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A STUDY OF THE RELATIONSHIP BETWEEN STUDENT ATTITUDES TOWARD
READING AND ACHIEVEMENT IN READING IN FIFTH-GRADE STUDENTS

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BY

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Introduction

Despite widespread efforts to prevent reading problems and years of research about evidence based practices for remediating reading skills, reading continues to be challenging for many students. A principal focus of federal and state educational legislation revolves around improving students reading proficiency (Martinez, 2008, p.1010). There is an abundance of research on instructional methods, interventions for preventing reading problems, and improving struggling students reading skills. Reform efforts aim to ensure reading instruction blocks during the school day (Reading First Schools) and policy recommends intense, quick academic interventions at the first sign of skill deficits (p. 1010). Despite these widespread efforts, less than one third of the nation's fourth-graders read at or above a proficient achievement level (National Assessment of Educational Progress [NAEP], 2005), which suggests a "reading crisis" in our country (p. 1010). The 2002 Nation's Report Card on Reading, issued by the National Assessment of Educational Progress (NAEP, 2002), indicated that 36% of U.S. fourth graders and 25% of U.S. eighth graders read below a basic level, and researchers associated with the NAEP study believe that these students could not demonstrate an understanding of the literal meaning of text, identify main ideas, make inferences, or relate what they had read to personal experiences (Reis, 2007, p. 4). This failure may result in students' inability to make successful transitions to increasingly challenging academic work.

Learning to read is likely the principal learning activity undertaken by children in their first years of school. The development of literacy skills in children is a fundamental role of schools. Educational and psychological researchers have focused their attention on the cognitive components of reading (components which includes reading comprehension, reading fluency, and motor skills involved in reading, among others), leaving a gap in the area of measuring

student attitudes. Researchers have long held attitude as an important psychological construct because the important role it has in moderating one's level of motivation and intention to read, as well as the relationship between an individual's personal beliefs regarding reading and reading activities. Among classroom teachers, it is widely believed that the students' attitude toward reading significantly impacts students' reading achievement (Petscher, 2010, p. 335).

The purpose of this study was to determine if there is a relationship between fifth grade student attitudes toward reading and student achievement in reading. The researcher hypothesized that from this study a correlation between student attitudes toward reading and student achievement in reading would be found.

Why Reading is Important

Research about children's attitudes toward reading demonstrates that teachers can serve as positive influences on student attitudes about reading through specific interventions and that certain instructional approaches may relate to reading attitudes (Martinez, 2008, p. 1011). Studying effective variables associated with good and poor attitudes toward reading is relevant for educators and parents who want to reduce student frustration with reading and promote a love of reading at school and at home.

Appleyard (1991) relates reading for children in the six to twelve age range to their growing independence as school students and family members, their adoption of social roles, and their growing awareness of a private inner life. Appleyard says that reading focuses on identity issues within children (p. 59). Literature offers children opportunities for social and emotional development. Reading opens opportunities to become involved in other worlds, sharing in knowledge, relationships, and feelings that go beyond direct experience (Sainsbury, 2003, p. 49).

Defining Reading Attitude

In 1975, researchers Fishbein and Ajzen defined attitude generally as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” (McKenna & Kear, 1995, p. 934). Alexander and Filler’s (1976) reading attitude is “a system of feelings related to reading which causes the learner to approach or avoid a reading situations” (1995, p. 934). Gathering evidence from prior research, McKenna and Kear (1990) conducted a factor analysis which indicated that there are two dimensions of reading attitude: attitude toward recreational reading and attitude toward school-related, academic reading.

While there are multiple models of reading experiences, one of the most widely recognized is the Mathewson Model. In the Mathewson Model, attitude is one of a multitude of factors that work together to influence an individual’s intention to read. The results of a reading encounter are circular, they feed back and influence attitude. Mathewson’s principal concern was with the role of attitude as a factor during the act of reading and during the period when one learns to read. His model has four “cornerstone concepts,” including personal values, goals, self-concepts, and “persuasive communications,” which can affect the reader through a central route (such as when a teacher directly encouraged reading) or peripherally (such as when a book has an interesting cover). In Mathewson’s three-way view, attitude is comprised of feelings, action readiness, and beliefs, along with two other factors which are seen as contributors to the decision to read or to continue to read: external motivators and the individual’s emotional state (McKenna, 1995, p. 937-938). Although the Mathewson Model is supported in general, it does not cover the possibility that social norms may have a direct effect on attitude. In an attempt to construct a model more conducive to considering the long-term development reading attitudes,

McKenna (1994) synthesized the work of Mathewson and others. The resulting McKenna Model rejected the three-way view of attitude, instead they hold the view that attitude is largely emotional in nature and that beliefs are causally related to it (1995, p. 938).

