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# The Relationship Between Reading Enjoyment, Gender, Socioeconomic Status, and Reading Outcomes in PISA 2009

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The Relationship Between Reading Enjoyment, Gender, Socioeconomic Status, and Reading  
Outcomes in PISA 2009

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Presented to the Educational Foundations and Leadership Department and the George Fox  
University School of Education in partial fulfillment of the requirements for the Doctor of  
Education

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George Fox University  
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“THE RELATIONSHIP BETWEEN READING ENJOYMENT, GENDER, SOCIOECONOMIC STATUS, AND READING OUTCOMES IN PISA 2009,” a Doctoral research project prepared by LUKE NEFF in partial fulfillment of the requirements for the Doctor of Education degree in the Educational Foundations and Leadership Department.

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## ABSTRACT

Over the past few decades, the United States has seen a shift in classroom reading instruction away from time spent reading for pleasure and practices like Sustained Silent Reading. While researchers have found a few positive relationships between time spent reading for enjoyment and educational outcomes, these limited findings have been unsatisfactory in convincing organizations like the National Reading Panel of the efficacy of Reading Enjoyment Time. This study uses the The Programme for International Student Assessment (PISA) 2009 reading assessment and accompanying student questionnaires to determine the importance of Reading Enjoyment Time as a predictor of reading outcomes, especially as this variable relates to subpopulations that are typically lagging in literacy achievement. The 2009 PISA includes a sample of 5,233 fifteen and sixteen-year old students (2,687 male; 2,546 female) from across the United States, and this study examines the self-reported Reading Enjoyment Time of these students, comparing its predictive ability for reading scores to the predictive ability of gender and socioeconomic status. The study finds that all three variables — Reading Enjoyment Time, gender, and socioeconomic status — are statistically significant predictors of reading outcomes with socioeconomic status being the strongest predictor ( $\beta = 0.372$ ), followed by Reading Enjoyment Time ( $\beta = 0.226$ ), and then gender ( $\beta = -0.097$ ). The research suggests that Reading Enjoyment Time does lead to improved reading outcomes for students, as highlighted by the 50.84 difference in PISA reading scores that corresponds with a move from the category of no Reading Enjoyment Time to thirty minutes or less Reading Enjoyment Time. Implications and suggestions for further research are discussed.

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## **CHAPTER 1**

### **Introduction**

“.... as a nation, we have more readers who can read and don’t than we do readers who can’t read at all! Yet our focus as a nation remains almost exclusively on reading skills. The disconnect is frightening” (Layne, 2009, p. 8).

“...Shouldn't schools be the place where students interact with interesting books? Shouldn't the faculty have an ongoing laser-like commitment to put good books in our students' hands? Shouldn't this be a front-burner issue at all times?” (Gallagher, 2009, p. 30).

In my current role as an Instructional Technology Coordinator, I am well aware of the amount of funding that is being channeled away from traditional learning solutions (libraries, novel sets, textbooks, any kind of paper-based learning) and toward technology and digital solutions for education. Since my job is explicitly tied to the combination of teaching and technology, I should be quite supportive of this funding shift. While I do have high hopes that technology will enhance learning and help to close the literacy gap, especially for students who come from subpopulations whose literacy skills are typically lagging, I worry that this shift might be in the wrong direction. Some of this hesitancy stems from an unforgettable, revelatory classroom experience that happened a few years ago.

In the late spring of 2011, after a few years of teaching in private schools, I finished a Master of Arts in Teaching program and received my teaching license for the state of Oregon. I was hired soon after to teach seventh grade language arts, social studies, and reading. Language arts and social studies were easy for me, as I had taught these before and had a clear sense of what worked well in the classroom. Teaching a course explicitly about reading was more

difficult for me to conceptualize. I had not taught a course specifically focused on reading before, and I did not know what classroom practices had the best results. I imagined that I should pursue a teaching style that was similar to what I did with high school literature courses: have students read compelling stories written by great authors. I figured I should teach my students some reading strategies and how to annotate the texts, and after this I should have them discuss the stories, and finally, they should write about them. I started planning for this kind of instruction and began organizing my classroom — arranging desks and gathering texts — to support this style of teaching.

While I was working to get my classroom cleaned up and put together, I quite fortuitously crossed paths with a teacher who had extensive experience with teaching middle school reading. I asked her opinion about how to teach a middle school reading course, and she pulled a book off her shelf for me: *Igniting a Passion for Reading* by Steven Layne (2009). She told me I should read it, and suggested I try some of his methods instead of what I had in mind. I thanked her for the book and took it home with me. As I read the book that evening, I quickly realized that I had the wrong idea about what was important for a reading class and what kinds of learning activities our class should complete. I decided to organize my classroom time to focus on the principles and procedures that Layne outlines. Instead of spending class time trudging through the same text together and focusing on reading skills, I let my students read what they wanted to (within reason) for most of the class period. They were happy to do this, and I often joined them in reading the books they found interesting. We had conversations about books, rarely as a whole class, but individually and in small groups. I spent a good portion of my time running back and forth to the library, tracking down just the right book to entice some of my

more reluctant readers. Students seemed to enjoy this style of class, and I was enjoying sharing good books with them. But I did not know if it was working.

Fast forward a few months, to that aforementioned, most-singular, most-revelatory moment of my teaching career. It started the way that many teacher stories do, with the principal ducking into the classroom, holding a piece of paper, and asking if he could have a chat for a few moments. I acquiesced to his request, wondering what email from a parent was so troubling that he had decided to print it out for me. The paper was not from a parent. It was the results from the class's recent state tests in reading. The principal commended my class for their efforts and noted that compared to the rest of the reading classes at the school, my students were the clear outlier in the right direction.

How was this happening? My students came from the same kinds of homes, included the same gender mix, the same socioeconomic situations, and the same subpopulations, many of which are typically lagging in their reading skills. Additionally, the results seemed to hold for students of all kinds, even those representing these typically lagging subpopulations. Therefore it did not seem to be a fluke based on a unique batch of students who just happened to find their way into this particular class. This method of helping them to find books they liked reading and then giving them time in class to read those books seemed to be working. The trend continued for the rest of the year, and by the semester break, the principal had rearranged my schedule to free me up for a period to teach a reading intervention section. Again, I tried the same method: encourage students to read for enjoyment during class time. Again, it worked, as confirmed by their state reading scores.

I continued to try the same method throughout the next few years of my teaching. From those years, I had plenty of anecdotal evidence that the reading for enjoyment method was

working well. Students reported increased attention, vocabulary, and understanding. However, this was scant evidence, and could easily be explained away by other relevant factors. I wanted to know if these were isolated incidents, or if reading for enjoyment really worked.

I went to look at what was in the research. I found that a dedicated, vocal cadre of English teachers, education speakers, and classroom practitioners, like Gallagher (2009), Layne (2009), Kittle (2013), and Miller (2010), were popular on the conference circuit, campaigning for a shift to teaching reading for enjoyment and for schools to rededicate their funds and time to helping students learn to love reading. They seemed to base most of their argument on anecdotal evidence. I found a few older studies that provided some evidence, but the research was less robust than I had anticipated. They noted that a few researchers found some links between reading for enjoyment and positive educational outcomes. Elley (1991), for example, reported that reading achievement strongly correlated with time spent reading for students working on second language acquisition. Krashen (1993) reported that, "voluntary free reading" (FVR) was associated with a range of positive educational outcomes related to literacy, including text comprehension and vocabulary acquisition. Pilgreen and Krashen (1993) found that Sustained Silent Reading time was connected to both increased comprehension and increased reading enjoyment. Anderson, Wilson, and Fielding (1988) found that reading time outside of school was one of the best predictors of reading achievement for students. Mullis, Campbell, and Farstrup (1993) reported that fourth grade students who more frequently read for enjoyment scored higher on average on the same National Assessment of Educational Progress (NAEP) reading test than those who read for enjoyment less frequently. Fourth-grade students who rarely or never read for enjoyment scored lowest on average. While there seemed to be little research

later than the early 1990s, this extant research offered some hope for the success of reading for enjoyment programs.

While there are some positive relationships between reading enjoyment and educational outcomes, the challenge of closing the gaps in literacy is formidable, as there are significant gaps to close between those who are achieving in the realm of literacy and those who are not. Both gender and socioeconomic status present significant gaps for students to overcome. The gender gap in literacy is well documented. In both the expressive (writing) and the receptive (reading) forms of literacy, girls do better than boys, markedly better, and this is happening everywhere on the planet. The 2009 Program for International Student Assessment (PISA) found that girls' reading scores were notably higher than boys in every country studied (OECD, 2010). The 2009 PISA also found that the international gender gap in reading skills has widened appreciably – by more than one-fifth – between 2000 and 2009 (OECD, 2010). In the United States, the situation is quite similar. The National Assessment of Educational Progress (NAEP) data from 2007 revealed a nearly twenty-point spread between females and males in literacy performance at the end of middle school and the end of high school. The gender gap in literacy skills is a worldwide phenomenon, affecting students from every country from which there is substantial data (OECD, 2010). The international gender gap in literacy is widening quickly and in no country is the gap shrinking (OECD, 2010). Most often, the gap is growing most, not because of increasing female scores, but because of decreasing literacy scores from boys (OECD, 2010). This is a bleak situation, and unfortunately, the overall, worldwide picture of the gender gap in literacy is even bleaker when noting that PISA is tracking only the data on reading, not writing.

The literacy gap is especially bleak for students who grow up in high-poverty situations. As Goldenberg (2001) reports, students from high-poverty schools are much more likely to

experience reading difficulties. Buckingham, Wheldall, and Beaman-Wheldall (2013) explained that children from lower income backgrounds are more likely to experience factors that negatively influence literacy, and they are also more susceptible to these factors. Chall, Jacobs, and Baldwin (2009) note that in second and third grade, children in poverty score similarly on reading assessments to the overall population, but around fourth grade, those scores start to diverge and by middle school, the literacy gap between students who come from impoverished communities and those who do not is markedly pronounced. Hernandez (2011) notes that childhood poverty is associated with high school dropout rates and lower literacy skills, and the rates are worse for students who are in poverty for over half of their childhood. The International Reading Association reports that while the racial gap has closed slightly in recent years, the socioeconomic gap increased and continues to increase (2014). Economic hardship and aliteracy are not completely synonymous and many inspiring stories involve students who grow up in poverty yet find their way to financial and professional success through a love of reading. Are these stories isolated incidents or perhaps mere coincidence? Or can reading for enjoyment serve as a useful educational practice and help close the achievement gap for students from lower income backgrounds?

I want to know whether reading for enjoyment offers a viable solution to closing these achievement gaps. Is reading for enjoyment a strong predictor of academic success? And if so, is it a strong predictor for students who are in the typically lagging gender and socioeconomic status subpopulations for literacy? In pursuit of understanding this better, I turned to one of the best sources in the world for comparative educational data, The Programme for International Student Assessment (PISA). Every three years, the OECD (Organisation for Economic Co-operation and Development) has its 34 member countries select a sample of fifteen-year old (or



early sixteen-year old students; all are fifteen or in their first few months of being sixteen, so the shorthand term used in PISA reporting is “fifteen-year old”) students who are then given a test that measures their academic achievement, specifically looking at how prepared they are to fit into society and life beyond high school. The two-hour test focuses on the core subjects of reading, math, and science. In 2009, the questionnaire that accompanied the PISA tests specifically focused on students' attitudes and experiences with reading. One of the survey items (question 27), asked students to identify how much time they spend reading for enjoyment. While this question does not differentiate between in-class and out-of-class reading for enjoyment, I am curious to know if this survey item can provide evidence toward the effectiveness of Reading Enjoyment Time. Is there a relationship between how students report their Reading Enjoyment Time and how they performed on the PISA reading test? If there is a relationship, does the same kind of relationship hold true for those in subpopulations that typically lag in reading skills? Which is the strongest predictor of reading ability, a student's gender, socioeconomic status, or how much time they spend reading?

### **Statement of the Problem**

This study examines the relationship between Reading Enjoyment Time, gender, socioeconomic status, and reading scores for fifteen-year old students in the United States. Specifically, I will utilize the PISA 2009 dataset to investigate the relationship between students' self-reported Reading Enjoyment Time and the students' associated reading score. Additionally, the data will be disaggregated by gender and socioeconomic status, which is measured by a scaled index score for their economic, social, and cultural status. The objective is to determine if

Reading Enjoyment Time is a significant predictor of PISA outcomes and if Reading Enjoyment Time is a better predictor of reading success than gender or socioeconomic status.

### **Research Questions**

In pursuit of fulfilling this objective and finding potential answers to this problem, I have formulated four research questions that allow for quantifiable answers, which can be analyzed for significance.

#### **Research Question #1**

For students in the United States taking the PISA in 2009, is there a relationship between reading enjoyment and reading outcomes as measured by PISA results?

#### **Research Question #2**

For students in the United States taking the PISA in 2009, is there a relationship between gender and Reading Enjoyment Time?

#### **Research Question #3**

For students in the United States taking the PISA in 2009, is there a relationship between socioeconomic status and Reading Enjoyment Time?

#### **Research Question #4**

For students in the United States taking the PISA in 2009, are gender, socioeconomic status, and Reading Enjoyment Time significant predictors of reading scores, and, if so, which is the most significant predictor?

### **Key Terms**

*Gender Gap in Literacy:* This refers to the pronounced achievement gap between boys and girl in reading skills. The gender gap in literacy has been reported in every country that PISA examines.

*PISA:* The Programme for International Student Assessment (PISA) is an assessment that measures the reading, math, and science literacy of fifteen-year-old students from 75 countries (as of the 2009 assessment) from around the world. The assessment is given every three years since 2000. In 2009, the assessment's accompanying student questionnaire focused on the reading literacy of PISA assessment takers. A "representative sample" of over 5000 students from the United States participated in the 2009 PISA assessment, and it is their reading skills and habits that are the focus of this research.

