

THE EFFECT OF SUSTAINED SILENT READING ON HIGH  
SCHOOL STUDENTS' LEXILE SCORES AND ATTITUDES  
TOWARD READING

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I have examined the final copy of this thesis for form and content  
and recommend that it be accepted in partial fulfillment of the  
requirement for the degree of Master of Education.

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We have read this thesis and recommend its acceptance

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## DEDICATION

To my husband, Brian, for his unending love and support during this endeavor; I cannot thank you enough.

To my son, Jack, because his smile always made me momentarily forget about deadlines, revisions, and the usual pressures that come with obtaining a master's degree

To my parents, who made my education a top priority; they read to me as a child, made sacrifices so I could take music lessons and attended every play, concert and ceremony.

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## ABSTRACT

This research attempted to find the relationship between the consistent practice of Sustained Silent Reading (SSR) and a student's lexile score. Two English I classes in an urban high school completed surveys that focused on a student's attitude toward recreational and school reading. The Scholastic Reading Inventory (SRI) provided the two English I classes a lexile score. Class A practiced SSR three days a week, while Class B did not. After the research period of twelve weeks, the two English I classes were given post-surveys similar to the pre-surveys and the SRI. The post-surveys from Class A were compared to the post-surveys from Class B. The post-SRI scores of Class A were compared to the post-SRI scores of Class B. Any changes or shifts in student attitude were measured. The hypothesis was found plausible. Significant differences were found in both the survey and SRI data. Class A had higher SRI scores than Class B. Additionally Class A had a better overall attitude toward reading than Class B.

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## CHAPTER 1

### INTRODUCTION

#### *Rationale*

In January of 2002, *No Child Left Behind* was signed into law. The federal mandate required every state to assess the ability of each student in reading, writing and mathematics. Every year, schools must look at the state assessment scores to see if they meet the criteria established for Adequate Yearly Progress (AYP). Failure to meet AYP could mean sanctions at both state and local levels. Since assessment scores are crucial to the survival of a school, educators and administrators are searching for resources that will help students become better readers, writers and mathematicians.

The reading ability of many students is troubling. The article, *Some Literacy Statistics for the U.S* (1998) states “13% of all 17 year olds and 44% of minority youth are functionally illiterate. Additionally, 85% of juvenile offenders have problems reading” (p. 1). During the 2004-2005 school year, the Wichita Public School District’s Secondary Language Arts Department began to study the results of Sustained Silent Reading (SSR) in high school. While some hypothesize that it is ineffective and time consuming, others suggest that it is the key to increasing lexile scores, thereby increasing reading comprehension for students. There is currently not enough data for either side of the argument; therefore the purpose of this study was to collect data in order to support or refute these claims. Gallagher (2003) compared Anderson, Fielding’s and Wilson’s study of SSR with fifth graders to high school students that participated in SSR at



Anaheim Union High School. The original study compared the students' percentile rank with their total minutes of silent reading per day. The researchers concluded that "time spent reading, during SSR and otherwise, also correlates strongly with high test scores" (p. 7).

In our ever-increasing assessment-driven climate, it is worthwhile to look at the practice of Sustained Silent Reading. It is not unreasonable to assume that students who read more will inherently become better readers. It is also logical to expect that those who are better readers will also do much better on reading assessments. By reviewing the results of SSR studies educators will be able to implement strategies that will be a benefit to students' reading abilities.

#### *Definition of Terms*

*SSR:* Silent Sustained Reading. The act where students are given class time to silently read at their desks.

*Attitude:* A state of mind or a feeling about reading that can be measured and analyzed by means of a survey.

*Lexile Score:* The lexile score indicates the reading level of the student. In order to obtain the lexile score, a test is administered to students. The test measures two factors: semantic difficulty and syntactic complexity.

*SRI:* Scholastic Reading Inventory. This is a specific test that measures a student's lexile score. Additionally, the results also give students a reading list with books that will complement that student's reading ability.

### *Purpose of Study*

The purpose of this study was two-fold. The first purpose was to explore the idea that utilizing Sustained Silent Reading in an English classroom over a twelve-week period would increase the students' lexical scores. The second purpose was to measure any change in the students' attitude toward reading.

### *Research Questions*

The research questions are:

1. What are the students' attitudes about reading? After the research, did the students who were involved with SSR have a significant attitude change about reading?
2. Does the consistent use of SSR significantly increase student lexile scores as measured by the Scholastic Reading Inventory (SRI)?

## CHAPTER 2

### LITERATURE REVIEW

The literature review is organized into different categories. The first category discusses the importance of reading. The second category discusses complexity of a student's apathy toward reading that can be detrimental to the future success of that student. The third category is the discussion of SSR. Many studies have looked at the effectiveness of a silent reading program in their classroom. The literature discusses the importance and success of those endeavors. The relationship between effective SSR and teacher modeling is another issue that is examined. Last, the importance of lexile scores and the SRI are reviewed. The SRI is a concrete and valid tool used to measure students' reading ability. The SRI is a valid resource and motivator for students, parents, and educators because it is able to give immediate and concrete information regarding the reading level of the student.

#### *The Importance of Reading*

Testing plays a major role in a high school student's life. Every year students must be prepared for many local and state assessments. Those that do test higher are usually those who read well. The National Assessment of Education Progress (2005) studied the research of Jordan and Nettles (1999) and Ludwig (1999) in addition to analyzing trends found in reading assessments of fourth and eighth grades from various sections of the nation. The NAEP concluded that "students who are competent readers, as measured by their performance on reading tests, are more likely to perform well in other subjects, such as

mathematics and science. Reading achievement also predicts one's likelihood of graduating from high school and attending college" (p.1).