Similarly to the McKenna Model, Sainsbury and Schagen (2004) rejected the three-way view of attitude. According to Sainsbury and Schagen there seem to be five aspects of motivation, rather than three. The first is learning orientation, which is being dedicated to learning the meaning of what is read. The second is intrinsic motivation, which is the enjoyment of reading and the interest in seeking out reading activities. Intrinsic motivation can be based on different things such as curiosity, involvement, and challenges. The third aspect is extrinsic motivation, also known as rewards, which can lead to superficial reading tendencies that may not be continued once the reward has been gained or removed. The fourth aspect is self-efficacy, or confidence in one's own ability as a reader. The final aspect is social motivation, which can be exemplified through sharing books (Sainsbury, 2004, p. 373).

Defining Reading Literacy

In addition to reading attitude, the other primary aspect of a reading experience is reading literacy. According to the Organization for Economic Cooperation and Development (OECD), the definition of reading literacy should go beyond “the notion of reading literacy as decoding and literal comprehension; it implies that reading literacy involves understanding, using and reflecting on written information for a variety of purposes” (2003). Reading literacy involves being able to understand, use, and reflect on written texts in order to achieve goals and participate in society successfully (Levy, 2009, p. 362).

Factors Affecting Reading Attitude

There are multiple factors that affect student reading attitude. Bronfenbrenner's Ecological Model (1979) consists of four different and interrelated spheres of influence and it can easily be adapted to use for the purpose of literacy. The microsystem would include parents and children sharing reading experiences. The second level, the mesosystem, would include things such as the children's relationships with reading in school, among their peers, and at home. Third is the exosystem, which includes the effect of parents' workplace on the children's reading skills. The fourth is the macrosystem, which would include belief systems from different cultures and views of diverse literacy experiences. Barnyak's study (2011) focuses on the microsystem, and how parents influence their children's ability to read successfully.

Bronfenbrenner described the psychological development of a young child as being "enhanced through his involvement in progressively more complex, enduring patterns of reciprocal contingent interaction with persons with whom he has established a mutual and enduring emotional attachment" (2005, p. 34). Regardless of socioeconomic background, literacy events occur daily in children's lives (Barnyak, 2011, p. 158).

Family History

Although many factors are important in a child's literary development, perhaps the most important is family literacy history. Parent involvement plays an instrumental role in children's development. A large amount of learning occurs within the home before children even enter school. Significant relationships have been found between family history and children's reading skills, spelling skills, reading comprehension skills, orthographic processing skills, and children's overall perceived reading competence (Conlon, 2006, p. 11). There has been a movement away from purely cognitive interpretations of reading achievement toward an

approach that includes psychosocial factors, which may include children's beliefs about their reading ability and their overall reading attitude. The way that children view their own reading ability influences aspects of motivation such as reading persistence and interest, which influence overall reading achievement (2006, p. 15). Children with poor reading skills may be more likely to come from a family with a history of reading difficulties (2006, p. 11).

There are two primary ways in which family factors can impact children's reading development. First, there could be a genetic link that would make children predisposed to have lower reading skills. Second, family history can influence children's reading skills through the encouragement of reading experiences, or lack of experiences. For example, the home literacy environment, which includes things such as the availability of books and time, has been linked to children's development of reading skills (2006, p. 13). Family demographic factors (such as socioeconomic status and mother's education level, among others) and other environmental factors (such as exposure to text and parental views, among others) have also been linked to reading ability (2006, p. 13). Conlon's (2006) general finding from these studies is that by the time children are in the early school years, a greater proportion of children from families with a history of reading difficulties perform below average on literacy activities based on school standards and curriculum. Children from families with a history of reading difficulties were at about a 5.7 times the risk of reading difficulties than children without positive parental history (2006, p. 13).

Researchers have been interested in the sources of educational differences between children from different socioeconomic backgrounds for many years. Cultural capital theory suggests that cultural resources at home, along with financial resources of the family, enhance the child's educational experience. High levels of cultural resources, which parents of high

socioeconomic backgrounds are able to give to their children may account for a portion of educational differences among students from different socioeconomic backgrounds. In the United States, a significant amount of research on child development has highlighted the importance of home literacy environments that stimulate the development of a child's cognitive and language skills. Researchers have found substantial differences in home literacy environments between children from high and low socioeconomic families, which in turn explain educational differences between the two groups of children (Park, 2008, p. 490). Poor home literacy environments of low socioeconomic families will likely lead to educational disadvantages for children from these backgrounds. In Park's study (2008), even when controlling for factors such as parental education and other individual characteristics, the index of early home literacy activities, the index of parental attitudes toward reading, and the number of books at home were still significantly associated with children's reading performance (2008, p. 502). Despite correlation between parental education and home literacy environments, a significant portion of low-educated parents are engaged with their children in literacy activities, have positive attitudes toward reading, and have a large number of books at home (2008, p. 502). Therefore, instead of duplicating educational differences among children from different socioeconomic origins, home literacy environments can be used as important resources because children from poor socioeconomic backgrounds can benefit from them.