*Reading Enjoyment Time:* This refers to the time that a student spends voluntarily reading a book or other text of his or her own choosing. PISA does not carefully define this term, and for the "reading enjoyment time" category it simply asks respondents to answer the question, "About how much time do you usually spend reading for enjoyment?" Beyond the PISA questionnaire item, there are a number of terms that are nearly synonymous with "reading enjoyment time," including "voluntary reading" and "recreational reading" and "independent reading." The term "Sustained Silent Reading" is sometimes used interchangeably, but in actuality this term refers to a slightly different practice that sometimes involves students being forced to read books they did not choose, and so for the purposes of this study, the terms will not be used interchangeably. The term will be referenced frequently though, as Sustained Silent Reading appears frequently in the literature about reading enjoyment.

*Socioeconomic Gap in Literacy:* This refers to the pronounced achievement gap in reading skills between students who live in high poverty situations and those who do not. For

PISA, this socioeconomic status is determined by a scaled index score compiled from a number of survey items that ask the students questions related to their economic, social, and cultural status.

## **Limitations**

The possibility of bias on the part of the researcher should be addressed, and I will readily acknowledge that I do love reading books and think that my own time spent reading for enjoyment has benefitted me immensely. I also was surprised by how effective scaffolding and providing time for reading enjoyment was for my students, and I found this to be a positive teaching practice in my classroom.

There are a few limitations that are inherent to using an existing data set like the PISA 2009 data. For example, there are no rich-text, qualitative responses to supplement the survey questions or test scores. There is no chance to follow up any potential findings with questions about how students determined which books to read or how they acquired copies of those books. There is no way to further examine what they counted as Reading Enjoyment Time. Did they get time in class for this, or was all of this time taken at home? Was there a large variance in the way that students chose to answer that question? On the subject of gender, how many students felt uncomfortable with the binary categories of male and female to which PISA restricts respondents? The PISA questionnaire item number four, asks only, “Are you female or male?” and allows for no further clarification or alternative options. How many would have chosen to self-identify their gender in other ways? These are questions, which there are not answers to, and there is no way to investigate these questions further with the same participants.

While using any extant dataset has downsides, using the PISA dataset in particular comes with some unique limitations. For example, since PISA is so well known, it has a number of vocal critics who point out a number of potential biases and flaws in both the test design and implementation. The PISA test has been accused of everything from a lack of transparency to culturally biased questions (Stewart, 2013). Others critique the narrow range of material that PISA assesses, noting that much of what students learn in schools is not assessed (Mortimore, 2009). Critics also allege that PISA results oversimplify complex educational realities (Stewart, 2013). Despite these critiques, PISA still maintains its status as the leading international student assessment.

### **Delimitations**

While there are downsides to using the PISA data, there are also some benefits. I chose PISA because I think it is one of the most important education data sets that we have. Based on the frequency of mentions in the popular press, it seems that overall PISA and its findings are taken seriously. I could have re-created a similar study in a local school, but by using PISA, I am able to examine a much larger sample and the findings are easier to generalize. I believe that the influence that comes from PISA data seems to outweigh any potential downsides. The dataset does include many questions and carefully selected items that provide detailed information about the background and context of each student, including indicators of their socioeconomic status and their attitude toward reading, both of which are important variables to consider for this particular line of inquiry. I should acknowledge that the PISA 2009 data set is not the latest PISA data available, but it is the latest set of reading-focused PISA data. There will not be another reading-specific PISA assessment until 2018. Additionally, while data is available for

the 74 other countries that participated in the 2009 PISA, I chose to focus solely on the data from the United States, but should any potential findings be significant, the dataset can be examined beyond the United States to compare the findings to other countries as well.

## **Summary**

In an education landscape dominated by No Child Left Behind (NCLB) legislation that ties results on state tests to funding, school districts must carefully analyze the effect of funding on educational outcomes. Should there be a shift in funding away from libraries and books and toward technology? Would a shift of this kind be based in research or driven by the influence of the advertisements of Silicon Valley? The educational agendas in many districts are shifting funds away from libraries and books and into one-to-one device implementation, but should it be this way? The purpose of this study is to examine the potential importance of Reading Enjoyment Time, especially the relationship between Reading Enjoyment Time and reading outcomes on the 2009 PISA. The study will examine Reading Enjoyment Time as a potential predictor of reading scores, and the data will be disaggregated by gender and socioeconomic indicators to determine if Reading Enjoyment Time is a significant predictor of reading success for students who represent these subpopulations that typically fall behind on reading measures.

## CHAPTER 2

### Review of the Literature

#### Introduction

This section contains a review of the research about reading for enjoyment, as well as the research surrounding the gender and socioeconomic gaps in reading skills. I begin this section with a brief history of what is sometimes termed “the Reading Wars,” and then I relate how these polemical historical developments connect to the issue of Reading Enjoyment Time. I then turn my focus to what is known about the gender gap in reading skills. After that, I shift to examining the literature about the socioeconomic gap in reading skills. Finally, I review the literature about reading enjoyment and its effects on reading outcomes. Additionally, I note some gaps in the research and potential opportunities for further research.

#### History

Over forty years ago, Hunt (1967) introduced a concept, students reading on their own for a period of time while at school, that he thought needed a catchy title. He chose “USSR,” which was short for Uninterrupted Sustained Silent Reading. He was careful to note that “USSR” did *not* stand for the Union of Soviet Socialist Republics; he even included that information in his article in capital letters to make sure that no one missed this significant detail. Despite his careful clarification, the politics of the next decade forced a change and the “U” in USSR was dropped to create the nomenclature that is popular today: SSR or Sustained Silent Reading. This term has become closely associated with the educational practice of giving students time to read for their own enjoyment, but this is not the only term associated with this practice of offering students time to read for enjoyment. One of the more prominent proponents of Reading

Enjoyment Time, Krashen, terms it “free voluntary reading” (1993); while others simply refer to it as “independent reading” or “recreational reading.” Other practitioners have tried to come up with catchy titles that are more socially acceptable than Hunt’s politically unsuitable term. These terms include everything from the popular DEAR (Drop Everything and Read; Gardner, 2003) to the absurd, as in WEIRD (We Enjoy Independent Reading Daily; Jacobs and Farrell, 2012) or SQUIRT (Sustained Quiet Uninterrupted Individual Reading Time; Wray, 2012). Whatever terminology is used, Reading Enjoyment Time has been promoted as a classroom practice since at least the late 1960s, and over these decades, it grew from a little known practice to widespread popularity in the 1990s to its more recent out-of-fashion, marginal status.

A mountain metaphor may be useful in explaining the pedagogical popularity of Reading Enjoyment Time in the classrooms of the United States. The mountain starts at the bottom, its least popular point, mainly because up until the 1960s the practice has little support in the literature. Even if free reading time was not being offered to students during the time of Dick-and-Jane style texts of the 1930s and 1940s, researchers and teachers were concerned with the reading habits and kinds of books that students were reading. Center and Persons (1936) surveyed 46,000 New York public school students and found that "they read a great deal" (p. 719), although much of it was what they termed "light fiction," a reality that greatly concerned the researchers who noted, "there is little to develop judgment, discrimination and critical faculties" (p. 726). They also worried about students lack of aesthetic taste and "matters of the spirit" in their choice of reading materials since *The Call of the Wild* was very popular while Shakespeare was not. Over the next few decades, others continued to sound the alarm about the declining reading habits and lagging reading skills of the nation’s youth, with a prominent



critique coming from Flesch (1955). During this period, extended time for students to read texts of their choice was an uncommon practice.

The first advocate of (Uninterrupted) Sustained Silent Reading (Hunt, 1967) made the case for Reading Enjoyment Time against the backdrop of the rise of teacher-directed phonics instruction in the 1960s. With a shift to “whole language” instruction in the 1980s and 1990s (Goodman, 1986), giving students time to read in class became increasingly popular, especially in response to substantial warnings about the ill-effects of aliteracy like Boorstin's (1984) report about a nation of declining readers. Moore, Jones, and Miller (1980) recapped the research on Sustained Silent Reading up to the beginning of the 1980s, noting that the general consensus of its first decade was that Sustained Silent Reading improved both students reading attitude and reading abilities. They recommended combining Sustained Silent Reading with a program of instruction. They also commented on the inconsistency in implementation and amount of time, which clouds the available data and makes drawing firm conclusions an impossibility.

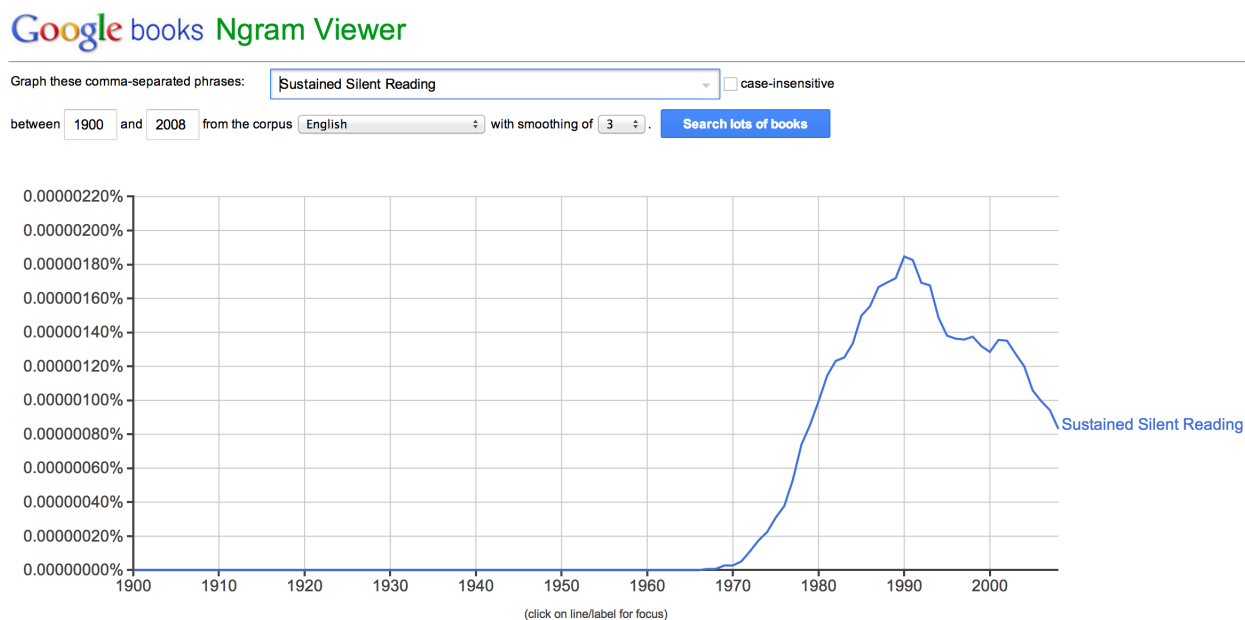


Figure 1. Google Books Ngram Viewer for “Sustained Silent Reading.”

*Figure 1* shows the first instance of the term “Sustained Silent Reading” in 1967 and its rise to popularity in 1990 and its drop in popularity since then. As the graph reveals, 1990 was the peak of references to Sustained Silent Reading in published texts. Soon after 1990, the number of references in the literature began to drop off, right around the time that Mullis, Campbell, Farstrup (1993) sounded the alarm that reading instruction was not working. They pointed out that 43% of United States fourth graders were "functionally illiterate." This did not mean they could not read at all, but that they were quite limited in their ability to do more than sound out words. With the research from The National Reading Panel (NRP) and the passing of No Child Left Behind in 2001, a shift toward teacher-directed phonics instruction was well underway. This shift, based on the research of the National Reading Panel, was an explicit move away from the whole language practices of previous decades, which were more supportive of allowing students dedicated time for reading books of choice. In recent years, the educational conversation has shifted away from No Child Left Behind and toward the rise of the Common Core State Standards Initiative. This shift presents new challenges and opportunities for reading instruction. Krashen (2013), for one, is less than optimistic about the direction that these latest movements, especially the escalating emphasis on Common Core, are taking reading instruction.

If this was a children’s tale and Reading Enjoyment Time was cast as the hero of the story, then the National Reading Panel would be the villain. Many reading scholars and researchers did view the National Reading Panel as near-villains, and the backlash against the NRP’s national policy for teaching reading was almost immediate, with Krashen, Garan, Taylor, and Allington being the most prominent detractors. Allington (2002) organized a scathing response to the National Reading Panel's report, accusing the NRP of acting like “Big Brother”

and being driven by ideology instead of a proper consideration of the research. The thirteen essays that comprise the Allington-organized response (2002) range in subject matter from critiques of the National Reading Panel's methodology (Garan and Krashen) to a conception of how policy makers and teachers might collaborate better in the future (Toll). Krashen (2001, 2005) offered scathing critiques of the National Reading Panel's report, denying the legitimacy of its findings. Additionally, numerous practitioners including Gardiner (2005), Atwell (2007), Gallagher (2009), Layne (2009), Miller (2010), and Kittle (2013), have added their voices and writings in support of Reading Enjoyment Time and Sustained Silent Reading, even after the National Reading Panel published their negative take on the practice.

How did the National Reading Panel conduct their research? And do the extensive critiques of the NRP's detractors have any legitimacy? The National Reading Panel's research group started with over 40,000 potential articles that referenced the topic of Reading Enjoyment Time. From there, they narrowed it down to only fourteen studies that they deemed to be acceptable for their standards (Cunningham, 2001). These standards excluded studies that did not have an experimental design, as well as any studies that determined that better readers do more reading, which the panel already took to be true. The majority of the studies that were included examined the possible correlation between Sustained Silent Reading and reading outcomes. The panel notes that a careful examination of the methodology of many of the studies reveals that the timeframe for student reading time was quite limited, to the extent that there would not likely be enough time allotted for meaningful change to occur. Despite this disclaimer about the research, the National Reading Panel still concluded that Reading Enjoyment Time was ineffective. Interestingly, a different group reporting on the same research, the Literacy Research Panel of the International Reading Association, concluded that not enough research existed to

draw meaningful conclusions about Reading Enjoyment Time. Concurrently, Krashen, Allington, Pearson (2004) and others pointed out numerous studies beyond the fourteen studies referenced by the NRP, that were missed or deemed to be unusable. They noted studies of extensive classroom observations, like Cambourne (1988), and other non-quantitative research methods that supported whole language methods. In pointing out these studies, Allington, Pearson and others critiqued the overly-stringent criteria for selection of the research that the NRP used.