Tests such as the ACT and SAT are connected to very prestigious scholarships. Those that do well on those tests will have a better chance of receiving scholarships; reading well, therefore, produces an opportunity to gain a college education. The NAEP (2005) reported that those who had proficient reading skills were less likely to have difficulty finding a job. Additionally those those who were able to read well earned higher wages than those who could not read well.

In order for one to be successful, then one must be educated. Kelly Gallagher (2003) writes that "students are human and, being human, seek pleasure or value. Like most people, their first thought will be, 'What's in it for me?' Unfortunately, many of our students see reading as just another assignment, something generated by the teacher" (p. 13). The objective of this thesis is to create a strategy that can motivate students to read more and hopefully increase their comprehension of what they read.

### *Why Aren't Students Reading?*

As educators we hope that when students walk through the door at the beginning of the school year, they will have the reading skills needed for that particular grade level. The reality is, unfortunately, not as ideal. The Rand Reading Study Group (RRSG, 2002) conducted research on different teaching practices of reading comprehension. In their research, RRSG found that "one of the most vexing problems facing middle and secondary school teachers today is

that many students come into their classrooms without the prerequisite knowledge, skills, or dispositions to read and comprehend the material placed before them” (p iii). The reason why students are not proficient is complex. There is a variety of reasons why students are not reading at a level that is satisfactory. According to the National Council for Agricultural Education (NCAE) (2003) some students do not read because they begin to focus their interests on particular areas; others believe they do not read well, so they simply do not read. Teachers also avoid classroom reading because they know that students in their class do not read well.

It is important to define the different readers in a classroom. The reasons behind struggling readers are important when implementing a reading program in a classroom. Just as doctors must understand the symptoms before diagnosing and treating an illness, educators must understand *why* students do not read. Once that is established, teachers will be able to create a reading program that addresses the students’ needs.

Burke (1998) describes three categories of readers: “powerful, proficient and reluctant” (p. 41). Powerful readers are the ideal type of readers we would like to have in our classrooms. They ask questions about the literature, characterization and the author’s message. These readers also look beyond the literature in order to understand the historical importance of the piece. Literature, from a powerful reader’s perspective, requires much more than reading words on the page; it is an act that requires more in-depth attention.

Proficient readers are the typical reader. Burke (1998) describes proficient readers as students who “have mastered the requisite skills, but these readers have stumbling points that the powerful readers do not. For example, vocabulary or contextual information may be lacking, and so a solid understanding evades them” (p.42). These are the students who often can do the reading and usually will do the required reading, but they tend never to surpass the basic reading expectations as a powerful reader would. They lack the guidance and motivation to move to the next level.

The NCAE (2003) has found that struggling or reluctant readers, however, have a far more complex and frustrating journey. What unifies all these readers is the anxiety that their reading limitations will make them appear dumb or otherwise embarrass them in front of their peers. Struggling readers, however, have found strategies to avoid reading and understanding whenever possible. Many students do not read at home and do not comprehend what they are required to read in school. “Struggling readers learn to disguise their reading problems and manage to get by without really comprehending what they read. Some struggling readers resist reading, while others sound out the words but don’t understand or remember what they’ve read” (p. 1).

Another problem with which English teachers must contend is the simple lack of motivation. Creating reading motivation within each student is an uphill battle. Unfortunately, there is not going to be one solution that will solve this problem. Building reading motivation requires complex construction. There isn’t

a single right motivational tool. What inspires one student to read might not inspire another. Gallagher (2003) states that, “to maximize our chances of success, we need to sell students on a wide range of reasons why they should read. These reasons—lots of them—need to be made visible to our students” (p. 4).

### *Sustained Silent Reading*

Sustained Silent Reading (SSR) offers a strategy to increase student reading comprehension. It is based on the theory that the more a student reads, then the better he or she will comprehend what he or she is reading. This in turn, will translate into higher test scores for the school and district. As mentioned before, the Wichita Public School District’s Language Arts Department is contemplating this strategy.

Sustained Silent Reading is a strategy that sets aside time during the week to give students silent, uninterrupted reading time. During the 1980’s and 1990’s educators Hyde, Daniels, and Zemleman (1998) attempted to reform the Chicago Public School System. In their research, they created strategies that generated positive teaching practices which were hailed as *Best Practice Strategies*. Independent reading was and still is regarded as a *Best Practice Strategy*. Hyde, Daniels, and Zemelman (1998) began to study the connection between SSR and effective teaching practices. “Effective teachers of reading provide time for silent reading every day, encourage reading for varying purposes, and develop creative ways for students to respond to literature.” (p. 31). The execution of SSR in the classroom has many benefits. Other research also

points to the theory that those that participate in a SSR find it beneficial.

Researchers Jensen and Jenson (2002) reported that the implementation of SSR correlates with an increase of a student's reading and vocabulary skills.

Implementing SSR in the classroom is not to merely raise test scores; it is to create a bridge between students and literacy.

For many students, SSR is a low-stress approach to reading. A study by Chow and Chou (2000) indicated that students enjoyed SSR because of its relaxed environment. The students not only had a quiet time during the day to read but also a non-threatening reading atmosphere for struggling readers. Furthermore, Mary Kirby's study (2003) of ninth graders and SSR concluded that a "little more than two-thirds of the students in both surveys feel that SSR has introduced them to genres that they may not have otherwise read"(p. 36). Those that really like reading receive an extra treat by being exposed to new literature and with ample time to read. Those that are struggling readers feel like it is environment that will not embarrass them.