Cognitive Functioning

A child's reading attitude and achievement may also be affected by cognitive factors. Phonological processing is an auditory processing skill with which one can determine speech sounds in the absence of visual print. As an auditory processing skill, there is a strong relationship between phonological processing skills and reading skills. Children with poor

phonological processing skills often have difficulty in segmenting words into their component sounds according to Conlon (2006, p. 14). It is widely held that children with reading disabilities have a deficit in phonological processing. There are a large number of “exception” words in the English language, or words that are not phonologically regular. Exception words are words such as “yacht” that are not pronounced as they should be by using strictly phonological rules. Successful readers of English are required to use phonology and orthographic skills, or spelling skills (2006, p. 14). These orthographic processing skills play an important role in the explanation of reading skills. Visual impairment found among poor readers may be explained by difficulties with attention shifting, or inefficiencies in disengaging attention from one stimulus to another. This difficulty would produce visual problems when sequencing letter strings (2006, p. 14). Family history contributes a significant genetic link to the explanation of orthographic processing and children’s perceptions of successes and challenges in reading. Based on Conlon’s (2006) overall findings, both family history and children’s perceptions of reading competence are important additional variables that should be included when considering the factors associated with reading performance.

Grade and Reading Attitude

Many studies have focused on variables such as grade level and its effect on reading attitude. When children begin school, they are typically motivated and interested in learning and in school activities. As children get older, this interest in learning steadily declines. These declines in academic interest have been shown to spread specifically to interest in reading (Kirby, 2011, p. 264). Studies of reading attitudes have focused on differences across grade level and age. Researchers have reported that younger students have more positive attitudes than older students do, and in general, attitudes toward reading decline each year as students move

through the elementary years (Martinez, 2008, p. 1011). Research suggests that for readers with low skill levels, attitudes toward reading decline when compared to attitudes of peers with high skill levels. This widening of the attitude gap across the elementary school years is parallel to the Matthew Effect in reading and highlights the inexorable downward spiral of students who begin school with poor reading abilities and attitudes. It appears that children's attitudes toward reading, inside of school and out, influence the amount of reading in which they participate, which in turn influences their reading ability.

McKenna, Kear, and Ellsworth conducted a study that included a national sample of 18,185 students in grades 1 through 6, and found that first and second graders expressed positive attitudes toward academic and recreational reading regardless of their reading ability (1995). Despite the aforementioned fact, all students' overall reading attitudes gradually and steadily declined across the elementary school years. In addition, while all students' academic-reading attitudes declined similarly despite their ability level, the low-ability students' attitudes toward recreational reading yielded the sharpest decline across the grade levels (Lazarus, 2000, p. 272).

Gender and Reading Attitude

In addition to grade level, gender may also affect reading attitude. Reading attitudes have been measured and attitudinal differences reported for many different groups, including gender groups. Such studies produce consistent findings about gender differences in reading attitude which indicate that girls have more positive reading attitudes than boys (Martinez, 2008, p. 1011). Using the Elementary Reading Attitude Survey (ERAS), McKenna, Kear, and Ellsworth (1995) reported that girls in grades 1 to 6 had more positive reading attitudes than boys in both academic and recreational reading activities. Gender-specific beliefs concerning expectations others may hold about gender and reading may explain consistent findings that girls tend to

possess more positive attitudes than boys. Girls as a group tend to outperform boys on reading ability measures. It may be that societal beliefs lead first to more positive attitudes toward reading in girls, thereby facilitating an advantage over boys in ability, and this difference in ability then helps to propagate more positive attitudes among girls in comparison to boys (McKenna, 1995, p. 939).

Ethnicity and Reading Attitude

Ethnicity is another factor that may affect a student's reading attitude. Studies have shown that ethnic group membership may also affect views of reading. In 1991, Saracho and Dayton reported that among a large sample of preschool children, African American students tended to possess more negative attitudes than white students or Hispanic students. This fact raises the idea that culturally transmitted beliefs may impede the progress of positive reading attitudes (McKenna, 1995, p. 939). According to McKenna, Kear, and Ellsworth (1995), the idea that beliefs about the importance of reading can be culturally transmitted should be researched further.