Pearson (2004) goes beyond critiquing the NRP's methods and offers a broader critique, arguing that the swing in educational practice from whole language and constructivist approaches in the 1980s and 1990s to explicit skills instruction at the start of the new century was closely tied to political maneuverings. Pearson is not shy to point out the failures of whole language instruction and the failure of many practitioners to carefully augment and support whole language text immersion with explicit instruction on necessary concepts. He notes that this failure opened whole language curriculum up to the critiques of policy makers in the late 1990s (p. 8). Pearson explains that this trend, when coupled with the changing research practices of the mid-90s that valued quantitative research methods over ethnographic studies, led to a new instructional focus on phonics and phonemic awareness at the early stages of reading (p. 9-10). Pearson summarizes Allington's (2002) stance on the political machinations at play, noting that a conservative movement to "skill the kids and deskill the teachers" was the true cause of the policy shift, not viable research (p. 13). The good news that Pearson found was that while policy makers and politicians engaged in divisive discourse, teachers who were highly regarded found a more balanced way to move forward (p. 14). Ultimately, Pearson finds that the "Achilles' heel" of whole language practices like Reading Enjoyment Time has been the lack of

measurable, externally-validated outcomes, and he suggests better data collection and research to drive future policy decisions.

The last forty years of reading instruction have seen a massive pendulum shift, first toward Reading Enjoyment Time in the classroom, and now decidedly away from it. A resurgence in favor of Reading Enjoyment Time at school, primarily led by practitioners, has been the very latest trend. Meanwhile, others are calling for a “blended learning” approach to reading instruction that attempts to combine the reading instruction practices of a broader range of researchers who have been in disagreement over the correct model for reading instruction. Perhaps these recent trends will combine to provide the hoped for synthesis that often results from the coming together of conflicting viewpoints. This is important work, especially in light of the extent of the existing gender and socioeconomic gaps in literacy. The stakes are high, and more evidence is needed to further refine the policies that become the realities in the classroom for our nation’s students.

### **An Introduction to the Gender Literacy Gap**

As previously noted, the gender gap in literacy is prominent, with females scoring higher on comparative tests around the world (OECD, 2010). Recent research has pointed to the widening of the gap, instead of the closing of that gap (OECD, 2010), and the National Assessment of Educational Progress report, which often is called the country’s “report card,” notes that the gap is prominent both at the end of middle school and the end of high school (NAEP, 2007). The OECD also reports that much of this can be attributed not to increased female scores, but rather to decreasing male scores (2010). What can be done about this? What

are the root causes of the gender gap in literacy? And would increasing Reading Enjoyment Time for male students be a helpful solution?

### **Developmental Factors Influencing the Gender Gap in Literacy**

Tracing the causes and roots of the gender gap in literacy can quickly devolve into a debate between the classic binary of nature and nurture. The terms most frequently employed distinguish between “sex,” which is used as the term most-commonly referring to the biological aspects distinguishing male and female, and “gender,” the term used to refer to the cultural constructions that have created the roles of male and female, which have inherent performative aspects. Some critiques of the terms are worthy of consideration, especially considering that binary distinctions of “sex” are overly simplistic, leaving out those whose sex has aspects of both male and female biology (Stockard & Johnson, 1992). The terminology of “gender” is complicated as well, presenting yet again an overly simplistic binary that fails to fully describe the many ways of being human in relation to gender (Delamont & Marshall, 2007). When exploring the causality of the gender gap, in regards to the influence of nature and nurture, it is clearly not an “either / or” situation but rather a “both / and.” The interplay of sex and gender are dually causative, and much has been written to attempt to parse out their respective causal influences (Delamont & Marshall, 2007). Ultimately, very few statements about literacy performance can be directly and solely attributed to either of the distinguishing terms of sex or gender.

In the nature category, there are certainly developmental factors based on biological differences that affect the literacy capacities of boys, especially relative to girls. A host of neurological limitations and factors limiting boys’ collective literacy capabilities have been

known and quantified for at least the last fifty years (Harding, 1962; Iacoboni, 2003). Some of these differences are present even before birth, manifesting in different average sizes and thicknesses of brain regions between sexes (Howard, 2000; Kimura & Hanson, 1990). The female brain has a thicker corpus callosum, which connects the brain hemispheres, a factor in literacy ability (Moir & Jessel, 2001; Iacoboni, 2003). These average brain differences may provide some explanation as to the earliest disparities in literacy ability between males and females, typically seen in the frequent reporting of higher female success at the receptive form of literacy as early as the end of the first year of school experience (Soderman, Chhikara, Hsiu-Ching, & Kuo, 1999). These brain differences have been linked to boys' comparatively-lower introspective capacities, an ability closely associated with the most frequently taught and tested forms of literacy (Kolić-Vehove & Bajšanski, 2010; Rowe & Rowe, 2002). Beyond these initial differences in brain region size, neuroscientists have repeatedly found that brain growth for females happens faster and finishes earlier than for males (Halpern, 1989). These initial differences in brain region size when combined with comparatively-accelerated female brain growth, certainly contribute to the comparatively lower male literacy scores.

Because of the interplay of societal factors with these known developmental realities, tracing causation of literacy deficiencies is difficult. Also, some researchers debate the practical implications for the classroom of this kind of research, noting that even the best brain research has yet to justify specific instructional methods for males (Halpern, 1989). This is an important consideration that requires careful thinking and a nuanced understanding of not just neuroscience but also best practices in teaching.

## **Societal Factors Influencing the Gender Gap in Literacy**

Despite definite biological factors at play, these hardwired differences cannot account for all the differences between male and females when it comes to literacy. Biological differences are compounded by a host of cultural factors that influence the disparity between male and female literacy success in the classroom. Many scholars and theorists have pointed out the preponderance of overly-simplistic gender binaries and essentialist narratives that are perpetuated both in and out of the education system. This “gender straight-jacketing” is effectively prescribing certain performative roles to gender and literacy, namely that literacy is more closely associated with being female, an idea which is identified even in the first year of schooling (Pollack, 1999; Rowan, 2002; Francis & Skelton 2005). The effects of socially-constructed notions about literacy (that literacy-related activities are supposedly more closely linked to females) appear crucial in opportunities for boys to self-report their understanding of how reading and writing should be associated with gender (Luke, 1994; Clay, 2011). These self-reported beliefs about gender have been examined, and popular conceptions of masculinity as related to literacy have been identified as factors in boys’ relative lack of literacy success (Martino, 2001). These tropes, dominant in much of society, of literacy being associated with females may also explain boys self-sabotaging or self-handicapping in literacy-related situations (Martin, 2003).

Societal notions of gender and literacy, specifically gender stereotyping, while detrimental to both males and females, seem to particularly limit male engagement with literacy activities. This gender stereotyping has been widely reported to numerous detrimental effects on students’ overall education achievement and specific, literacy performance (Pollack, 1999; Skelton, 2002). While impressive literacy development can be achieved in spite of this,



especially through the quality of the teacher and the instruction (Rowe & Rowe, 2002), many teachers still promote gender stereotypes about literacy, perpetuating societal understandings of literacy as being more associated with the female gender (Henderson, 2008). While biological differences are certainly a factor, the reinforcement, in and out of the classroom, of gender stereotypes compounds and complicates the situation.

While causation of boys' literacy woes is fairly murky, it is apparent that the overlap of biological and societal factors account for numerous, polyvalent sources of potential literacy struggles in young males. Any research that relies too heavily on either a biological explanation or a sociological explanation of the gender gap neglects important and substantial influencing factors on boys' literacy abilities. It is interesting that some researchers do still attempt to dictate classroom policies on the basis of either biology or sociology alone.

### **Strategies for Addressing the Gender Gap in Literacy Performance**

Numerous researchers, educators, and theorists have used their ideas to attempt to narrow the gender gap in literacy, and a number of strategies have been implemented in the quest to boost male literacy performance. A veritable plethora of curriculum changes, including the inclusion of video games and comic books, have been implemented in an attempt to promote literacy-engagement through male-friendly content. These studies have reported anecdotal success but lack the quantitative results for wider application (Gee, 2003; Hong, 2005; Blair & Sandford, 2004). Curriculum changes to focus on supposed male-friendly learning strategies, most commonly and specifically, a focus on active literacy, have produced successful results, but some questions remain about the feasibility of broader application and the reproducibility of the circumstances of these studies (Brozo, 2010; Alloway, 2002). For example, some practitioners

espouse a theory that revolves around offering boys opportunities to engage whatever it is that interests them, even if it is strange or violent. Their research supports this freedom of topic selection as a means of boosting male literacy engagement (Shaughness, 2006). Others support a specific kind of boy-friendly topic selection that focuses on questions of system building (Baron-Cohen, 2003). Other researchers have examined this problem and found that the kinds of reading that males typically enjoy are not acceptable for school settings. Love and Hamston (2003) found, like many other researchers, that teenage boys value non-traditional and non-print forms of reading material, and educators should respond to this situation by integrating more of these appealing-to-males texts into the classroom. Another advocate for expanding the definition of what kinds of texts should be considered part of the curriculum, Barrs (2000) chose to focus particularly on the kinds of texts and writing that are favored by boys, explaining that teachers should take steps toward including more texts that are desired by males. Lu and Gordon (2007) found that a web-based summer reading program did not motivate boys who were already struggling with reading. These studies, while anecdotally successful, lack the clarity of quantifiable and reproducible results that account for more than a novelty effect.

Another potential solutions that some researchers have focused on is the possibility of single-sex classrooms for combating deficiencies in or gaps in scores along gender lines, both for males and females. Focusing specifically on single-sex classrooms for males, and teacher changes to provide a male teacher for male students, one finds many proponents on both sides of the debate, but few unquestionably positive results (Lahelma, 2002). No studies of single sex classrooms that apply the most rigorous of scientific standards have had proven results that justify the cultural stereotyping inherent in single-sex education (Halpern, 1989; Clay, 2011). Many have raised concerns over the supposed sexism inherent in this situation, noting

education's role in socially constructing gender, by having all male or single-gender classrooms, asserting that education should work to actively resist gender heteronormativity (Francis & Skelton, 2005). Single-gender classrooms for male students have had some documented instances of positive effects on test scores, but questions of sexism seem to offset the gains (Rowan, Knobel, Bigum, & Lankshear, 2002). Francis and Skelton (2005) make a strong case for schools that rather than separating students by sex, instead work to minimize gender differences, not playing to supposed gender differences by changing curriculum or classroom settings, as the most successful at boosting male literacy achievement. This line of thinking is echoed in those who promote a complex understanding of culture and masculinity as the key to moving male literacy achievement forward (Sun, Zhang, & Scardamalia, 2010).

When it comes to reading for enjoyment time, Greaney and Hegarty (1987) examined a number of factors influencing the reading enjoyment time of fifth grade students in Ireland. They found that gender correlated significantly with leisure time reading, and that females had a much more positive view on reading than their male counterparts. While their methodology allowed for little more than identification of significant variables, they found that when controlling for sex, another variable, motivation, was a stronger predictor of reading enjoyment (Greaney & Hegarty, 1987). Greaney (1980) found a wide variety, ranging from none to over an hour, in amount of reading time for students and attributed most of the variance to gender, along with a few other variables including reading achievement and birth order. Love and Hamston (2003) found that boys are much less likely than girls to spend time reading for enjoyment, especially as they enter into their teenage years. While there are hints in the literature that increasing Reading Enjoyment Time may be a solution, there seems to be a lack of solid, quantified evidence to support this claim.

## **An Introduction to the Socioeconomic Literacy Gap**

Much like the gender gap, the socioeconomic gap in literacy between those who grow up in poverty situations and those who do not has increased in recent years according to Literacy Research Panel (International Reading Association, 2014). While the increase is new, the problem has been well known and examined, and there is an established consensus that students who grow up in lower socioeconomic conditions are at a much greater risk for experiencing reading difficulties (Goldenberg, 2001; Chall, Jacobs, & Baldwin, 2009). These lowered reading outcomes correlate with increased high school dropout rates (Hernandez, 2011) and other potentially detrimental outcomes. Interestingly, early indicators of literacy convey similar achievement among students from all socioeconomic backgrounds, but around the middle school years, a pronounced split along socioeconomic lines is revealed in reading assessments (Chall, Jacobs, and Baldwin, 2009). How does this happen? What factors are contributing to this socioeconomic gap in reading skills, and what can be done about it? Would spending classroom time on reading for enjoyment be a useful practice to implement?

## **School-Related Factors Influencing the Socioeconomic Literacy Gap**

How much of the blame can be placed on the education system for failing to educate students from lower socioeconomic backgrounds? Shannon (1998) examines the ideological assumptions at play in education and notes that reading tests and instruction often contain cultural components that discriminate against students who are not from the dominant culture. His writings and others have raised questions about the role of school in the trajectory of the lives of students from lower socioeconomic status backgrounds, yet Alexander and Entwistle

(1996) found that the Baltimore public schools were a net positive in the lives of its students, despite surface indicators that suggested otherwise. They also claim that the achievement gap, at least for elementary students, is explained almost entirely by the gains made by students from higher socioeconomic backgrounds over the summer, a time when students from lower socioeconomic situations make little comparative growth (p. 84). Schools that only measure achievement gains annually may not accurately capture a significant factor in reading growth: the effect of summer break, an effect that negatively correlates with socioeconomic status. Similarly, Alexander and Entwisle (2001) found that the break from school over the summer months accounts for much of the disparity in reading development along socioeconomic lines.