Kirby's study (2003) also found that students both valued and enjoyed SSR in the classroom:

Participants in the study overwhelmingly stated they were glad they participated in Sustained Silent Reading in class each week with only 19% of the students feeling otherwise. Sixty-one percent of the respondents said that they enjoyed reading in questionnaire 1 and this number increased to 77% of the respondents in questionnaire 2. Seventy percent of the participants felt that SSR had value while only 11% did not



agree and this number grew to 18% in the second survey. Three-fourths of the students surveyed felt SSR was a good educational practice. (p.39)

Seventy-nine ninth-grade students participated in Kirby's study. Each student was given a pre-questionnaire that measured the students' attitude about SSR. After eight weeks, the students then were given a post-questionnaire in order to measure any change in the students' attitudes about SSR. From the data, it can be noted that the students overall valued SSR in the classroom. Additionally what is interesting to note from the data is that after SSR had been established in those classrooms, 16% more students enjoyed it after the second questionnaire.

*Student choice.* When starting an SSR program, the research states that it is imperative that students be given the opportunity to choose their reading material. Throughout the day, students are told what to read; they need to view SSR as a time in which they have total control. Hyde, Daniels & Zemelman (1998) contend that giving students choice is crucial. "Choice is an integral part of literate behavior. Children should be permitted to choose reading materials, activities and ways of demonstrating their understanding of the texts they have read" (p. 31).

Adolescents are very good at rebelling against authority. It was noted in Kirby's study (2003) of ninth graders and SSR that "Those students that did not have choice in choosing books would have thought more positively about SSR and participate more if they had a choice over what they were able to read"(p.40). By taking a large portion of teacher control away, students can focus on their interest of literature rather than rebelling against it.

By leaving the choice of literature up to the students there is an

opportunity for students to control their reading growth. The National Council of Agricultural Research's (2003) study describes the positive reaction to letting students have choice over the literature.

The objective of free reading is to develop reading habits and encourage students to become lifelong readers (as opposed to developing reading skills). Children who do extensive free reading chose what experts consider 'good books,' and the more they read, the more they expand their reading interests. (p. 5)

Instead of the teacher controlling the level of a student's improvement, the students are empowered to do so.

In offering students a choice of books it is essential that the students have access to different genres and novels with varied difficulty levels. Librarians are usually more than happy to help students find books. It is also helpful to create classroom library. The majority of students who failed to bring in pre-selected books to class were the reluctant readers. Jenson and Jenson (2002) state, "The teacher needed a selection of books that would catch the reluctant readers' attention and hook them on reading. A wide variety of topics and readability was needed" (p. 2).

Struggling readers are going to work very hard to avoid reading. It is understandable to avoid something one finds unpleasant. However, by having a classroom library a student cannot use an excuse of "forgetting" the books. They learn that SSR is an absolute; everyone will have a book to read.

Students are given ownership in this process. Choice is an element that

can ensure that by giving students choice, then the overall participation in that practice will increase. Hsui (nd) concludes that

Research in which students read extensively, have ownership over the materials they choose to read, and are allowed to read in a relaxed, non-judgmental environment within the classroom has mostly shown that these activities contribute to the development of independent reading and language learning (p.1).

The consensus of literature points to the fact that choice and participation are the first steps in employing the practice of SSR.

*Teacher modeling.* The construction of a reading program, such as SSR, requires teacher involvement on many levels. Gallagher (2003) understands the plight of the teacher's many responsibilities. "Planning lessons, grading essays, completing paperwork, conferring with students and parents, serving on committees and attending dances, concerts, plays and sporting events cut into reading time. The demands of teaching have created a roadblock to the bookstore and library" (p.8). It would be tempting to grade papers and update paperwork while students silently read, but that is the worst message a teacher can send his or her students. Gallagher (2003) then discusses the importance of teachers setting aside time for SSR. "How could we sell kids on the value of reading when we teachers were not reading? Students are quick to notice such hypocrisy" (p.9). Without teacher modeling students will soon discover that reading is not a significant priority; it is merely busy work so the teacher can become caught up on work. The success of SSR is bound not only with the participation of the

students but also with the teacher. This is not a simple busy work project; it is a practice that will play a significant role in their life.

### *Problems within the Framework of Sustained Silent Reading*

Sustained Silent Reading is not without its critics. Some teachers find using SSR in the classroom is ineffective and inefficient. Seow (1999) writes that Uninterrupted Sustained Silent Reading (USSR) lacks good organization. He contends that:

Much time is wasted getting pupils to settle down quickly to USSR, and by the time the pupils are beginning to read, they are also beginning to get ready to move on to the next school period for the day (p.2).

The lack in time efficiency can lead to problems within the SSR framework. Seow (1999) also argues about the duration of an SSR program. He concludes that a silent reading program lasts too long. His theory suggests that because students are locked into the routine of SSR, they will never move to the higher level of independent reading.

There are also those who believe SSR is not as beneficial to students as it should be. Maguiness (1999) notes in her 1997 study that while the program looked effective on the surface, it had many difficulties within it. She found that although students were checking out books from the library, the students reported that they believed that SSR did not improve their reading skills. Maguiness' (1999) study had pointed out flaws in organization and accountability. She noted that students lacked motivation with the program. "SSR was dependent on the goodwill and motivation of the students. There were no obvious rewards for

students taking part. There was no assessment regime. This was not a high stakes activity” (p. 2). The effectiveness and efficiency of a Sustained Silent Reading program are still researched since it’s infancy in the 1970’s. The program has attracted both critics and supporters alike.