Reading Attitude and Students with Learning Disabilities (LD)

Student differences may also contribute to a variety of reading attitudes. Although traditional views may attempt to associate students with learning disabilities with negative attitudes toward reading, few studies actually exist to support these interpretations (Lazarus, 2000, p. 271). Studies show that students with learning disabilities who are recipients of reading instruction in special-education resource rooms expressed reading attitudes that equaled or exceeded those expressed by low and average non-disabled students in general education classrooms in a nationwide study conducted by McKenna and Kear (1990). The findings also indicated that the students who were diagnosed with learning disabilities had more stable

attitudes across grades 1 through 5 when compared to those expressed by their non-disabled students in the same study (1990). For total reading achievement and attitude, only the high scoring, non-disabled readers' scores exceeded the scores that were noted for the students diagnosed with learning disabilities (Lazarus, 2000, p. 280).

Why Reading Attitude is Important

Understanding the role of attitude in developing readers is important for two principal reasons: first, attitude may affect the level of ability ultimately reached by a student through its influence on factors such as engagement and practice; second, even for the accomplished reader, poor attitude may present a choice not to read when other options exist. This condition, which occurs when a person chooses not to read, is now generally known as aliteracy. The emotional satisfaction gained from reading is the primary reason that most readers read. Similarly, the emotional frustration that nonreaders may experience when trying to read is the primary reason that they do not read.

Students who are interested and confident are motivated to learn. This motivation brings about further learning, making this relationship cyclical. Those students who are enthusiastic readers tend to read more, thereby developing their reading abilities. The enjoyment of reading is important in developing and maintains reading skills. Reading education has two main goals: first, children must be given the necessary skills to read effortlessly; and secondly, their enjoyment should be developed so that they are able to become self-motivated readers who participate in the broader and deeper experiences that reading can bring. Those who enjoy reading more are generally better readers. The better readers may prefer more challenging material such as stories, magazines and newspapers, whereas the lower readers may choose more often comics, poetry and information books. The balance between reading skills and enjoyment

remains an important topic for teachers in their task of developing students as “capable, confident and enthusiastic readers” (Sainsbury, 2003, p. 54).

Traditional insight suggests that positive attitudes toward reading result in a greater likelihood to take part in reading. Although understanding children’s attitudes about reading will not explain the cause of reading skills deficits or provide explicit instructional interventions for academics to prevent reading deficits, studying affective variables correlated with attitudes toward reading is relevant for educators and parents who want to reduce children’s frustration with reading and promote a love of reading in and out of school (Martinez, 2008, p. 1011). Boosting reading attitudes is a meaningful initiative for educators and school professionals who wish to narrow the reading gap and eliminate reading failure. McKenna, Kear, and Ellsworth (1995) suggest that young readers’ positive attitudes toward reading produce motivation and engagement, which influences their overall levels of literacy. Family history and cognitive processes in themselves fail to explain all of the variability in children’s reading skills. There has been a shift away from a cognitive interpretation to an approach that includes multiple factors, such as children’s beliefs about the self and attitudes. Within the context of reading, the way in which children evaluate their reading capabilities is expected to influence aspects of motivation, such as interest in reading and persistence in reading, which influences children’s reading achievement (Conlon, 2006, p. 15). Reading attitude fulfills an important role in the development and use of a lifetime of reading skills. The ultimate success of reading instruction may be strongly tied to the reader’s attitude. Researchers have hypothesized that attitudes affect one’s motivation and subsequent reading achievement by increasing or decreasing the amount of time that learners engage in reading. Others have noted that even accomplished readers with average to poor attitudes toward reading may not read when other options (such as television

viewing are available). However, extensive evidence has consistently linked reading attitude with ability and reported that poor and remedial readers express more negative attitudes than better readers (Lazarus, 2000, p. 272).

The McKenna model predicts that an individual's attitude toward reading will develop over time as the result of three factors: normative beliefs, beliefs about the outcomes of reading, and specific reading experiences. Beliefs about the outcomes of reading (whether those outcomes are positive, negative, or boring) are formed in relation to children's beliefs about the outcomes of competing activities (such as television viewing). As students grow and more leisure options develop, the prospect of reading will be weighed against available alternatives, each of which is associated with an attitude. Students who become capable readers may not have strong positive attitudes toward reading if they expect to be more satisfied with other leisure activities. Beliefs, nevertheless, about the outcomes of reading must relate at least in part to the ability to read. The obligation of this relationship is to a certain extent self-evident, but growth in ability is linked to one's perception of the value of reading. If the value of reading is low, the development of reading ability will be inhibited and results will tend to confirm the belief that reading has little if any value (McKenna, 1995, p. 939).