Allington and McGill-Franzen (2003) also make a strong and similar case for rethinking the role of schools in the socioeconomic literacy gap. They note that students' reading skills regress over the summer and that students from lower socioeconomic backgrounds make similar gains to students from higher socioeconomic backgrounds. They identify the achievement gap as forming during the summer and concurrently note that school success corresponds with leisure reading, something that students from lower socioeconomic backgrounds struggle with due to lack of access among other issues. In response to this, Kim (2006) studied the effect of mailing books to students over their summer term, finding that students from at-risk subpopulations benefitted the most from this program, an indicator that reading for enjoyment might be beneficial to students from lower socioeconomic backgrounds, especially during the summer break. If students from lower socioeconomic backgrounds are making similar gains to everyone else while in school, what else is going on that might be influencing their reading skills?

### **Non-School-Related Factors Influencing the Socioeconomic Literacy Gap**

Many researchers have examined the conditions and variables beyond school that contribute to the decreased literacy skills of children from lower socioeconomic backgrounds. They have found that children who grow up in lower socioeconomic conditions are not only exposed to more factors negatively correlated with literacy, but they are also more vulnerable to these variables (Buckingham, Wheldall, & Beaman-Wheldall, 2013). Examining the literacy gap from a social constructivist perspective, Au (1998) noted the prevalence of several key factors, including lack of access to texts, that may overly-determine the literacy outcomes of students from diverse backgrounds. Similarly, Singham (2005) observes the numerous complexities involved with identifying the causes of the achievement gap yet echoing what others have said about educational factors only being a small part of the equation. If educational factors are only a small part of the equation that explains the socioeconomic gap in literacy, what other, non-school factors should be considered and which are most closely tied to literacy skills?

While Singham is right to note the complexity involved in trying to identify the significant variables, a number of detrimental environmental factors have been identified that affect students from lower socioeconomic backgrounds. For example, Kumanyika and Grier (2006) report that compared to children from middle-income families, children in poverty watch more television and have fewer books at home. Buckingham, Wheldall, and Beaman-Wheldall (2013) trace an accumulation of factors that explain why children from lower socioeconomic backgrounds struggle disproportionately with basic literacy skills. They explain that not only does the family's socioeconomic status matter, but also the average socioeconomic status of the school matters in a statistically significant way. Interestingly, they recommend that students have the opportunity to read books independently in addition to a solid basis in phonics instruction. Neuman (1986) documented that when socioeconomic status is controlled for, a child's reading

attitude is correlated to their parent's encouragement of reading. Neuman and Celano (2001) studied four different neighborhoods and their access to literacy-promoting texts. They found that children who grow up in middle-income neighborhoods have much better access to literacy-promoting texts, while students who grow up in low-income situations have to rely on schools and libraries for access to literacy-promoting texts, since they often did not have access to these at home. Students from lower socioeconomic backgrounds may be uninterested in this though, since many NCLB reading programs are culturally biased and based on the “social construction of privilege” according to Shannon (1998). Along the same lines, some believe that political structures, when compared to reading instruction, vastly overdetermine life outcomes, and literacy educators who would like to make a difference in changing poverty situations should work to change the political system (Edmondson & Shannon, 1998). Regardless of potential bias and political structures, it is clear that poverty experiences for youth, while varying by ethnicity, have long-lasting effects, especially on reading (Lee, 2009). When it comes to possible influences on learning outcomes for students from lower socioeconomic backgrounds, lack of access to reading materials and more time in front of the television are just a few of the more prominent, readily identifiable variables amongst a host of complex societal situations.

### **Strategies for Addressing the Socioeconomic Gap in Literacy Performance**

What strategies have researchers and practitioners advocated for offsetting this host of detrimental factors? Many researchers noted the importance of early intervention for lagging readers from lower socioeconomic backgrounds. Some researchers hone in on the importance of fourth grade (Chall, Jacobs, Baldwin, and Chall, 1990) while others note the importance of reading skills for elementary students from lower socioeconomic backgrounds, focusing

primarily on the importance of the third-grade year (Hernandez, 2011). Walberg and Tsai (1983) researched the importance of early intervention and reported on "Matthew Effects" in education, based on the NAEP science knowledge test. Their regression analysis focused on early educational experiences and found that those early education experiences predicted future educational outcomes. Stanovich (1986) researched this rich-getting-richer phenomenon for reading ability, finding that children who exhibit certain reading abilities earlier, especially around third grade, read more and read better later on in school. In response to this assertion, numerous researchers have further examined the "Matthew Effect" and found little evidence for it (Scarborough, 2000, Aarnouste and van Leeuwe, 2000, Thompson, 2003). Bast and Reitsma (1998) found that the Matthew Effect exists for only certain reading measures, particularly word recognition, and the Matthew Effect was not observed for other reading measures like comprehension. Even if the Matthew Effect is questionable, the importance of early intervention for lagging reading skills was a commonly held belief.

Beyond early intervention, other researchers found helpful solutions that made positive changes in the lives of struggling readers from lower socioeconomic backgrounds. Some suggest that specific cognitive processes need to be explicitly taught to students from poverty backgrounds and certain reading interventions have been documented to have more success (Price, 2010). Higher-order thinking and "cognitive engagement" in reading instruction are recommended for children in poverty (Taylor, Pearson, Peterson, & Rodriguez, 2003). Barone (2006) takes a narrative approach to understanding the literacy gap. In tracing the accounts of sixteen students, she echoes what many others researchers also note: students excel under the teaching of a highly-qualified reading teacher. She advocates for explicit phonics instruction at



younger ages, but takes a more balanced approach to whole language options for secondary students.

A few others join Barone in promoting Reading Enjoyment Time strategies for students from lower socioeconomic backgrounds. Taylor and Dorsey-Gaines (1988) found that homes and schools should offer literacy-rich environments for students in high-poverty situations. Gerstl-Pepin & Woodside-Jiron (2005) reported that schools should not totally ignore the “scientific” approach of NCLB, but they should still work to support emotional connections to reading in the pursuit of building a love for reading. Taylor, Pearson, Clark, and Walpole (2000) examined the most effective low-income schools and found that independent reading time was a significant variable related to quality teachers. If quality teachers of low income schools are promoting independent reading, is it having a beneficial outcome? What might happen for students from lower socioeconomic backgrounds who are in these teachers classrooms and have class time to read for enjoyment? This question lacks a clear answer in the extant research and could benefit from robust, experimental, quantitative research.

### **Introduction to Reading Enjoyment Time**

Reading Enjoyment Time is a term derived from the PISA 2009 questionnaire, which asked a series of question attempting to identify the practice of students having time to read a book of their choice. Another frequently used term is “Independent Reading,” which often includes some assistance from teachers but still allows the student to choose his or her own reading material. “Recreational Reading” is less common, but still widely known. This term seems to have more of a connotation of reading for relaxation or pure enjoyment, compared to “Independent Reading” which may require a specific topic or genre of reading material. Perhaps

the most frequently used term is “Sustained Silent Reading,” which refers to a designated portion of class time in which students are required to read silently, often from a book of their choosing but not always. While other terms are sometimes used, these are the most common. “Reading Enjoyment Time” serves as functional umbrella term for these similar sets of practices. Many who publish on these topics seem primarily concerned with this question: how much is Reading Enjoyment Time connected to reading outcomes? Other questions are also common including questions about motivation and in what ways Reading Enjoyment Time is connected to certain kinds of student motivation? More recently, researchers responding to the National Reading Panel have asked the more basic question: should students be given time in class to read for enjoyment?

### **Motivation for Reading Enjoyment Time**

What motivates students to read on their own for enjoyment? Many researchers point to the work of Deci (1975) on the importance of intrinsic motivation. The general theory of Deci, that intrinsic motivation is essential, was confirmed by Becker, McElvany, and Kortenbruck (2010) who found that very good readers and very poor readers did not differ in extrinsic reading motivation, but they did differ significantly in their intrinsic motivation to read. Wigfield and Guthrie (1997) found that intrinsic motivation was a better predictor of reading enjoyment amount. Wang and Guthrie (2004) also examined students’ intrinsic and extrinsic motivation for reading and found that students with intrinsic motivation had positive correlations with Reading Enjoyment Time while those with more self-reported extrinsic motivation were negatively correlated with Reading Enjoyment Time. Student choice of reading material was also closely linked to intrinsic motivation, and Chua (2008), while the effects of Sustained Silent Reading

over multiple months, found that students who are allowed to choose what they want to read are more likely to be engaged and motivated.

### **Patterns and Predictors of Reading Enjoyment Time**

A handful of researchers have dedicated their studies to examining the Reading Enjoyment Time habits of students. Cox and Guthrie (2001) found that among a host of variables, motivation was the best predictor of Reading Enjoyment Time. Cullinan (2000) recapped the literature at the end of last century, noting that reading achievement and time spent reading were closely related, yet many surveys reported declining reading habits as students progressed through school. Anderson, Wilson, and Fielding (1988) found that Reading Enjoyment Time decreases as students age. They also calculated the amount of time that children spend reading for enjoyment outside of school at less than two percent of their available free time. Clearly figuring out what motivates students to read would be helpful, but unfortunately the research seems unclear on this matter.

Other researchers have made a point of noting the inherent difficulties in accurately capturing the reading habits of school-aged children, noting that schools often force an overly narrow definition of acceptable texts onto students. For example, Hughes-Hassell and Rode (2007) surveyed urban adolescents about their reading for enjoyment habits and found that students enjoyed reading certain kinds of materials like magazines and comic books and yet their reading scores remained low. The researchers questioned the accuracy of the students' survey results and wondered whether certain kinds of reading materials that involve less cognitive engagement actually correlated with higher literacy achievement. Alvermann (2001) believes that many students who struggle with school literacy and who are labeled "reluctant readers" still

enjoy a robust literacy that exists beyond the walls of the classroom, and she advocates for schools to intentionally shape educational practices to assist these emerging school-literacies and to redefine what counts as reading to include more forms of text that students enjoy outside of the classroom. Alvermann and Moore (1991) explain how teachers often control the text choices of students and thereby define for students what kinds of texts are acceptable and many of these texts operated at the level of content-driven factual evidence, a level that did not fully engage students. Alvermann (2002) continues to make the case for expanding the definition of literacy to various forms of texts from a wide variety of cultural backgrounds. One wonders what expanding this definition of acceptable texts might do to the in-school reading habits of students.

### **Correlational Studies of Reading Enjoyment Time**

Beyond simply examining the reading habits of students, many researchers have attempted to identify correlational relationships between Reading Enjoyment Time and various reading achievement outcomes. Some of the studies are problematic in their methodology, which calls into question the validity of their results, a phenomenon that the National Reading Panel's *Reading First* research highlighted. For example, Davis (1988) studied eighth graders, examining the correlation between Sustained Silent Reading and reading comprehension. The NRP labeled his study's research methods as "sketchy" due to a lack of key statistical analyses. Similarly, Cline and Kretke (1980) put together a multi-year study to track the effects of Sustained Silent Reading, but the research design was weak and not focused on achievement gains. The measures for achievement gains that they did use were deemed unreliable by the National Reading Panel. While they did not report how long students read for, Langford and Allen (1983) noted that Sustained Silent Reading (or USSR, since they used the older

terminology) produced significant reading results for students in the experimental group. Other studies were smaller in scope but produced positive evidence that voluntary reading is connected to achievement (Eiley, 1991; Eiley, 1992). Between small sample sizes and questionable methods, the National Reading Panel was right to question the extant research.

The argument against Reading Enjoyment Time does not stop at questionable studies as some researchers have found less than positive results for Reading Enjoyment Time. For example, Reutzel and Hollingsworth (1991) who studied Sustained Silent Reading in the fourth grade, did not find significant differences in their reading outcomes. Similarly, Summers and McClelland (1982) compared students who had daily Sustained Silent Reading time with students who did not and found that those who had daily Sustained Silent Reading performed better on reading comprehension tests, but the results were not significant.

To make the case for Reading Enjoyment Time, there are studies that are more robust and have produced positive correlational evidence, like Lee (2014), who found that reading enjoyment was the single greatest predictor of reading achievement for both Eastern and Western high-achieving countries. While Lee's study positively identified Reading Enjoyment Time as the leading predictor of reading achievement, the methodology focused on examining a range of variables with little further research into the causes and implications of reading enjoyment time, especially as it relates to various subpopulations. Similar to Lee's study, Taylor, Frye, and Maruyama (1990) found that there is a relationship between reading time outside of school and in-school reading outcomes for fifth and sixth graders, yet a strange choice in methodology — the students took a different reading test before the study (the SRA Achievement Series) than they took after the study (the Gates-MacGinitie Reading Test) — means that questions about the relationship between reading enjoyment time and reading outcomes remained unclarified. These

studies – the questionable, the small, the negative, the positive – when taken in sum, offer mixed results on the correlational relationship between Reading Enjoyment Time and reading achievement.

It should be noted that reading outcomes were not the only subject of these correlational studies. Pilgreen and Krashen (1993) found that students who participated in a Sustained Silent Reading program kept reading more even after the program had finished. Morrow (2003) notes that readers who are read to as children have more propensity for independent Reading Enjoyment Time later in life, which is associated with a number of benefits including emotional maturity and school achievement. Another researcher, Gambrell (1996) noted the importance of generating student interest in reading, as intrinsic motivation is linked to increased Reading Enjoyment Time.