### *The Need for Lexile Scores*

Since the enactment of *No Child Left Behind*, student testing is now more crucial than ever before. Testing is a means of measuring the skills of not only students but of teachers and administrators. If test scores are high, then schools are celebrated and applauded for being effective. If test scores are low, then schools face the threat of state and federal sanctions. Much depends upon these scores; therefore, the tests need to be as accurate as possible. Smith (2004) describes the importance of accuracy in testing:

As our various sanctioning and professional bodies in the behavioral sciences have rightly pointed out we should not make high-stakes decisions from a single administration of a test. This standard has resulted in the necessity of multiple measures. Unless, however, there is general objectivity of measurement of the underlying constructs we are still left with subjectivity and sliding state standards where “proficiency” in one state means something entirely different in another state. (p. 8)

It is reasonable to ask that assessments be consistent. Without objectivity, then assessments become “hit or miss.” When assessments have become as crucial as they are, then total objectivity and consistency must be absolute.

Lexile measurements are a consistent and objective measurement of

student reading ability. The range in the scale is 200L for a beginning reader to 1700L for very advanced readers. Each score is associated with a grade level. A score of 200 indicates the student reads at a second grade level; a score of 1700 would indicate that the student would be able to comprehend college-level readings. The measures are based on two factors: semantic difficulty and syntactic complexity. Semantic difficulty is based a student's vocabulary. For the developing reader, new words are difficult when first encountered in print. But as the reader encounters the same word again and again, that word becomes more familiar. Burdick and Lennon (2004) state that "Early reading researchers determined that the difficulty of words is a continuum based on exposure, with frequently encountered words being the easiest and rare words the most difficult" (p. 2). The second factor is syntactic complexity, which focuses on sentence length and structure. Burdick & Lennon report,

Reading researchers have found that the best predictor of the difficulty of a sentence is its length. Long sentences are likely to contain more clauses, and therefore communicate not only more information and ideas, but also an interrelationship between them. Researchers also speculate that longer sentences require the reader to retain more information in the short term memory. (p.2).

By using both syntactic complexity and semantic difficulty, the student is able to receive a lexile score that reflects his or her reading ability.

Even though the evidence above is compelling one can question the idea of trying to measure a seemingly abstract act: reading. Although we cannot

measure reading directly, we are able to make inferences from the way they answer questions. In order to do this, the technology of the test comes into play. Williamson (2004) reports that the lexile test uses psychometric theories in order to create a metric measuring operation. This, in turn, gives a numerical value to a seemingly abstract action. By turning the ambiguous into something that is clear and concrete, teachers can use lexile scores to measure a student's reading ability.

With any testing, we must account for errors. During the study, the students were tested at the beginning and at the end of the research period. Many changes that affect the lexile scores could take place during that time. While taking the SRI, factors that could affect the students could be hunger, inattention, rebellion, boredom, anxiety, or fatigue. Other factors such as hallway noise, climate, time of day and interruptions can also create an error in the testing. Using variability can give the test administrator a clearer picture of any testing error. Williamson (2004) discusses the importance of estimating how much measurement error exists:

Psychometricians do this by theoretically examining the variability of repeated measurements. They imagine that the measurement process can be performed repeatedly under the same conditions with the same individual, and estimate the variability of the scores produced. By using measurement theory, it is as if they are able to repeat the measurement process many times under the same conditions with the same individual. The result variability in scores is due to random errors of measurement since the individual does not change. (p.7)

The Scholastic Reading Inventory reports a standard error of measurement. In creating a valid test, we are able to rely on the information that it gives. It can be a valuable and concrete resource that measures a student's reading ability.

Using a lexile measurement would be helpful in order for schools to adhere to *No Child Left Behind*. Using the lexile framework, each state can establish its own proficiency level benchmarks, but using the same scale, improvement can be viewed in very concrete terms. Smith (2004) states that "states could define their AYP for reading in terms of lexile score and use the lexile measures from the test results to document growth" (p.6). If states align themselves with the same lexile measurement framework, multiple, inconsistent assessments will not be. Smith (2004) notes using multiple measures will only lead to confusion at all educational levels. Multiple measures run the risk of losing objectivity and validity. The foundation for *No Child Left Behind* and Adequate Yearly Progress (AYP) is test scores. These inconsistent and inaccurate scores carry political and legislative weight. Because of the legislative importance of assessments, Smith contends that the assessment should be objective and concrete.

The Scholastic Reading Inventory is a specific version of a lexile test. The test measures a student's reading ability by using both semantic difficulty and syntactic complexity. Along with the student's lexile score, the students were given a list of books that would complement their reading level. The SRI is helpful to the parents and the school. Any time a student takes the SRI he or she



can receive a lexile measure. Smith (2004) states that the amount of parental involvement will increase with the use of lexile scores.

Having state assessment results also reported on lexile scale also enables parents, teachers and students to act on the information. With a lexile measure, parents can actively support and encourage reading by helping their children select appropriately targeted books” (p. 7).

Most parents want their child to succeed in school. When a parent receives assessment results, test scores can be a bit vague. With a lexile score, a parent has a very clear picture of their child’s reading level. If a student is in ninth grade but reads at a fifth grade level, hopefully that will spur the parent into helping their children become a better reader. Words such a “proficient” or “basic” are very valuable to educators and administrators, but not so powerful to parents. Finding out that their high school child is reading at an elementary level is very powerful to parents. The SRI does this.