Changing Attitudes Toward Reading

When a student who holds a negative attitude reads a likable book, there is a direct impact on the attitude and belief system about reading. Posner, Strike, Hewson, and Gertzog (1982) identified four conditions that must be satisfied for inconsistent new experiences to alter the belief system in a long-term fashion. In the first condition, the student must recognize the new experience as "anomalous" ("I dislike reading, but this book is good"). In the second, the student must believe there is a need to reconcile the dissimilar beliefs ("Perhaps I need to

reevaluate how I feel about reading”). Third, the student must wish to reduce the discrepancies among beliefs (“If I dislike reading, I need to explain to myself how certain books are enjoyable”). Finally, the student must realize that the two beliefs cannot be integrated (“I cannot dislike reading and at the same time like this book”). This theory and its four conditions are important in any effort to improve reading attitudes because they suggest intervention strategies for teachers and support the theory of Cognitive Dissonance (McKenna, 1995, p. 953-954).

Librarians and teachers should make an effort to provide materials that reflect students’ interests, such as celebrities, sports, and popular culture, as well as items that address multicultural and urban topics in order to reach diverse readers (Hughes-Hassell, 2006, p. 44). Teachers have to make their students feel successful in the classroom to support the cyclical nature of success leading to further motivation and success. Among other factors, teachers are important in enhancing or decreasing student motivation for reading. One way that the power of the classroom can be shared is through peer-led discussion groups. It is important to take advantage of both student-led and teacher-led discussions, while creating a balance that provides choice and enhances the abilities of all of the classroom students.

Teacher influence is the one area over which the teacher has the most control, whereas the attributes students bring with them to school (for example: gender, general ability, past experiences) is an area over which teachers have no control. Teachers must take advantage of the characteristics that they can control, and use them to positively motivate their students and help them be successful. Teachers should establish a classroom climate where students feel confident and engaged, while valuing attempts at learning over correct responses. This is especially important since student engagement in the classroom is directly linked to their success in school. For students to become actively engaged, the lessons must have several key

characteristics. The lesson must be made personal, meaningful, and relevant to the life of the students, who come from diverse backgrounds and have unique needs. Also, the classroom as a whole should be a place where the students feel safe, comfortable, and free to explore their academic and recreational interests. Within a well-structured classroom, student choice is important as a motivator of student learning. Teachers must work to develop a classroom environment students are engaged and motivated in relation to academics and others skills.

Reading aloud to students is a key element to such an environment because it builds background experience, as well as skills that increase vocabulary, sentence structure, syntax, and comprehension. Students of all ages benefit from the teacher reading aloud to the class on a regular basis. Teachers who demonstrate a personal love for pleasure reading encourage their students to read and discuss books often by modeling a healthy attitude toward reading. Teachers demonstrate their love of reading by becoming explicit reading models who share their own reading experiences with the students. These experiences can be related to students through discussions about text and about ways in which literature has personally affected a teacher's life, students and teachers can share passages from personal reading experiences, or teachers and students can share experiences through dialogue journals.

Students' access to literature greatly affects their abilities and motivation to engage in reading. Children arrive at school with different experiences and differing support levels in reading. Because of this, a literacy rich environment must be provided at school, especially for those students who do not have text-rich homes, to provide students with a variety of choice for reading materials and level the playing field for children of different backgrounds. Informational books, such as newspapers, magazines, and trade books are often of interest to students, and should be included in the classroom library. Children become excited to share facts and

knowledge learned when reading, which leads students to gain a sense of ownership and personal connection with their learning, which cyclically positively impacts their motivation to read. According to Corcoran (p. 141), recommendations can be made for all intermediate teachers to explicitly dedicate time for read-alouds, discussions, choice, and exploration of literature to motivate students to become life-long readers.

How Reading Attitudes are Relevant to Teachers and Families

Reading attitudes are relevant to teachers and families for many different reasons. Elementary students who experience academic success generally possess more positive attitudes toward reading and higher levels of reading related self-esteem when compared to their lower-achieving peers. It seems that if schools desire to influence student affective domains, schools may effectively influence the affective disposition of students by increasing academic performance and in this case by utilizing evidenced-based instructional programs (Kaniuka, p. 186).

Elementary Reading Attitude Survey (ERAS)

In order to measure student reading attitude, a survey was developed. The Elementary Reading Attitude Survey (ERAS) reportedly measures attitude toward recreational and academic reading (Kazelskis, 2004, p. 111). There has been a long-standing assumption that the attitudes toward reading and reading achievement are related and several studies have indicated that attitudes toward reading are related to scores on reading achievement tests (Worrell, 2007, p. 119). McKenna and Kear (1990) reported developing the ERAS, “a public-domain instrument ... [that would] enable teachers to estimate attitude levels efficiently and reliably” in an attempt to increase research on attitudes toward reading. The ERAS is based on a standardized national sample of over 18,000 students in grades 1-6 from 95 different school districts in 38 states. The

20 item, 4 node survey instrument yields three scores: a recreational reading score, an academic reading score, and a total score. McKenna and Kear (1990) reported moderate to high internal consistency coefficients for the ERAS scores as well as evidence of structural validity, and they published normative standards on the three scores for the six grades they studied (Worrell, 2007, p. 119).

