestas.

El tiempo para cumplir la encuesta probablemente tomara entre diez y veinte minutos. Las preguntas de la encuesta explorarán la lectura que haces tú durante tu tiempo libre. Se te estará preguntado de cosas como el tiempo total que tú lees y cuanto que te gusta la lectura. También se te estará preguntando sobre los temas que te gusta leer y tus materias preferidas. Tus respuestas individuales no serán compartidas con nadie y solo serán usadas por el proyecto de búsqueda educacional del Sr. McDougal. El completar la encuesta o no, no tendrá ningún efecto en tu nota ni en nada más.

Tu maestro(a) de arte de lenguaje y el Sr. McDougal estarán disponibles para ayudarte como sea necesario durante el tiempo mientras respondes a las preguntas de la encuesta. Tus respuestas a las preguntas de la encuesta serán muy útiles para este proyecto de búsqueda educacional. Quizás tú lo encuentres interesante para aprender más de tu propio comportamiento e intereses de lectura. El Sr. McDougal planea escribir un reporte sobre los resultados, pero él no usará tus respuestas individuales ni los nombres de ningún

estudiante. Quizá el reporte permita a investigadores educacionales aprender más sobre la lectura que hacen los estudiantes de escuela intermedia durante su tiempo libre. Para ser parte de este proyecto de búsqueda, simplemente debes cumplir la encuesta.

Si tienes tú cualquier pregunta o preocupación, puedes contactar al Sr. McDougal.

Peter McDougal, [Posición, nombre de escuela]
[Número de teléfono]
[Email]
[Nombre de escuela]
[Distrito escolar]

Jane Stickney, [posición]
[Peter McDougal, [Posición, nombre de escuela]
[Número de teléfono]
[Distrito escolar]

Dr. Ed Kame'enui
Avizor de la facultad
541.346.1644
Universidad de Oregón

Dr. Paul Yovanoff
Avizor de la facultad
Dr. Ed Kame'enui
541.346.1495
Universidad de Oregón

Si tienes preguntas de tus derechos humanos como participante en la búsqueda educacional, o si tienes cualquier otra pregunta, siéntete libre de llamar la protección de sujetos humanos de la Universidad de Oregón a 541.346.2510.

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