As noted, the SRI gives a list of book titles to each student. These books titles are at or slightly above the reading ability of the students. Burdick and Lennon (2004) claim that lexile scores can help teachers and students alike. More often than not, those students who are at the bottom of test scores get most of the teacher attention, while those who are advanced do not get as much attention. The lexile framework provides teachers a way to use their awareness of the challenges and fears that the new reader faces to adjust the difficulty of assigned texts. When students confront new kinds of texts, the introduction can be softened and made less intimidating by guiding the student to easier reading.

Burdick and Lennon (2004) also note that the lexile scores will help the proficient and powerful reader as well. “On the other hand, students who are comfortable with a particular genre or format can be challenged with more difficult readability levels, which will prevent boredom and promote the greatest rate of vocabulary and comprehension levels” (p. 7). Lexile scores are tailor-made to each student’s ability. With guidance and enthusiasm, those students that are already great readers, will be challenged to become even stronger; those who struggle will become more confident and skillful.

### *Summary*

The effective practice of SSR is complex and varied. The overall theme from the literature that has been reviewed is the idea that SSR, when used correctly, can create an environment that is conducive to increasing a student’s reading ability. The need for change has been established in recent research literature. The use of strategies such as teacher modeling and student choice has an impact with the students that are participating in a SSR program.

Kirby’s (2003) study creates a strong foundation for this study. Results from her study indicated “over 70% of the students felt that SSR was both valuable and a good educational practice” (p. 44). The research of Kirby (2003) also expounds on the importance of consistency and teacher modeling. “When students see that their teacher, the one they expect to be an expert on a particular subject, values something such as reading, they in turn see it as important.”(p. 45).

Creating an SSR practice is not the perfect solution but the teacher can help create a classroom environment that is centered on reading. Using all of these

practices in an SSR program can lead not only to students that are able to read better, but also to an increase in test scores. Research literature from Smith and Williamson call attention to the inaccuracy of the current testing methods. Lexile scores, however, create a valid and concrete measure of a student's reading ability. The Scholastic Reading Inventory is a test that not only measures a student's reading ability using a lexile score, but also creates a book list that helps students find reading material that meets their comprehension level. This is a program that is not without faults; it has a potential to create an environment where students are unafraid to practice reading, teachers are able to assist in a student's frustrating journey of reading comprehension, parents are able to receive specific and valid feedback and districts are able to test students with the knowledge that the instrument is accurate and reliable.

## CHAPTER THREE

### METHODOLOGY

#### *Introduction*

The research participants were not randomly selected. In order to determine the cause and effect of the research design, an analysis of covariance (ANCOVA) will control for the differences between the two freshmen English I classes. The design process will be that of quasi-experimental, with the use of pre-tests and post-tests on nonequivalent-groups.

The methodology used in this research is varied. Two English I classes participated in the study. At the beginning of the study the students were given a pre-survey to measure their attitudes about reading. After the students had finished the pre-survey, all students took the pre-SRI. The pre-SRI gave the students their lexile scores. Class A participated in SSR Monday, Wednesday and Friday for 15 minutes. Class B did not. At the end of the research period, all students completed a survey. The post- survey measured the students' attitudes about reading. Lastly, the students took the post- SRI. The data collected was analyzed in order to determine if there was measurable change found in either the students' attitudes about reading or their SRI scores.

#### *Participants*

Two freshman English I classes participated in the study. Class A has a total of 24 students. Of those students, eleven are female and thirteen are male. Thirteen students are of a minority background. Eleven students are Caucasian.

Ten students in Class A are in special education. Class B has a total of 22 students. Of those students, ten are female and twelve are male. Ten students are of a minority background. Twelve are Caucasian. Additionally in Class B, five students are in special education. The age range in these particular freshman classes range from age fourteen to sixteen.

### *Instruments*

Two instruments were used during this research. The first instrument was a reading attitude survey. In order to create a valid and reliable means of measurement, a reading attitude survey created by Ryan and Smith (1995) was used in Class A and B (see appendix). The survey was administered at the beginning of the research project before the pre- SRI assessment and at the end of the twelve-week research period again before the post-SRI. The pre and post survey's objective was to gather data in order to find changes in the students' responses. This indicated a shift in students' attitude about reading.

The survey used the Likert-scale wherein the student is given four options: 4 = makes you very happy, 3 = makes you slightly smile, 2 = makes you mildly upset, and 1 = makes you very upset. The students answered each question with the number that corresponds to their feelings about recreational reading and school reading. The survey consisted of twenty questions. Each survey is scored by adding the 20 scores together; hence scores could range from the lowest (20) to highest (80). The Ryan and Smith (1995) survey is a model of an earlier reading attitude survey constructed by McKenna and Kear (1990). This survey, also

known as an Elementary Reading Attitude Survey (ERAS), is proven to be both a valid and reliable means of measurement. McKenna and Kear (1990) employed the use of Cronbach's alpha that measure different variables within an instrument; its main purpose is to measure the reliability of an instrument. Additionally McKenna and Kear (1990) studied many subscales in order to substantiate the validity of the survey. These subscales studied the students' use of the library, the time a student spends watching television, and the relationship of the students' attitude scores and their reading ability. Because the ERAS was created for elementary students, it is more appropriate that the survey created by Ryan and Smith (1995) be administered to the high school participants.