The ERAS is a pictorial rating scale based on the cartoon character Garfield that comprises of two 10-item subscales for recreational and academic (school-related) reading attitude. Responses are quantified by assigning from 1 to 4 points to each item, 1 being most negative, 4 being most positive. Use of Likert rating scales to measure attitude include accepting certain limitations, which may include the need for relatively subjective judgments by respondents; the unpredictable effects of mood, attention, cooperation and other factors present at the time of assessment (McKenna, 1995, p. 943-944). The decision to use a pictorial format was made because of the ease with which young children should be able to comprehend each of the options. The researchers chose to use the Garfield character after an informational survey of elementary-age students indicated his recognizability. In a survey of more than 30 elementary teachers, the results indicated that the comic strip character Garfield was more likely to be recognized by children in grades 1 through 6 than any other (McKenna, 1990, p. 627).

The decision to use an even number of scale nodes (4) was made in order to avoid a neutral middle choice, which was based on research which suggested that subjects often use a comfortable middle option to avoid committing themselves, even when clear options exist. The decision to include four nodes and no more was based on findings that short-term memory development often prevents young school-age children from considering more than five options at a time. Reliability estimates for the two subscales and for their composite score are based on

Cronbach's alpha (Cronbach, 1951). The coefficients range from .74 to .89, and of 18 coefficients computed (for the two subscales and the full scale at each of six grade levels), 16 were at least .80. Evidence of construct validity was gathered by means of a series of tests in which subjects were grouped according to various conditional variables (McKenna, 1995, p. 944). The recreational subscale was tested by grouping children into those with and without library cards (given that a library was available to them) and those with and without a book currently checked out from the school library. The academic subscale was tested by grouping children based on reading ability. Teachers were instructed to begin the administration of the ERAS by describing the survey and its purposes and by making clear that there were no "right" answers. Discussion should be on the pictures of Garfield, and class consensus should be achieved as to the predominant mood characterized by each illustration. To minimize the possible effects of decoding difficulties, teachers should read each item aloud twice as students followed along and marked their responses (1995, p. 944).

The ERAS can be given to an entire class in a matter of minutes, but it is important that the administration reflect as closely as possible the procedure used with the norming group in order to avoid unnecessary bias. The scoring sheet that comes with the instrument can be used to organize this process and record recreational, academic, and total scores, along with the percentile rank of each assessee. After being recorded, these results are ready for immediate use. This survey provides quantitative estimates of two important aspects of children's attitudes toward reading, academic and recreational. They can do little in themselves to identify the causes of poor attitude or to suggest instructional techniques likely to improve it, just as with global measures. This instrument can be used however to make possible conjectures about the attitudes of specific students, provide a convenient group profile of a class (or larger group), or

serve as a means of monitoring the attitudinal impact of certain instructional programs. A teacher might begin the school year by administering the ERAS during the first few weeks of school. Class averages for recreational and academic reading attitude will enable the teacher to characterize the class generally based on those two dimensions. Scores for individual students may suggest the need to further explore characteristics such as the nature, strength, and origin of their values and beliefs. This goal could be pursued through the use of individually conducted strategies, which may include strategies such as structured interviews, open-ended sentence instruments, or interest inventories (McKenna, 1990, p. 627-28).

During the past decade, the ERAS has been used in various studies designed to examine relationships between reading attitude, reading habits and selected cognitive variables; reading attitude and approaches to literacy instruction by grade level; reading attitude and reading achievement across grade level, gender, ethnicity, and socioeconomic status; reading attitude, reading ability, gender, and ethnicity; and language arts achievement and reading attitude survey format; and computerized self-assessment of reading and gender, among others (Kazelskis, 2005, p. 29).

Reading Level Indicator

The ERAS is helpful in measuring reading attitude, but it is unable to measure reading achievement. The Reading Level Indicator is an untimed group-administered, norm-referenced reading screener. According to the manual that accompanies the Reading Level Indicator testing protocols, its primary use is to identify individuals reading at a second to sixth grade level. In addition, it can identify functional non-readers (those who are reading at a grade equivalent of 1.8). The Reading Level Indicator range of results has been limited in order to make this screener sensitive and reliable for those students that are of greatest concern in relationship to

reading ability. Two groups that are of greatest concern include students who may be at a reading level significantly lower than the level of materials being used in the classroom. Also, students who may not have the ability to read independently materials assigned for use outside of the classroom. Because the Reading Level Indicator is a screening measure designed to identify individuals experiencing significant reading difficulties, it can help teachers and other education professionals make instructional decisions (such as placement) regarding students. The resulting reading levels which are calculated from the assessment may be used to gauge the test taker's ability to make use of grade level instructional materials.