### **Adolescent Reading Instruction, Motivation, and Enjoyment**

As previously noted, reading outcomes as related to reading time have been studied at many levels, from Kindergarten through secondary, yet much of the research seems to be focused on the reading instruction of younger students. While many researchers focus their research on the early education years in hopes of preventing illiteracy, some researchers note that successful reading interventions can still be implemented in adolescence for struggling readers (Scammacca, Roberts, Vaughn, Edmonds, Wexler, Reutebuch & Torgesen, 2007). For adolescents, the shift that has taken place, from learning to read to reading to learn, raises the stakes on the importance of a successful literacy education. While there is some overlap between the “ Essential Components of Reading” for younger and older readers, this shift toward reading to learn changes the focus for the “Essential Components of Reading” away from phonics and

phonemic awareness and toward word studies and motivation (Boardman, Roberts, Vaughn, Wexler, Murray & Kosanovich, 2008). A few of these “Essential Components of Reading” for older students allow for and even encourage reading enjoyment to be part of the instruction. For example, one research group provides directions for research-based instruction on fluency that recommends teachers have students, “Select passages—that students are interested in reading—at their independent or instructional reading level” (Boardman, et al, 2008). Of all the recommended instructional components for older readers, the inclusion of motivation as an essential component has provided cause for a number of researchers to investigate the relationship between Reading Enjoyment Time and reading motivation for adolescents.

A variety of approaches have been utilized to investigate the relationships between reading motivation, time spent reading, and reading skills. Morgan and Fuchs (2007), for example, assessed fifteen studies and found that a bidirectional relationship exists between reading motivation and reading skills, indicating that increased motivation connects to both increased reading time and reading skills. Noting the literacy gap that exists for adolescent males, Bozack and Salvaggio (2013) studied the relationship between reading motivation and academic achievement for adolescent males, finding that achievement results were linked with reading motivation, which were in turn linked with high school achievement. The connection for adolescents between motivation and increased reading enjoyment time also correlates with increased use of helpful reading strategies (Guthrie & Wigfield, 2000). The flip side of this argument is covered by Jacobs (2008), who notes the potentially detrimental effect on student reading motivation that comes from required low-interest texts in content area subjects in high school classrooms. Despite these potential turn-offs, one study (Hassell & Rodge, 2011) of urban adolescents found that nearly two-thirds of students read for enjoyment, but the research

also revealed that Reading Enjoyment Time was reported much less frequently during summer vacation, a critical time for reading skills as many regress over this period. One study of adolescent reading motivation was particularly interesting in its approach and findings (Ivey, 1999). This study followed three adolescent readers for five months, collecting a wide range of data, both qualitative and quantitative, which was used to conclude that the three students who were studied could not be accurately placed in the typical binary categories of either skilled or unskilled, motivated or unmotivated. This study serves as a useful reminder to other researchers of both the complexities of reading and the complexities of human beings, highlighting the shortcomings of any categorical placements and concurrent statistical analysis of readers, reading skills, and motivation.

### **The Pedagogy of Reading Enjoyment Time**

Despite some mixed results from Reading Enjoyment Time studies, practitioners have continued to try to refine the best approaches and pedagogical methods for including Reading Enjoyment Time in the classroom. Most prominently, Pilgreen (2000) released *The SSR Handbook*, a guide to implementing a Sustained Silent Reading program in school, which offers numerous strategies and structures for implementing SSR. From Pilgreen and others, there seems to be consensus among pedagogical experts about the importance of teacher-guided reading time. Mooney (1990) advocated for a practice called guided reading, which allows the reading experience to be more child directed than the teacher-driven. Allington (2006) notes that the most important factor for boosting reading achievement comes from interaction with a highly-qualified teacher, not reading time alone. Topping, Samuels, and Paul (2007) found that quantity alone was not enough and that quality instruction also mattered, pointing to the



importance of a skilled teacher in each classroom to guide independent reading time.

Interestingly, The International Reading Association (2000) in their position statement on what made an excellent teacher of reading, did not mention facilitating Reading Enjoyment Time, a notable absence. Instead they focused on small group instruction and independent skills practice.

To improve reading attitudes, Alvermann (2002) recommended establishing a set time for reading for pleasure. Gardiner (2001) advocated for educators to see a ten-minute session of silent reading as being beneficial to a students education, not a subtraction from their education. Fielding, Wilson, and Anderson (1986) recommend that students get at least one hour of independent Reading Enjoyment Time every week. Graves, Juel, and Graves (2004) explain the differences between different forms of Reading Enjoyment Time, categorizing Sustained Silent Reading as the easiest to implement, followed by reader response and workshop approaches. Atwell (1987) and Rief (1992) advocate for a text-rich workshop-driven classroom experience for students that centers on a variety of texts, student choice, and independent reading and writing time. Reutzel, Fawson and Smith (2008) have more recently advocated for what they term "Scaffolded Silent Sustained Reading." Their publication provides guidance to teachers and offers structures to frame the Sustained Silent Reading process.

The question of structure -- how much or how little -- comes up frequently among those attempting to provide guidance to those implementing Reading Enjoyment Time in the classroom. Smith (1985) critiqued the overly-rigid, systematic approach to teaching reading, in favor a more holistic and humanizing approach that valued Reading Enjoyment Time coupled with phonics strategies. Luke and Freebody (1990) introduced the Four Resources Model as a response and compromise between the various factions involved in reading research who advocated for varying amounts of structure for the reading process.

Researchers have also studied how many and what kinds of books should be made available to students for Reading Enjoyment Time. A “book flood” approach has been tried with mixed results (Elley and Mangubhai, 1981), and sociological factors were a major influence on the success of the program (Ingham, 1982). Pearson and Johnson (1978) developed a taxonomy for reading comprehension that called for instruction that incorporated reading enjoyment and avoided using texts that were separated from their embedded context. Goldman and Lu (2008) investigated the situation of reading low achievers and found that those who claim to hate reading often enjoy non-traditional texts and need practitioners to help them bridge the gap from these forms of literacy to literacies valued at school.

## **Conclusion**

In reviewing the current landscape of research into the causes and potential fixes for the gender and socioeconomic gap in literacy, one finds that while much has been tried, little has been found that simply and clearly works. In particular, Reading Enjoyment Time as a solution is controversial at best. Indeed, the rift between the theoretical positions of those who have thought deeply about these issues and those whose books and advice have made their way into the classroom is astounding. Beyond this, or perhaps because of this, much that is taken by many teachers as common knowledge (examples: that boys and girls learn differently or that Sustained Silent Reading has been proven to be bad pedagogy) is false, or misleading at best. While theoretically-sound positions on the gender and socioeconomic gap have been articulated by a host of academics, the most promising and theoretically sound ideas have yet to find footholds in classrooms, likely due to a lack of clarifying research. Clearly there is a problem, but advancing with caution seems to be the *modus operandi* of those who actually hold the most

nuanced and thoughtful positions on the issues. Plotting out strategic routes through the tangle of complexities is serious work, which reveals many questions that need answering.

Which factors are most significant and should be the primary focus of future researchers? While gender is a significant factor in predicting literacy achievement, a student's socioeconomic status is the most prominent indicator of literacy achievement (Collins, Kenway, & McLeod, 2000). When the confluence of gender and socioeconomic status meet in a male from a poverty background, low literacy performance is likely (Collins et al, 2000). Other factors including (dis)ability, race, ethnicity, and sexuality also serve as indicators of likely literacy performance. While the gender and socioeconomic gaps are substantial, a review of the literature on literacy achievement would be remiss not to mention the number of factors, racial disparities in particular, that come together in various combinations to influence students' literacy achievement. Any research into the gaps in literacy achievement must also deal with the confluence of these potential factors, a task fraught with complexity and difficulty. Even a phrase like "gender gap in literacy" is inherently problematic due to the potentially-misguiding term "gender," and the breadth of what may or may not be considered "literacy." These are the difficult realities of researching and addressing the various gaps in literacy achievement. Despite these difficulties, numerous organizations, individuals, and researchers are actively pursuing possible strategic remedies for low literacy scores.

One potential solution, increasing Reading Enjoyment Time, has its advocates, but lacks a clear foundation in reliable research. Much work still needs to be done to delineate and quantify the potential effects of Reading Enjoyment Time on reading outcomes. There is a definite lack of research into Reading Enjoyment Time that avoids anecdotal-only evidence and potential sample bias. Once these criteria are met, the study must then present reproducible

results. Research is needed that combines solid methodology with a focus beyond a qualitative study of a single classroom. These few recommendations are just drops in the bucket, perhaps even drops in the ocean, of all the possibilities for future research related to the literacy gap and Reading Enjoyment Time.

## **CHAPTER 3**

### **Methods**

#### **Introduction**

Reflecting on my experience with reading for enjoyment and how well it worked for my students made me hopeful that Reading Enjoyment Time would be a strong predictor of reading outcomes, especially for students who come from subpopulations that typically exhibit a gap in reading achievement. As someone who is now in an educational technology role, I think there are some large, important, policy and funding questions at stake. If giving my students time to read high-interest books has worked so well, why does it seem that the preponderance of educational resources are being dedicated to technology instead of getting students to love reading? Should schools be shifting funding from supporting libraries and purchasing high-interest books to funding one-to-one devices for students, as many seem to be doing? This study attempted to find answers to these questions by determining the importance of reading for enjoyment by examining the relationship between reading for enjoyment, gender, and socioeconomic status, for reading scores on the 2009 PISA. It was hypothesized that each of these variables would be a significant predictor of reading scores, with Reading Enjoyment Time being the best comparative predictor of reading outcomes. The study attempted to determine if Reading Enjoyment Time would be a better predictor of reading outcomes than socioeconomic status or gender by disaggregating the Reading Enjoyment Time data by these subpopulations.

#### **Nature of the Data**

The Programme for International Student Assessment (PISA) was first given in 2000 and has been given every three years since then. The assessment is given worldwide to fifteen-year

old (or sometimes early sixteen-year old) students and measures student skills in three subject areas, math, science, and reading. Each time the PISA is administered, a focus subject area is determined and in addition to the test, a 30-minute questionnaire examines student behaviors, attitudes, and practices in more depth for that subject area. In 2009, reading literacy was the focus area that received a more in-depth examination on the student questionnaire. In 2009, 5,233 students from 165 schools (both public and private) in the United States took the PISA and filled out the questionnaire that examined reading literacy attitudes, contexts, and strategies. The sample population for this study is, therefore, these 5,233 students from the United States who took the PISA in 2009.

These 5,233 participants were determined by the PISA consortium to be a “nationally representative sample.” According to Fleischman, Hopstock, Pelczar, and Shelley (2010), to achieve the "nationally representative sample," each country involved submits a "sampling frame to the consortium of organizations" who run PISA. This "stratified systematic sample" should ensure that the chosen schools and the selected participants within the school are representative of the country's population (Fleischman, Hopstock, Pelczar, & Shelley, 2010, p. 61), but as with any sampling effort there is always a margin of uncertainty in the resulting data due to the possibility of sampling variance. Despite efforts by OECD to achieve a representative sample, some scholars have raised questions about the representativeness of the schools chosen, as well as the students selected from within these schools (Prais, 2003). For the United States sample, 236 public schools and private schools from each of the four geographical regions (Northeast, Central, West, Southeast) were selected. Of these 236 schools, 145 schools consented to PISA testing. This met the minimum requirement of 65% school participation that was established by PISA. An additional twenty “replacement” schools also participated, bringing the total number

of participating US schools to 165 (Fleischman, Hopstock, Pelczar, & Shelley, 2010). From these schools, a representative sample of 6,677 fifteen-year-old students was selected. Some students were allowed to be excluded from the sample if they had functional or intellectual disabilities that did not allow them to “perform in the PISA testing environment” (Fleischman, Hopstock, Pelczar, & Shelley, 2010). Also, students with limited language proficiency were also allowed to be excluded. These exclusions had to be under five percent of the PISA-selected sample (Fleischman, Hopstock, Pelczar, & Shelley, 2010). The 5,233 United States PISA participants exceeded the PISA-designated minimum necessary response rate.

To check the validity of the sample from the United States, The PISA Consortium completed a nonresponse bias analysis and found only one significant difference between the schools that participated and those that did not. The difference that they found was in the percentage of students who qualified for free and reduced lunch, an indicator of socioeconomic status. They found that the selected schools actually had a higher percentage of students who qualified for free and reduced lunch (Fleischman, Hopstock, Pelczar, & Shelley, 2010) than the full sample of schools. This variable, as argued by Carnoy and Rothstein (2013) indicates a possible sampling error. Carnoy and Rothstein explain that the overrepresentation of this variable indicates that United States policymakers should approach policy decisions based on PISA data with caution.

These 5,233 students took the PISA test and accompanying questionnaire between September and November 2009. On the two-hour paper test, these students scored on average a 500 on the 1000-point scale. PISA does standardize the scores, so that the average overall is 500 with a standard deviation of 100. This result for United States students was only slightly higher than the average score (493) for the 32 Organisation for Economic Co-operation and

Development (OECD) countries (Fleischman, Hopstock, Pelczar, & Shelley, 2010). The test results can be further broken down by subtests, as the PISA 2009 assessed students literacy skills in mathematics, science, and reading. On these subtests, the United States ranked from thirty-first in mathematics, to twenty-third in science, to seventeenth in reading.

With a focus on reading literacy for the 2009 PISA, the OECD Consortium carefully defined what exactly they wanted to assess on the reading literacy test: “Reading literacy is understanding, using, reflecting on and engaging with written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society” (OECD 2009, p. 23). The last phrase hints at the fact that the PISA reading test is designed to assess the ability of students to take their classroom learning and reading skills and apply these to settings beyond the classroom and that could be described as “real world” experiences (Fleischman, Hopstock, Pelczar, & Shelley, 2010). The typical PISA reading test assessment item includes a selection from a piece of prose text followed by a series of questions about the text. The reading literacy test is comprised of three categories, termed “literacy subscales.” The focus of each of these three subscales is reflect and evaluate, access and retrieve, and integrate and interpret. PISA 2009 reports an overall score on the reading literacy assessment, and also reports a score for each of these literacy subscales. Disaggregating the scores of participants from the United States by these subcategories reveals that US participants scored higher than average on the “reflect and evaluate” category and about average on the other two categories (Fleischman, Hopstock, Pelczar, & Shelley, 2010).