The second instrument was the Scholastic Reading Inventory. The computer test was given at the beginning of the research project after the pre-survey and again after the post-survey for each class. The researcher examined the data in order to find any changes between the pre and post SRI assessments for each class.

The SRI gave the student a lexile score. This score measured the reading ability of the student. As an extra bonus, the SRI also lists novels that are at or slightly above that student's lexile score. The list created an opportunity for students to seek out books that they are able to comprehend at a comfortable level. The research's objective was to explore the relationship between a student's lexile score and SSR.

The SRI is a valid and reliable means of testing. The SRI is a computer test, which measures by means of semantic difficulty and syntactic complexity.

Smith (2004) believes that the lexile test creates an objective and reliable tool for districts to use as a means to measure student-reading achievement. Williamson (2004) observes that psychometricians focus on the test's variability of repeated measurements. In their studies they found that scores remained consistent with repeated testing. Additionally the calibrations of scores are employed by the Rasch model; this in turn creates internal validity and objective measure for assessment.

#### *Procedures for the Collection of Data*

At the beginning of the school year two English I classes were selected to participate in the research study. Class B was the control group. Class A was the experimental group. The researcher administered the attitude survey to Class A and Class B. The survey discussed their current attitudes about reading. After they completed survey, both classes took the Scholastic Reading Inventory. Class B continued the curriculum as prescribed by the Wichita, Kansas School District. Class A continued the curriculum as well but they also participated in SSR for a period of 12 weeks.

The researcher took Class A to the library every three weeks in order to help them find an SSR book. They were also allowed to use the book list that the SRI test had provided for them. These are lists of book titles that are at the lexile level or slightly above for each student.

Class A participated in SSR on Mondays, Wednesdays and Fridays for the first 15 minutes of class. The researcher also modeled SSR. During those 15 minutes each student sat quietly at his or her desk and read their chosen

outside reading book. If the student did not bring his or her outside reading book, he or she was able to choose a book from the classroom library. At the end of the testing period the researcher gave both Class A and Class B the post- attitude survey. At the end of the research project both classes took the post-SRI. Using both the data from the SRI and the survey, the researcher hoped to find a relationship between SSR and a student's lexile score.

#### *Procedures for Data Analysis*

One objective of the research was to examine the students' responses in the pre- survey and compare them to the post-survey. Class A's pre-survey was compared to the post-survey at the end. The data from Class A was analyzed using an ANCOVA in order find if there were any measurable shifts found in that class during the twelve-week period. Class B's pre-survey was compared to the post-survey at the end of the research period. The data from Class B was analyzed in order find any measurable shifts found in Class B. The information from the post-surveys from Class A and Class B was compared to find any measurable differences in attitudes about reading.

The second research question discussed the relationship between the practice of SSR for a twelve-week period and an overall increase in the students' SRI score. Class A's pre and post SRI data was compared in order to find any shifts in scores. Class B's pre and post SRI data was compared in order to find any shifts in scores. The data from Class A and Class B's scores was analyzed by using an ANCOVA in order to find if any gains were recorded between the two tests thus proving the hypothesis to be plausible.



## CHAPTER FOUR

### RESULTS AND FINDINGS

#### *Presentation of Findings*

The objective of the research was to observe if the students who participated in SSR for a time period of twelve weeks would have increased their SRI scores more significantly than the students of the control group, who did not participate in SSR. Additionally, the research project wished to observe if there was a significant increase in the experimental groups' overall attitude of reading when compared to the control groups' attitude towards reading. The findings and results are organized by their respective research question. The sets data were analyzed using an analysis of covariance (ANCOVA) that controls for group differences in the pre-tests. Table 1 indicates means and standard deviations for three variables.

Table 1

*Means and Standard Deviation s of the Experimental and Control Groups on SRI, Recreational Reading and School Reading Attitude Surveys*

Test	Experimental Group				Control Group			
	Pretest (n= 24)		Posttest (n=23)		Pretest (n=22)		Posttest (n=20)	
	M	sd	M	sd	M	sd	M	sd
SRI	1046.2	240.6	1103.3	233.3	1048.3	221.5	1061.5	192.9
Rec. Reading								
Attitude	28.6	6.2	28.0	6.5	23.5	7.6	22.0	6.8
School Reading								
Attitude	26.2	4.6	26.5	5.6	23.9	5.4	23.1	5.1

The first hypothesis stated that the experimental group would have significantly higher reading attitude scores than the control group on both segments of the survey. The results indicated that a significant difference was found between the experimental and control groups' attitude toward recreational reading:  $F = 18.9$  ( $df=1$ ),  $p < .00$  (see Table 2). This indicates that the SSR intervention caused students to have a more positive attitude about recreational reading. Additionally the first hypothesis contended that the experimental group, after participating in SSR, would score significantly higher on the survey that measured school and recreational reading. Also, for this variable a significant difference was found between the groups' attitude toward school reading  $F = 27.84$  ( $df=1$ ),  $p < .00$  (see Table 2). This indicates that students who participated in SSR during the research period had a more positive attitude toward school reading

The second hypothesis suggested that those students who participated in SSR would have higher SRI scores than those students who did not participate in SSR. The hypothesis also substantiated  $F = 76.66$  ( $df=1$ ),  $p < .00$  (see Table 2). This indicates that students who participated in SSR had significantly higher reading scores in comparison to students who did not participate in SSR during the research period.