The Reading Level Indicator can be administered in approximately 4 to 20 minutes. According to the author, Kathleen Williams, testing time was found to range from 3 minutes and 20 seconds to 14 minutes and 15 seconds for a small study of 42 students in Grades 4 through 12. The Reading Level Indicator has two parallel forms, referred to as the Purple Form and the Blue Form. Each form contains forty multiple choice questions of two different types. The first twenty questions are sentence comprehension items, and the second twenty questions are vocabulary items. For the sentence comprehension items, the examinee is instructed to read a sentence with a missing word, and choose a word that would best complete the sentence by using context clues. For the vocabulary items, each item is presented by a short phrase or sentence with one word in color (purple or blue), and the examinee is instructed to put an “x” in front of the word or group of words that mean the same as the word printed in color, from a list of four or five options.

The Reading Level Indicator is reliable and valid. Reliability for the Reading-Level Indicator was estimated using coefficient alpha, split-half, and alternate form methods. In all cases reliability was highest for the youngest examinees, decreasing slowly over the grades.

Both forms had an alpha coefficient ranging from .93 for 1st graders to .82 for 12th graders. Corrected split-half reliabilities were similar to the coefficient alpha values. Alternate form reliabilities were .94 for the youngest children and .81 for the oldest. The alpha reliabilities were the same for both the Purple and Blue form, ranging from .82 to .93. Because the Reading Level Indicator aims to screen reading ability, in order for the screener to have content validity it has to sample reading ability. Both sentence comprehension and vocabulary are key elements of reading ability, which indicates content validity. Evidence of construct validity is provided by the criteria that were used in writing the questions for the Reading Level Indicator. The Reading-Level Indicator purports to be a screening instrument of reading ability. Sentence comprehension items require that students read and comprehend sentences as a unit. Vocabulary items require knowledge of the meaning of words. Both skills are undeniably basic elements of reading ability. Construct validity evidence is provided by the detailed criteria that were used in writing the two item types for the Reading-Level Indicator. Care was taken to ensure that reading ability was being measured rather than other abilities, such as background or word knowledge, and that incorrect responses to items were not due to “tricky” or misleading distractors.

The manual itself states that although the test can identify nonreaders, it is really most effective at reading levels from the second to sixth grade, lacking sufficient discrimination above the seventh grade level. The standardization of the Reading-Level Indicator was a byproduct of the 1999 standardization of the GRADE (Group Reading and Diagnostic Evaluation). A pool of items was administered to 17,727 individuals aged 5 to 21 in Grades 1 through 12 to try out items for the Sentence Comprehension and Vocabulary subtests of the GRADE. Later items for the Reading-Level Indicator were drawn from this same pool of items. The standardization

testing was conducted in the classroom setting by a teacher or administrator familiar to the students. The sample consisted of 32% African Americans, 30% Hispanics, 34% Whites, and 4% Other. Grade equivalents were determined by calculating the median ability level for all items and using the levels in order to determine the grade equivalents for the raw scores. The sample consisted of 32% African Americans, 30% Hispanics, 34% Whites, and 4% Other. Also, a Spanish translation of the testing materials is available. During the development of the Reading Level Indicator, items were analyzed quantitatively for gender and racial bias by examining individual items statistically to determine if they were significantly more difficult for either males or females or whites, or for African American or Hispanic populations. In addition, a panel of consultants reviewed the items in order to assess their fairness and inclusiveness of students of diverse backgrounds. Items that were judged by this panel as quantitatively or qualitatively biased were deleted altogether from the item pool.

Myrtle Beach Intermediate School Fifth Grade Study

Methodology

The researcher, Christen Shelley, chose to administer the Elementary Reading Attitude Survey (ERAS) and the Reading Level Indicator to a class of 25 students at Myrtle Beach Intermediate School. These assessments were chosen because they can be administered to an entire class in less than 30 minutes. The assessments are easy to administer and do not require a certified administrator. Both assessments are reliable and valid. The ERAS reliability coefficients range from .74 to .89 and the Reading Level Indicator reliability ranged from .82 to .93. The ERAS is a 20-item, 4-node, pictorial rating scale which yields recreational and academic reading attitude scores. The Reading Level Indicator is an untimed group-administered, norm-referenced reading screener that yields a reading ability score. The

administration of the reading assessments began at 12:45 p.m. on May 7, 2012 and ended at 1:45 p.m. on the same day. Both instruments are reliable and valid according to the accompanying statistical manuals. It is possible that the results of the tests may be affected by measurement and observer effects. The students may have chosen particular answer choices because they were aware of being tested.