From the accompanying questionnaire, more can be understood about these students, their home life, education, and attitudes toward schools. Through the accompanying questionnaire, students self-reported on a number of items, like parents' education and



occupation the possession of different items at home, and attitudes about reading and school.

While this self-reporting can be unreliable, the large sample size offers some assurance of statistical reliability. Of the 5,233 United States PISA participants, 51.3% were male (n=2,687) and 48.7% were female (n=2,546). Out of all the students, 92.6% were born in the United States, and 7.4% were born in a different country. Eighty-seven percent of the students spoke English at home, and 13% did not. The survey reports that 89.9% of the participating students had a computer at home and 89.2% had access to the internet at home. Additionally, 87% of the students had a room of their own. Ten percent of them strongly agreed that reading is a waste of time, while 74% disagree or strongly disagreed with the idea that reading is a waste of time. Ninety-one and a half percent of these students disagreed or strongly disagreed with the idea that school is a waste of time. These statistics represent only a portion of the available descriptive data for PISA 2009 students; the full quantity of available information extends further into these and other similar topics.

## **Variables**

Four primary variables were chosen for investigating the potential influence of Reading Enjoyment Time as disaggregated by gender and socioeconomic status.

*Reading Enjoyment Time:* The first and most obvious variable is “Reading Enjoyment Time.” This is the variable that served as the datapoint for determining the students’ enjoyment of reading. This question (ST23Q01, in the PISA code book) instructed students to indicate how much time they spent reading for enjoyment. Their answers fell on an ordinal scale (1–5) and corresponded with the following categories: 1 = I don’t read for enjoyment, 2 = 30 minutes or less a day, 3 = Between 30 and 60 minutes, 4 = 1 to 2 hours a day, 5 = More than 2 hours a day.

The average score was a 2.06, but it is important to remember that Reading Enjoyment Time scores are ordinal and reported on a scale from 1 to 5, so a jump between scores, depending on where they are in the scale, does not represent the exact same amount of time. It should be noted that 54 students did not respond to this questionnaire item and have been removed from the analysis.

*Gender:* The next variable is gender, which is labeled as “sex” in the PISA data (Sex: 1 = Female and 2 = Male). As previously noted, this variable did not allow for any variance from these choices.

*Socioeconomic Status:* The next variable of interest is socioeconomic status, for which the economic, social and cultural status index score (ESCS) will be used. This variable was calculated from an assortment of answers to the accompanying questionnaire. The items that were selected for inclusion all included some indicator of the socioeconomic status of the participant’s family and were weighted by the extent to which they represented socioeconomic status. These variables included parents’ occupation and education, as well as whether or not the student possessed a number of items, like a room of their own and computer. The index variable is continuously scaled and the average score was .149 with a range of -3.42 to 2.89. An index score of zero means that student comes from an average socioeconomic background. A one-point difference represents a difference of one standard-deviation from the average distribution. A student with a score of negative 1.0 would be more advantaged than only one out of six students. A student with a positive 1.0 score would be more socioeconomically advantaged than five out of six students. Of the more than 5000 students who participated, 43 are missing data from the ESCS category due to unanswered survey items and were removed from the analysis.

*Reading Scores:* The next chosen variable is the outcome variable, their reading scores, labeled as "Reading." The possible range for a student's reading scores was 0 - 1000, with an actual range from 156.4 as a low, and 772.5 as a high. The average score was 497.6. This score represents the student's relative ability to reflect on and evaluate the importance of reading materials, access and retrieve key information from a text, and integrate and interpret a variety of texts.

### **Descriptive Statistics**

These variables were analyzed for statistical relationships and predictive abilities. Table 1 shows the descriptive statistics for these variables.

Table 1

#### *Descriptive Statistics for Chosen Variables*

<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>Score Range</b>
Socioeconomic Status	0.15	0.92	-.342 - 2.89
Reading Score	497.60	95.60	156.4 - 772.5
Reading Enjoyment Time	2.06	1.17	1 - 5

*Note.* Based on PISA 2009 data.

Of particular interest is the mean score for Reading Enjoyment Time. A score of 2.06 indicates that on average, students are spending around 30 minutes a day reading for pleasure. This is actually a higher score than anticipated, especially after considering a number of doom and

gloom reports during the literature review phase about the state of the reading attitude amongst today's youth. It is a hopeful indicator that students are spending time reading for enjoyment.

### **Analytical Procedures**

This study is designed to be a comparative quantitative study, and four variables have been selected to answer four research questions. The first research question that was identified is, "For students in the United States taking the PISA in 2009, is there a relationship between reading enjoyment and reading outcomes as measured by PISA results?" To answer this question, the ordinal, independent variable Reading Enjoyment Time and the continuous, dependent reading score variable were analyzed using the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test. This test is recommended for ordinal, categorical variables like Reading Enjoyment Time that have a limited number of possible ordinal values and nonparametric results (Vargha & Delaney, 1998; Chan & Walmsley, 1997). The next question identified is, "For students in the United States taking the PISA in 2009, is there a relationship between gender and Reading Enjoyment Time?" This was analyzed using Spearman's rank order correlation due to the nonparametric nature of the Reading Enjoyment Time variable. Since the next question – "For students in the United States taking the PISA in 2009, is there a relationship between socioeconomic status and Reading Enjoyment Time?" – again contains the Reading Enjoyment Time variable, this was again analyzed using the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test. Finally, the last question reads, "For students in the United States taking the PISA in 2009, are gender, socioeconomic status, and Reading Enjoyment Time significant predictors of reading scores, if so, which is the most significant predictor?" For this question, a

stepwise multiple regression analysis was conducted. These analytic approaches are in line with other similar studies (Lee, 2014; Wei, Lu, Zhao, Chen, Dong, & Zhou, 2012).

### **Research Ethics**

Since the dataset being used has already been collected and is publicly available, there are no known research ethics issue. In addition, the dataset contains no personal data that could be used to identify individual students. Approval by the Institutional Review Board (IRB) was not required for this study.

### **Role of the Researcher**

I conducted this research as a doctoral student at George Fox University. Professionally, this work is important to me since I have a role in my district in promoting good instruction. I also have a role in making decisions around technology funding, so having the facts about which methods for reading outcomes are most effective is important and meaningful to me. I want to know if Reading Enjoyment Time is a significant factor in closing the literacy gap, especially for the students in our district who come from a typically lagging subpopulation.

### **Potential Contributions of the Research**

This research could help to pinpoint an answer to the question of how to focus reading instruction practices in the classroom. Since the late 1990s, schools have drifted away from Sustained Silent Reading and supporting choice reading time for students. Does the PISA 2009 support these choices? Or do the multiple voices insisting that schools re-asses their priorities and shift time and resources to supporting reading enjoyment have it right? What is the

relationship between Reading Enjoyment Time and PISA reading results? If there is a strong, positive result, is the relationship similar for key subpopulations? If it proves to be so, this research could be instrumental in reestablishing Reading Enjoyment Time in schools and shifting funding back into libraries and purchasing high-interest books for students. As a teacher who loves technology, I am very susceptible to being swept up in the furor over technology-based solutions for education, but I must intentionally confront that mindset and examine the facts. These facts are potentially embedded in the PISA 2009 results.

## **CHAPTER 4**

### **Findings**

This chapter includes the findings of the quantitative analyses of the four research questions. I utilized the standard threshold of less than 0.05 for determinations of statistical significance. The hypothesis of this study is that Reading Enjoyment Time is a significant variable in predicting reading outcomes, not just for the whole population, but also for socioeconomic and gender subpopulations. When comparing predictors of reading outcomes, it is hypothesized that all three variables significantly relate to reading outcomes and that Reading Enjoyment Time is a better predictor than gender and socioeconomic status.

### **Research Questions**

With the intention of discovering meaningful insight into Reading Enjoyment Time as a predictor of educational outcomes, especially for certain subpopulations, I analyzed the United States 2009 PISA dataset, using four research questions:

#### **Research Question #1**

For students in the United States taking the PISA in 2009, is there a relationship between reading enjoyment and reading outcomes as measured by PISA results?

#### **Research Question #2**

For students in the United States taking the PISA in 2009, is there a relationship between gender and Reading Enjoyment Time?

#### **Research Question #3**

For students in the United States taking the PISA in 2009, is there a relationship between socioeconomic status and Reading Enjoyment Time?

### **Research Question #4**

For students in the United States taking the PISA in 2009, are gender, socioeconomic status, and Reading Enjoyment Time significant predictors of reading scores, and, if so, which is the most significant predictor?

### **Analysis**

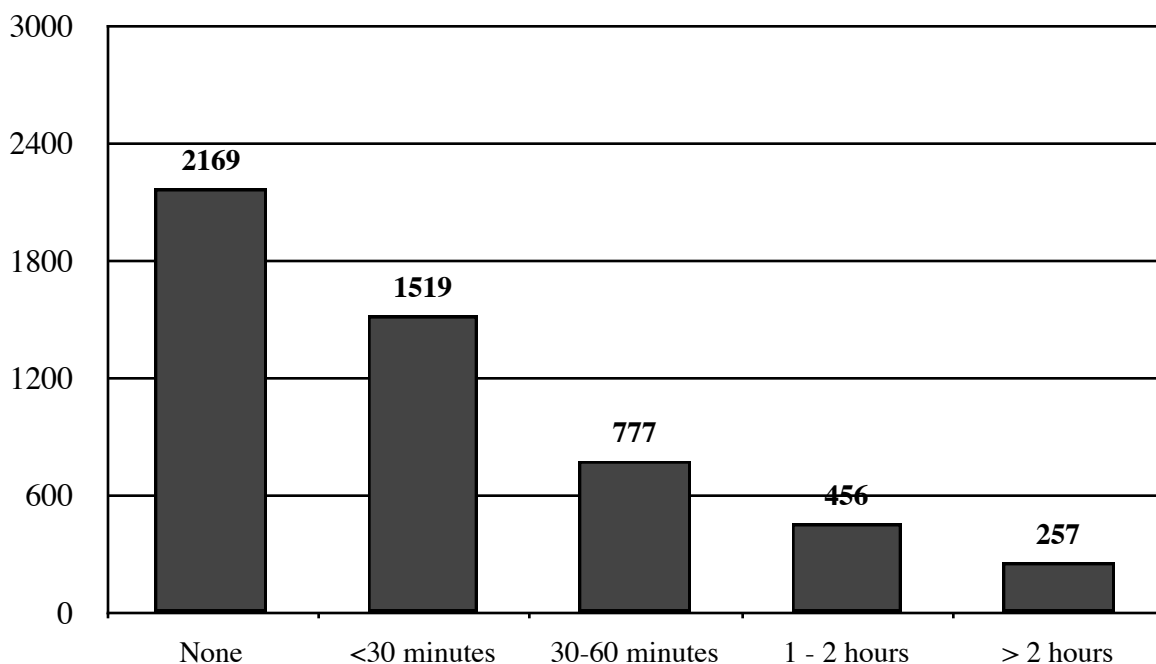
To analyze these four questions, I considered a few options and ultimately selected the following statistical methods: the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test for questions one and three, a T-test for question two, and a stepwise multiple regression analysis for question four.

### **Results for Research Question One**

For students in the United States taking the PISA in 2009, is there a relationship between reading enjoyment time and reading outcomes as measured by PISA results? To analyze this question and the relationship between reading enjoyment time and reading outcomes, I utilized the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test. As hypothesized, the test revealed statistically significant findings for this question. To explain this findings and analysis, it is important to remember the categorical nature of the Reading Enjoyment Time variable, which necessitated the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test. For Reading Enjoyment Time, the 5,233 respondents self-reported their reading time as categorized by five options: none, thirty minutes or less, between thirty and sixty minutes, from one to two hours, or greater than two hours of reading enjoyment time every day. The breakdown of



students responses into these five categories is shown in *Figure 2*. The average of the scores was a 2.06 with a standard deviation of 1.168.



*Figure 2. Number of Reading Enjoyment Time Respondents By Category*

Their response on the Reading Enjoyment Time item was then compared by each category to their reading score on the 2009 PISA using the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test. Reading scores were reported on a scale from zero to 1000, with an N of 5,233, and a mean score of 497.59. The standard deviation on this item was 95.60. In Table 2, descriptive statistics for the two variables are compared.

Table 2

*Descriptive Statistics for Question One Variables*

<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>Score Range</b>
Reading Score	497.59	95.59	156.38 - 772.46
Reading Enjoyment Time	2.06	1.17	1-5

*Note.* Based on PISA 2009 data.