Table 2

*ANCOVA Findings for Experimental and Control Groups on SRI, Recreational Reading and School Reading Attitude Survey Scores.*

Measurement	F	<i>df</i>	p	<b>Eta<sup>2</sup></b>
SRI	76.66	1	.000	.66
Rec. Reading (attitude)	18.19	1	.000	.30
School Reading (attitude)	27.84	1	.000	.39

## CHAPTER FIVE

### DISCUSSION

#### *Discussion of Results*

The results suggest in this experiment that there is a positive connection between SSR and a student's lexile score. Furthermore, the results suggest that in this experiment SSR has a positive connection with a student's attitude toward school and recreational reading. The results can be discussed in two distinct areas: the importance of the student and the SRI score and the connection between the student and his or her attitude regarding reading.

As earlier noted, a significant connection was found between students who participated in SSR and their SRI scores compared to the control groups' SRI scores. Although not perfect, the SRI test was able to give students and the researcher concrete information about the students' reading ability. Jenson and Jenson (2002) noted that the use of SSR in the classroom can increase a student's vocabulary and reading ability. In addition, Gallagher's (2003) research concluded that those students who participate in a silent reading program have higher test scores than those who don't.

At the moment, many researchers and educators alike are working to find reading strategies that have had some success in the classroom. The type of testing was constructive for the students and researcher alike for several reasons. One, the test itself was able to offer immediate feedback in a concrete, user-friendly score. From the moment they received their pre-test numbers, the students found out if their reading ability was above, below or at a ninth grade

level. The SRI also gave each student a list of books available within and a little bit above their reading level. When the experimental group visited the library, the students looked for those particular titles. Burdick and Lennon (2004) contend that when students are given a selection, less skilled readers will find books that aren't threatening and highly skilled readers will be able to branch out to more challenging literature.

What was most visible in the research project was the observation of student attitudes toward reading. Kirby's (2003) previous research found that a large percentage of students responded favorably to not only SSR, but also to reading as whole. The survey that was administered in this research measured the students' attitudes toward recreational and school reading. In both areas the students who participated in SSR had a significantly more positive attitude toward both recreational and school reading.

Previous research also cited contributing factors to a successful silent reading program. Hyde, Daniels & Zemleman (1998) maintain the notion that student choice is crucial when creating a program. Kirby's (2003) research also substantiated this idea. Many students in her survey noted that they would have had a much more positive attitude towards silent reading if they had choice over what books they were allowed to read. In another study Gallagher (2003) advocated the importance of teacher modeling. Students found that silent reading became more valuable and pertinent when they also saw the teacher taking silent reading seriously. These various factors were included when creating the silent reading intervention in the current research.

What was also noted was the student reaction when they compared their pre-test scores to their post-test scores. In the experimental group, sixty-six percent of the participants increased their post-SRI score. When the students found out they had increased their scores, they were so very proud and happy about their achievement. What also is important to note that both the experimental and control groups were classes with special education students. Many of those mainstreamed, special-education students saw an increase in their scores. Specifically six of the ten special education students who participated in SSR raised their post-SRI score. When they received their scores, they were incredibly pleased with themselves; often, for these students, reading scores have not been something to celebrate.

#### *Limitations of the Study*

When conducting research it is important to minimize all potential flaws, both procedural and methodical, in order to be able to create the most accurate information possible. The researcher took all precautions within the methodology. However, nothing is fail-safe. The Scholastic Reading Inventory (SRI) is one of the best means of measuring a student's reading ability; however it is not without its flaws. The first problem with the test is the fact that it is on the computer. Many students, including those who are special education students, have a difficult time with reading and comprehending the test. In order to remedy this, the researcher told the students that if they found themselves unable to concentrate or simply cannot read the text they should take a *time-out* and focus on something else for a few minutes then return to the computer screen and finish

the question. Throughout the pre-test and post-test the researcher observed students close their eyes for a few minutes and then return back to the test. Many students complained about the format of the test itself. As the test progressed, the questions became more difficult; students found themselves reading words with which they were unfamiliar. Some students became very irritated with the progression of the test. Because this was a test, the researcher was unable help them or let them use a dictionary. In this case, the researcher could only give them encouragement and let them figure out the answer as best they could. Neither the students nor the researcher found the lexile scores problematic. The students were happy they received a user-friendly score.

The second method of measurement was the use of the attitude survey. The researcher felt confident with the survey itself. The survey was created by researchers Ryan and Smith (1995). This particular survey's predecessor was created by McKenna and Kear (1990). Hence, the survey had been thoroughly tested in order to create both reliability and validity. The only limitation that the researcher had with the survey was all of the questions were worded in the same fashion. Once the student knew both the format of the Likert scale and the statement wording, they could have easily circled one number for each question without truly reading and comprehending the statement.

Another limitation that the researcher encountered was the population fluctuation of a normal high school setting. The researcher had many students move to different English classes and even different schools. The researcher also had many students move into the classroom from different classrooms and

different schools. During the twelve-week research period, many students were moved around due to the changes in the students' spring semester schedule.

Additionally the researcher did not have three post-SRI scores from students who have excessive attendance problems. The researcher had very little control over these matters yet with these limitations in mind, the researcher was pleased to have a sample size of 46 participants.

#### *Implications of Future Research*

Creating a successful reading program requires research and consistency. There is much wonderful research about SSR but very little concrete research that measures the connection between the practice of SSR and a student's reading ability through the use of the SRI. Because this is a quasi-experiment with a very small sample size, the researcher cannot make generalizations about the SSR program and further research would be needed. However this particular research was successful not only for the researcher but most importantly to the students. Students were excited about reading and would ask me if I would let them read on non-SSR days. The students looked forward to going to the library in order to find new books. It is the researcher's hope that the implementation of this program will lay a strong reading foundation that these students will build upon for years to come.