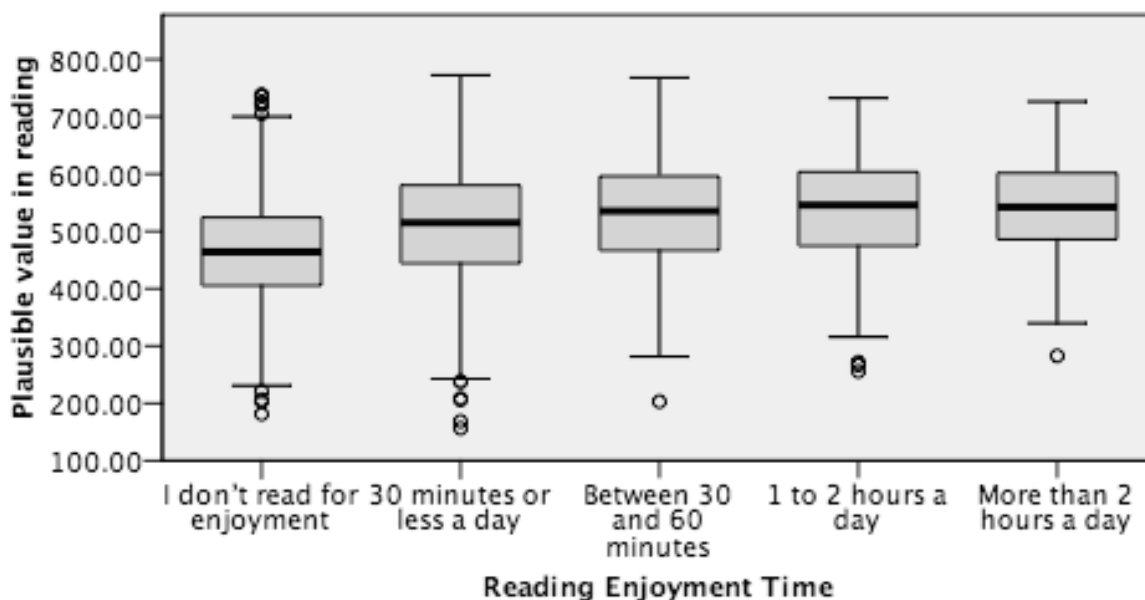
Comparing Reading Enjoyment Time to PISA reading scores using the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test revealed a significant relationship between the variables —  $X^2(4, N=5,178) = 516.7, p < .001$  — which leads to a rejection of the null hypothesis that the distribution of the plausible values in reading scores are the same across categories of Reading Enjoyment Time. Table 3 shows the mean and mean rank reading scores by category for Reading Enjoyment Time, and Figure 3 reveals the boxplot graph for reading scores distributed by Reading Enjoyment Time categories.

Table 3

*Mean and Mean Rank Reading Scores by Category for Reading Enjoyment Time*

<b>Category</b>	<b>N</b>	<b>Mean Score</b>	<b>Mean Rank Score</b>
I don't read for enjoyment	2169	464.15	2061.02
30 minutes or less a day	1519	514.99	2,785.63
Between 30 and 60 minutes	777	535.17	3,093.15
1 to 2 hours a day	257	545.71	3,210.36
More than 2 hours a day	456	542.32	3,266.17

*Note.* Based on PISA 2009 data.



*Figure 3. Distribution of Reading Scores Across Reading Enjoyment Time Groups*

While the Kruskal-Wallis analysis reveals that a significant relationship exists across the categories, a series of followup Mann-Whitney  $U$  tests comparing pairwise relationships between each of the categories was necessary to reveal which scores in which categories had a significant relationship with which other categories. Of the ten possible combinations, significant results were found for seven of the ten pairwise comparisons. These results are shown in Table 4, and they suggest that there was a significant difference in PISA reading scores across Reading Enjoyment Time categories with only three of the categories not showing statistically significant differences, all of which were among the highest reading time groups.

Table 4

*Pairwise Comparisons of Statistical Significance for Reading Enjoyment Time by Reading Scores*

<b>Category</b>	<b>I don't read for enjoyment</b>	<b>30 minutes or less a day</b>	<b>Between 30 and 60 minutes</b>	<b>1 to 2 hours a day</b>	<b>More than 2 hours a day</b>
I don't read for enjoyment	n/a	<.001*	<.001*	<.001*	<.001*
30 minutes or less a day	<.001*	n/a	0.004*	<.001*	<.001*
Between 30 and 60 minutes	<.001*	0.004*	n/a	0.037*	1.00
1 to 2 hours a day	<.001*	<.001*	0.037*	n/a	1.00
More than 2 hours a day	<.001*	<.001*	1.00	1.00	n/a

*Note.* \* $p < .05$ . Based on PISA 2009 data.

The results of this question will be further discussed for implications in chapter five.

## **Results for Research Question Two**

For students in the United States taking the PISA in 2009, is there a relationship between gender and Reading Enjoyment Time? The question aims to explore the idea of whether or not males and females spend similar amounts of time reading for enjoyment. The two variables were both self-reported on the student questionnaire that accompanied the PISA 2009 test. The Reading Enjoyment Time variable was described in the previous question. The gender variable scores are within the expected range with a mean score for this item at 1.51 and a standard deviation of .500. To find out if there was a significant relationship between these variables, a Spearman's rank correlation test was used, and as hypothesized, there was a significant difference between the Reading Enjoyment Time of males and the Reading Enjoyment Time of females,  $r_s = -.258$ ,  $p < .001$ . These results suggest that males and females differ significantly in the amount of time that they spend reading for enjoyment, with females averaging a higher Reading

Enjoyment Time score on average. The results of this question will be further discussed for implications in chapter five.

### **Results for Research Question Three**

For students in the United States taking the PISA in 2009, is there a relationship between socioeconomic status and Reading Enjoyment Time? The purpose of this question was to investigate the potential relationship between the socioeconomic status of respondents to the Reading Enjoyment Time item. For answering this item, I again chose to use the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test because of the multiple categorical subsets for the Reading Enjoyment Time variable. Descriptive statistics for the Reading Enjoyment Time variable will not be repeated for this question, as they are dealt with extensively in Question One. The other variable used in this question is the student's economic, social and cultural status index score (ESCS), which was calculated from a variety of responses to the PISA student questionnaire. As explained in chapter three, the index variable score is continuously scaled with an average score of .149 and a range of -3.42 to 2.89. As a reminder, an index score of zero means that student comes from an average socioeconomic background, and a difference of one point represents a difference of one standard-deviation from the average distribution. Table 5 shows descriptive statistics for the two variables used for this question.

Table 5

*Descriptive Statistics for Question Three Variables*

<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>Score Range</b>
Socioeconomic Status	0.149	0.919	-.342 - 2.89
Reading Enjoyment Time	2.06	1.168	1 - 5

*Note.* Based on PISA 2009 data.

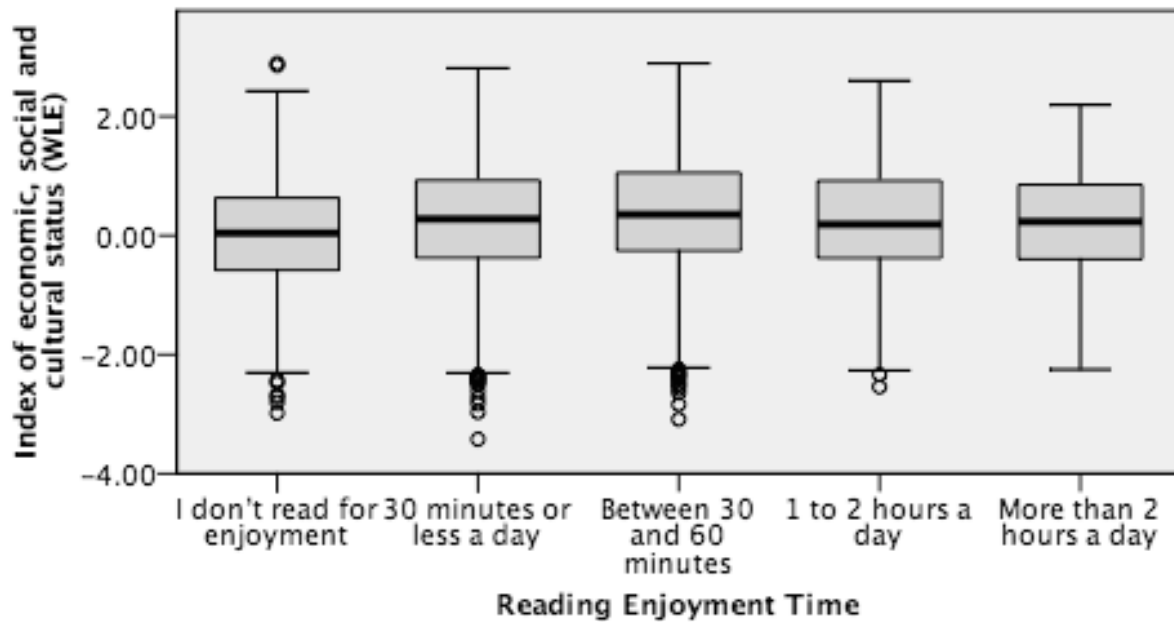
As hypothesized, the test revealed statistically significant findings for this question. Using the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test to compare Reading Enjoyment Time to socioeconomic status revealed a significant relationship between the variables,  $X^2(4, N=5154) = 102.53, p < .001$ , which leads to a rejection of the null hypothesis that the distribution of the plausible values in socioeconomic status scores are the same across categories of Reading Enjoyment Time. Table 6 shows the mean and mean rank socioeconomic status scores by category for Reading Enjoyment Time, and Figure 4 uses a boxplot graph to show the distribution of socioeconomic status scores across Reading Enjoyment Time groups.

Table 6

*Mean and Mean Rank Socioeconomic Scores by Category for Reading Enjoyment Time*

<b>Category</b>	<b>N</b>	<b>Mean Score</b>	<b>Mean Rank Score</b>
I don't read for enjoyment	2169	0.04	2,337.80
30 minutes or less a day	1519	0.19	2,724.39
Between 30 and 60 minutes	777	0.23	2,862.08
1 to 2 hours a day	257	0.35	2,689.35
More than 2 hours a day	456	0.28	2,669.28

*Note.* Based on PISA 2009 data.



*Figure 4. Distribution of Socioeconomic Status Scores Across Reading Enjoyment Time Groups*

Even though the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test shows that there is a significant difference across the categories, using a series of followup Mann-Whitney  $U$  tests was necessary to compare pairwise relationships between each of the categories, showing which categories were significantly different from which other categories. Four of the possible ten pairwise comparisons were found to have statistically significant results. Table 7 shows these results, which suggest that there was a significant difference in socioeconomic status scores across Reading Enjoyment Time categories with all of the statistically significant differences in mean rank scores falling between the “I don’t read for enjoyment” category and each of the other categories.

Table 7

*Pairwise Comparisons of Statistical Significance for Reading Enjoyment Time by Socioeconomic Status Scores*

<b>Category</b>	I don't read for enjoyment	30 minutes or less a day	Between 30 and 60 minutes	1 to 2 hours a day	More than 2 hours a day
I don't read for enjoyment	n/a	<.001*	<.001*	<.001*	.008*
30 minutes or less a day	<.001*	n/a	0.363	1.00	1.00
Between 30 and 60 minutes	<.001*	0.363	n/a	0.496	0.724
1 to 2 hours a day	<.001*	1.00	0.496	n/a	1.00
More than 2 hours a day	.008*	1.00	0.724	1.00	n/a

*Note.* \*p < .05. Based on PISA 2009 data.

These results will be discussed further in chapter five.

#### **Results for Research Question Four**

For students in the United States taking the PISA in 2009, are gender, socioeconomic status, and Reading Enjoyment Time significant predictors of reading scores, and if so, which is the most significant predictor? The variables used have already been described, so recapping them again seems overly repetitive. Based on the previous tests, it is known that on average females spend more time reading for enjoyment, but how much does this matter when it comes to reading scores? How big of a role does gender play when compared to other factors? Is socioeconomic status a better predictor of reading scores than Reading Enjoyment Time? Will that prove to be the most significant predictor? In an attempt to hone in on which variable — Reading Enjoyment Time, gender, or socioeconomic status — is the best predictor of PISA reading scores, the next and final test performed was a multiple regression analysis.



The multiple regression analysis found that Reading Enjoyment Time, gender, and socioeconomic status predicted 22.6%, a significant ( $p = <.001$ ) amount, of the variance in PISA reading scores,  $R^2 = .226$ ,  $F(3, 5150)$ ,  $p < .001$ , with each variable independently predicting a significant amount of the variance in reading scores (see Table 8). Accounting for the other two variables, each additional point increase in Reading Enjoyment Time score is associated with an 18.44 point increase in the reading score. Controlling for the other two variables, being male is associated with an 18.50 point decrease in the reading score. Accounting for the other two variables, each additional point increase in a student's socioeconomic status score is associated with a 38.55 point increase in a student's reading score. In terms of how the predictors compared with one another, socioeconomic status, not gender or Reading Enjoyment Time, is the strongest predictor ( $\beta = .372$ ). Reading Enjoyment Time is a slightly weaker predictor ( $\beta = .226$ ), and in a twist that may be surprising to those raising the alarm about the gender gap in literacy, gender was the weakest predictor ( $\beta = -.097$ ). All told, the research suggests that Reading Enjoyment Time, socioeconomic status, and gender are all related to significant variance in reading scores. Among these three predictors, the research suggests that student's socioeconomic status is related to the largest increase in reading scores, followed by Reading Enjoyment Time and gender. Table 8 has a more thorough breakdown of these results.

Table 8

*Multiple Regression Analysis of Reading Scores by Gender, Reading for Enjoyment Time, and Socioeconomic Status*

Variable	Unstandardized Coefficients B	Standardized Coefficients Beta	p-value
Gender	-18.503	-0.097	<0.001*

Variable	Unstandardized Coefficients B	Standardized Coefficients Beta	p-value
Reading Enjoyment Time	18.438	0.226	<0.001*
Socioeconomic Status	38.545	0.372	<0.001*

Adjusted R Square = .226

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*Note.* \* $p < .05$ . Based on PISA 2009 data.

Again, what could be seen as quite surprising to some in this multiple regression analysis, is that socioeconomic status was such a strong predictor and that the Beta on gender was much smaller than the other two variables. In between these variables, Reading Enjoyment Time was found to have a significant Beta. This is worth some discussion and will be addressed in the following chapter.

## Summary

The results of the data analysis provide evidence that Reading Enjoyment Time plays a significant role in the academic results, specifically reading outcomes, of students in the United States. While socioeconomic status was a more significant predictor of reading outcomes, Reading Enjoyment Time was still found to be substantially correlated with an increase in reading scores. Especially when compared with gender, Reading Enjoyment Time stands out as a more significant predictor of reading outcomes. While these results may have been anticipated by a thoughtful individual, a few things were surprising and interesting about this particular look at the data, and these results are worthy of a thorough analysis and a thoughtful consideration of potential implications, which will be covered in the upcoming chapter.