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## Appendices

## Appendix A

### Reading Attitude Survey

Directions: Answer the following questions by circling the number below each question.

**4 = Makes you very happy**

**3 = Makes you slightly smile**

**2 = Makes you mildly upset**

**1 = Makes you very upset**

1. How do you feel when you read a book on a rainy Saturday?

4                      3                      2                      1

2. How do you feel when you read a book in school during free time?

4                      3                      2                      1

3. How do you feel about reading for fun at home?

4                      3                      2                      1

4. How do you feel about getting a book as a present?

4                      3                      2                      1

5. How do you feel about spending free time reading?

4                      3                      2                      1

6. How do you feel about starting a new book?

4                      3                      2                      1

7. How do you feel about reading during summer vacation?

4                      3                      2                      1

8. How do you feel about reading instead of hanging out with friends?

4                      3                      2                      1

9. How do you feel about going to a bookstore?

4                      3                      2                      1

10. How do you feel about reading different kinds of books?

4                      3                      2                      1

Appendix A continued

**Reading Attitude Survey continued**

Directions: Answer the following questions by circling the number below each question.

**4 = Makes you very happy**  
**3 = Makes you slightly smile**  
**2 = Makes you mildly upset**  
**1 = Makes you very upset**

11. How do you feel when the teacher asks you questions about what you read?

4                      3                      2                      1

12. How do you feel about reading textbooks pages and worksheets?

4                      3                      2                      1

13. How do you feel about reading in school?

4                      3                      2                      1

14. How do you feel about reading your textbooks?

4                      3                      2                      1

15. How do you feel about learning from a book?

4                      3                      2                      1

16. How do you feel when it's time for reading in class?

4                      3                      2                      1

17. How do you feel about the stories you read in reading class?

4                      3                      2                      1

18. How do you feel when you read out loud in class?

4                      3                      2                      1

19. How do you feel about a dictionary?

4                      3                      2                      1

20. How do you feel about taking a reading test?

4                      3                      2                      1

## Appendix B

September 2005

Dear Parent or Guardian:

As a student in the Master of Education in Curriculum and Instruction at Wichita State University, I am conducting a study in order to complete my master's thesis.

Your child is invited to participate in a study of utilizing Sustained Silent Reading (SSR) to increase students' lexile score or reading level. By increasing the lexile score, a student's reading comprehension is also enhanced. I hope to learn how effectively encourage and facilitate an improvement in a student's literacy skills.

If you decide to let your child participate, your child will first be given a survey that discusses their attitudes about reading. Next, the students will take the Scholastic Reading Inventory (SRI). This will give the students' their lexile score or reading level. Using that information the students will begin to practice Sustained Silent Reading (SSR) three times a week for 15 minutes. At the end of the twelve-week research period, the students will again take a survey that discusses their attitude about reading. Lastly, the students will complete the project by retaking the SRI.

Your child will be encouraged to read more in a classroom environment. The practice of uninterrupted reading will increase his or her reading ability.

If you have any questions about this research you can contact me, Kellie Birmingham, at 6903 E. Odessa, Wichita KS 67226, telephone 744-6171 or Dr. Peggy Jewell, Department of Curriculum and Instruction, Wichita State University, Wichita KS 67260-0028, telephone 978-6933. If you have any questions pertaining to your rights as a research subject, you can contact the Office of Research Administration at Wichita State University, Wichita KS 67260-0007, telephone 978-3285.

You are under no obligation to allow your child to participate in this study. Your signature indicates that you have read the information provided above and have voluntarily decided to allow your child to participate.

You will be given a copy of this consent form to keep.

Sincerely,

Kellie Birmingham

---

Signature of Parent or Legal Guardian

Date



## Appendix C

September 2005

Dear Student:

I have been informed that my parent(s)/guardian have given me permission for me to participate. I will be a participant to study the utilization of Sustained Silent Reading and its effect on a student's lexile score. My participation in this project is voluntary and I have been told that I may stop my participation in this study at any time.

Sincerely,

Kellie Birmingham

---

Student Name

Date

## Appendix D

### FINAL REPORT for RESEARCH INVOLVING HUMAN SUBJECTS

I certify:

1. That the study entitled Utilizing Sustained Silent Reading  
to Increase Students' Lexile Scores  
was conducted as described in the approved protocol;  
and
2. That I will retain records of informed consent of my subjects for at least three (3)  
years after the subjects' participation.

Debra Jewell Ed.D.  
Signature of Investigator

April 23, 2006  
Date

IRB 9/94

## Appendix E



WICHITA STATE UNIVERSITY

Office of Research Administration

DATE: November 28, 2005  
NAME: Dr. Peggy Jewell and Kellie Birmingham  
DEPARTMENT: C&I

The University Institutional Review Board (IRB) has reviewed your research project application entitled:

*Utilizing Sustained Silent Reading to Increase Students' Lexile Scores*

and approved the project as provided in the Federal Policy for the Protection of Human Subjects. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

1. Any significant change in the experimental procedure as described should be reviewed by the IRB prior to altering the project.
2. When signed consent documents are required, the principal investigator must retain the signed consent documents for at least three years past completion of the research activity.
3. At the completion of the project, the principal investigator is expected to submit a final report; the form is attached.

Thank you for your cooperation. If you have any questions, please contact me (ext. 5635).

Sincerely,

Kenneth H. Pitetti, Ph.D.  
Chairperson, IRB

attachment