## **CHAPTER 5**

### **Discussion and Conclusion**

The final chapter includes discussion of possible implications of the study, analysis and commentary on the findings, and recommendations for future research. This study was focused on examining the sources of reading success, with a particular focus on how reading success is related to the time that students spend reading for enjoyment, and then focusing more carefully on how reading enjoyment time relates to gender and socioeconomic status. The findings did show that gender, socioeconomic status, and Reading Enjoyment Time were significant predictors of reading success. As the findings reveal, this a complex topic without any easy or obvious solution, but some potential implications and recommendations can still be construed from the study, especially after taking into consideration the existing research and the current state of educational practice.

#### **Summary of the Findings**

This study used the large sample of 5,233 students from the United States PISA 2009 test and questionnaire to examine the role that Reading Enjoyment Time plays in reading outcomes and then examines how this variable plays out for typically lagging or at-risk subpopulations when it comes to literacy skills. Four questions were honed and four variables chosen to examine Reading Enjoyment Time and its influence on reading score outcomes. The dependent variable that was chosen was the student's reading score on the PISA assessment; the other three of the four variables that were chosen came from the accompanying questionnaire. One variable was an index score for the student's socioeconomic status. The other two variables were the

student's self-reported gender and their amount of time spent reading for enjoyment. To analyze these four questions, three different analytic methods were utilized. The repeated test was the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test, which was used on questions one and three. The other two statistical tests were a Spearman rank correlation test and a multiple regression analysis of the three predictor variables.

### **Analysis of the Findings**

Following the results from chapter four, this next section further explores the data and offers insight and analysis into the findings. This section is organized by question with each question receiving individual commentary and analysis.

#### **Research Question One**

For students in the United States taking the PISA in 2009, is there a relationship between reading enjoyment and reading outcomes as measured by PISA results? The hypothesis that an increase in Reading Enjoyment Time relates with an increase in reading outcomes as seen in PISA 2009 reading test scores was not too much of an imaginative leap. It makes sense that the more time that a student spends reading for enjoyment, the better they will do on average on a test that measures their reading skills. The Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test revealed that this was indeed the case, and the data suggests that there were significant difference in PISA reading scores across Reading Enjoyment Time categories. As one examines the categories for Reading Enjoyment Time in ascending order (see Table 3), the progression from lower reading scores to higher reading scores is obvious. The 2,169 respondents who fell into the lowest category — “I don’t read for enjoyment” — for Reading

Enjoyment Time had a mean score of 464.15. Comparing their scores to the scores of the 456 students who were on the opposite end of the spectrum for Reading Enjoyment Time, placing themselves in the highest category of “more than 2 hours a day,” there is on average over an 80-point swing. Reading more corresponds with higher reading scores. Interestingly, those in the second highest category for Reading Enjoyment Time of “1 to 2 hours a day” actually scored higher on average than those who reported the most Reading Enjoyment Time (545.71 mean rank scores compared to 542.32 mean rank scores). While the difference in those mean rank scores is not statistically significant (see Table 4), it does raise an interesting question of how much time spent reading for enjoyment actually matters. Is there a point at which once one spends that much time reading, going past that time does not provide any additional benefits?

The followup test to the Kruskal-Wallis One-Way Analysis-of-Variance-by-Ranks Test that compared pairings of categories for statistical significance revealed that the scores of the students who reported no Reading Enjoyment Time differed significantly from each of the other four categories (see Table 4). This finding suggests that any time spent reading for enjoyment corresponds with an increase in reading outcomes. Similar results held for the next category in which students identified that they read for “30 minutes or less a day.” The reading scores of the students in this category differed significantly from every other category. It is after this point and when examining the final three categories that there is finally a point at which the scores did not differ from the reading scores of those in other categories in significant ways. For example, the mean rank scores of those students who reported that they read for “more than 2 hours a day” did not differ significantly from the scores of students who fell into the category of “between 30 and 60 minutes” and those who were in the category of “1 to 2 hours a day.” As noted previously, it seems that at some point, somewhere over thirty minutes but less than sixty minutes, the benefits

from time spent reading for enjoyment do not correspond with increasingly higher reading scores.

### **Research Question Two**

For students in the United States taking the PISA in 2009, is there a relationship between gender and Reading Enjoyment Time? Based on the preponderance of research into the gender gap in literacy achievement, it was hypothesized that females would score higher on average on the PISA reading assessment. This hypothesis, as analyzed through Spearman's rank correlation test, was confirmed. In accordance with what earlier studies have suggested (Henderson, 2008; Martino, 2001), it was not surprising that being female correlated with more Reading Enjoyment Time, and little in the results of this question and analysis are out of the ordinary or novel. The only interesting and noteworthy finding from this question was that the mean score for Reading Enjoyment Time for females placed them at a 2.35, well into the category that actually involved spending time reading, while the mean score for males, placed them on average at a 1.77. This number falls in between the lowest category of no reading time and the next category of spending thirty minutes or less, which means more males than not reported some time spent reading for enjoyment every day. These results may potentially help to explain the higher reading scores that females achieved on the PISA 2009 test. Females on average scored a 511, while males scored a 484 on average. The results from this question help to establish the current state of Reading Enjoyment Time, especially as it relates to the gender gap in literacy. Further explanation and commentary of the relationship between gender and Reading Enjoyment Time is incorporated into the fourth research question.

### Research Question Three

For students in the United States taking the PISA in 2009, is there a relationship between socioeconomic status and Reading Enjoyment Time? As the first research question revealed, increases in Reading Enjoyment Time are related to higher reading scores on the PISA 2009. The question then becomes who is actually spending time reading for enjoyment? This third research question was pursued in an attempt to triangulate how Reading Enjoyment Time might relate to students from lower socioeconomic backgrounds. One possible complicating factor that should be highlighted for this item is that the schools that participated in the PISA representing the United States did have a higher percentage of students who qualified for free and reduced lunch (Fleischman, Hopstock, Pelczar, & Shelley, 2010) than the full sample of schools that were initially identified. This population then is possibly skewed more toward a lower socioeconomic status than a representative sample for the United States, and this could possibly affect results, especially on an item that relates to socioeconomic status. The results, as hypothesized, did reveal that students who were lower on the index score for socioeconomic status did have lower Reading Enjoyment Time scores. Most noticeably students in the category of “I don’t read for enjoyment” had socioeconomic scores of just .041, compared to the average socioeconomic status score of .149 for the entire population. This is a noticeable difference, especially when comparing this score to the score of students who reported reading for an hour or more a day, which were .277 and .353. While this difference is noticeable, it is not surprising based on extant research like that of Chall, Jacobs, and Baldwin (2009). Also of note is that the pairwise comparisons revealed that the significant relationships were all between the “I don’t read for enjoyment” category and the rest of the categories, a result that again highlights the lower socioeconomic status of those students who do not read for enjoyment. The results for this item

make it very clear that there is a relationship between a decrease in socioeconomic status and a decrease in Reading Enjoyment Time. Since having a lower socioeconomic status also related to a lower score on the PISA reading test, perhaps reduced Reading Enjoyment Time is a factor. The results of research question four will help in understanding the possible connections between Reading Enjoyment Time, socioeconomic status, and reading scores.

### **Research Question Four**

For students in the United States taking the PISA in 2009, are gender, socioeconomic status, and Reading Enjoyment Time significant predictors of reading scores, and if so, which is the most significant predictor? This question was designed to determine which of the variables researched was actually the most significant in terms of predicting reading scores. Based on the extant research, it is understood that both gender and socioeconomic status are related to lagging reading results, but what about Reading Enjoyment Time? Would Reading Enjoyment Time prove to be a more significant predictor of reading outcomes than gender and socioeconomic status, confirming what researchers like Krashen (2001) and others have argued? While the three variables together did predict a significant percentage of reading outcomes (22.6%), Reading Enjoyment Time was not the most significant predictor. Socioeconomic status, with a Beta of 0.372, was much higher than the other two variables (-0.097 for gender and 0.226 for Reading Enjoyment Time). Numerous researchers have reported the connection between poor academic achievement and socioeconomic status, so it is not surprising that socioeconomic status is the leading variable that affects reading achievement from the variables chosen for this study. Controlling for the other two variables, socioeconomic status predicted a 38.55 point increase for every additional point increase on the social and cultural status index score. While it makes



sense that socioeconomic status came through as the most significant variable, it is interesting that its Beta (0.372) was so much stronger than that of the gender variable (-0.097), especially considering the breadth of literature that has been written about the gender gap.

These results suggest that an educator interested in improving reading scores should first consider the impact of poverty and socioeconomic status, since this was the most significant predictor of reading outcomes. Yet changing a student's socioeconomic status is a daunting task and is not the kind of task that falls within the scope of the work that a classroom teacher does. Compared to the other, largely immutable variables, Reading Enjoyment Time is a variable that teachers and schools can influence. While it had a smaller Beta than socioeconomic status, Reading Enjoyment Time was still significant. Reading Enjoyment Time had a much higher Beta than gender, and a move from one category to the next highest for Reading Enjoyment Time was correlated with an increase in score of 18.438 on average. Looking at specific categories, the largest increase in reading scores was between the "I don't read for enjoyment" category and the "30 minutes or less a day" category. Moving a student from the category of not reading for enjoyment to spending any amount of time reading for enjoyment correlated with an average change of 50.84 points. That is a dynamic result, which shows the positive impact on reading outcomes that Reading Enjoyment Time can have. Especially when considering the enormous, daunting task of changing socioeconomic realities, it makes sense that some educators might choose to focus on boosting a student's Reading Enjoyment Time, which seems quite realistic in comparison.

### **Implications and Recommendations for Future Research**

The data from the 2009 PISA provides some weighty evidence that Reading Enjoyment Time is a significant factor in improving student reading outcomes. While many studies hint that increasing reading time through methods like SSR influences student outcomes on reading tests, no other study that was found during the literature review included as large of a sample size as this study. Given the large sample size and the high Beta on Reading Enjoyment Time as a predictor of reading outcomes, it is possible to conclude that increasing student Reading Enjoyment Time would lead to better reading outcomes for students. The results of this study do have some potential implications for educators and policy makers working to increase the reading scores of adolescent youth. The findings of this research could provide districts and schools the justification to implement a program that supports and implements Reading Enjoyment Time for its students. The 50.84 point difference in PISA reading scores that corresponds with going from not spending any amount of time reading for pleasure to simply spending some time reading for pleasure on a daily basis is a noticeable result that schools and educational organizations should consider including in their practice.

### **Future Research Suggestions**

While the results of this study are promising, more research is needed. Since the kinds of tests that definitively prove causal relationships (like randomized, double-blind, controlled trials) are difficult to implement for educational research, the more studies that work to further untangle the relationships between these variables, especially as they relate to certain subpopulations, will be useful. For example, the PISA dataset does not allow the data to be disaggregated by subpopulations that are frequently required and included in state reporting, especially for those districts who are reporting on their progress toward either meeting NCLB requirements or NCLB

waiver requirements. The PISA data does not include information about any student's status related to special education or being an English Language Learner, two important subpopulations that districts frequently select for state reports as well as monitoring and intervention. Further research that can disaggregate results by such subpopulations could provide meaningful and useful results.

Further research into Reading Enjoyment Time, the gender gap, socioeconomic status, and reading success could do a few things differently than this current study. One idea for a future researcher interested in this topic would be to select the composite variable available through PISA that tracks overall reading enjoyment, rather than simply relying on Reading Enjoyment Time as an indicator of reading motivation. This potentially more robust, composite score should guide the researcher in determining just how much having a passion for reading might matter in developing young readers who achieve successful reading outcomes.

This study was also limited by the wording of the questions in the PISA questionnaire, specifically the question about Reading Enjoyment Time did not distinguish between in school and out of school time spent reading. Since class time is valuable, further research that distinguishes between in school Reading Enjoyment Time and out of school Reading Enjoyment Time would be beneficial. Does Reading Enjoyment Time have more positive results if students are given time in class for it? Does Reading Enjoyment Time outside of school have a stronger correlation with reading outcomes? More extensive and thorough questioning of students about Reading Enjoyment Time would be useful on future PISA questionnaires or in future studies that use a similar methodology. In addition to a question that differentiates between in and out of school reading time, an item that considered the difference between voluntary and involuntary Reading Enjoyment Time could help to determine the effectiveness of a Reading Enjoyment

Time program as compared to a student simply seeking out this time of his or her own volition. Furthermore, finding a school situation which could provide a control group and an experimental group that follows the recommended methods of the best practioners would provide a decidedly better analysis of the effectiveness of Reading Enjoyment Time, especially if allowed a prolonged period for data collection.

## **Conclusions**

In the context of an ongoing, healthy debate about the best practices for reading instruction, as supported by research, this study provides substantial evidence that Reading Enjoyment Time does correspond with higher reading scores. While socioeconomic status was a stronger predictor of reading outcomes, the fact that Reading Enjoyment Time was a stronger predictor than gender speaks to its importance as a potential solution in closing the literacy gaps that exist today. Especially when considering the immutability of the other variables, Reading Enjoyment Time stands out as a promising strategy for districts to implement for closing the extant gaps in reading achievement. While it would be difficult for many teachers to give up a portion of class time for Reading Enjoyment Time, the results of this study indicate that such time may lead to substantial positive outcomes on reading assessments. I do hope that future research will further explore the potential that Reading Enjoyment Time offers, disentangling some of the mysteries that still exist when it comes to the connection between Reading Enjoyment Time and reading results. Does a student need to have a minimum level of skill before reading time is beneficial? Does a love of reading have to exist before a student will spend time reading? Between love, skill, and time, how much of each is needed and in what order? These are not easy questions to untangle, but I think they are important. Prior to this

study, I had a felt sense of the importance of reading, but after conducting this research, I now have the confidence of the data to recommend time spent reading for pleasure as a classroom practice for boosting reading achievement.

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