The sample was chosen based on a connection to a fifth grade teacher, Mrs. Tina Medina, who was willing to allow her class to participate in the study. Parent permission was acquired by sending home a letter informing parents of the study and requesting permission to test their children. Of the 25 students in the classroom, 14 returned parent permission forms. The key characteristics of the students that were tested for this study include: chronological age, gender, if they have an Individualized Education Plan (IEP), if they have a unique ability, and their ethnicity (see table 1 key).

The students who participated in this study ranged from 10 years 5 months old to 11 years 10 months old. Of the 14 students who were included in the study nine were females and five were males. None of the students who participated had IEPs. Two of the students, both females, were ESOL students. Four of the students, two males and two females, were GT students. Eight of the students were Caucasian, one of the students was Hispanic, two of the students were African American, two of the students were multiracial, and one of the students was Albanian. A potential problem with the sampling procedure may be that there was no control group to compare the sample group to.

Table 1—Participant Characteristics

Student	Chronological Age	Gender	IEP	Ability	Ethnicity
<i>Aureanabidia</i>	11 yrs. 0 mos.	F	N	ESOL	H
<i>Curt</i>	11 yrs. 10 mos.	M	N	GT	W
<i>Gage</i>	10 yrs. 10 mos.	M	N	NA	W
<i>Faith</i>	11 yrs. 0 mos.	F	N	GT	W
<i>Darl</i>	10 yrs. 9 mos.	M	N	NA	B
<i>Shyann</i>	10 yrs. 5 mos.	F	N	GT	WB
<i>Olivia</i>	10 yrs. 9 mos.	F	N	NA	W
<i>Travis</i>	11 yrs. 4 mos.	M	N	NA	W
<i>Arieyunna</i>	11 yrs. 2 mos.	F	N	NA	B
<i>Geraldina</i>	11 yrs. 7 mos.	F	N	ESOL	AI
<i>Cade</i>	10 yrs. 10 mos.	M	N	GT	W
<i>Stephanie</i>	11 yrs. 5 mos.	F	N	NA	WB
<i>Emily</i>	11 yrs. 3 mos.	F	N	NA	W
<i>Becca</i>	11 yrs. 5 mos.	F	N	NA	W
Key:					
<u>Ability:</u> ESOL (English as Second Language) GT (Gifted and Talented)			<u>Ethnicity:</u> Caucasian (W) Hispanic (H) African American (B) Multiracial (WB) Albanian (AI)		

The study took place at Myrtle Beach Intermediate School in Myrtle Beach, South Carolina. Mrs. Medina, the fifth grade classroom teacher introduced the researcher to the class and briefly discussed with the students the testing procedure, and left the room.

Data Analysis

The researcher compared the scores for the ERAS and the Reading Level Indicator using the Pearson *r* correlation coefficient, which was developed by English statistician Karl Pearson (Hinkle, 1994, p. 107). The correlation coefficient that is used most often in studies of behavioral science is the Pearson product-moment correlation coefficient, which is symbolized by *r* and referred to as Pearson *r*. Pearson developed this correlation coefficient in order to describe relationships of cross-products. Cross-products involves multiplying the two scores (X

and Y) for each test subject and then determining their sum, and then dividing the sum by $n - 1$ (1994, p. 107). Data analysis was completed through the Coastal Carolina University (CCU) Mathematics Learning Center. Discussion between the researcher and the mathematical statistician revolved around the best way to analyze the data. The discussion led to a paired t-Test (paired two sample for means), which compares the means of two variables. A paired t-Test was chosen in order to compare the two sets of data which were matched.

The Pearson correlation (or r) for the results from this study of 14 students' scores on the ERAS and the Reading Level Indicator was calculated 0.53319, which is a slight positive correlation, although it is not a strong correlation. The research hypothesis held that student reading ability and achievement would be correlated, which has been proven by this survey, despite the fact that the correlation is not strong.

Results

A paired t-Test was chosen in order to compare the two sets of data which were matched, which compares the means of two variables. The data analysis indicated a slight positive correlation of .53 when comparing students' scores on the ERAS and the Reading Level Indicator. This indicates a slightly positive correlation between students' reading attitude and reading achievement. Table 2 displays the mean, variance and Pearson correlation of the students' scores for the Reading Level Indicator and the ERAS.

Table 2—tTest (Paired Sample for Two Means)

	<i>Reading Level Indicator</i>	<i>ERAS</i>
Mean	26.85714286	53.14285714
Variance	20.28571429	156.2857143
Observations	14	14
Pearson Correlation	0.533193086	

Table 3—Student Scores on ERAS and Reading Level Indicator

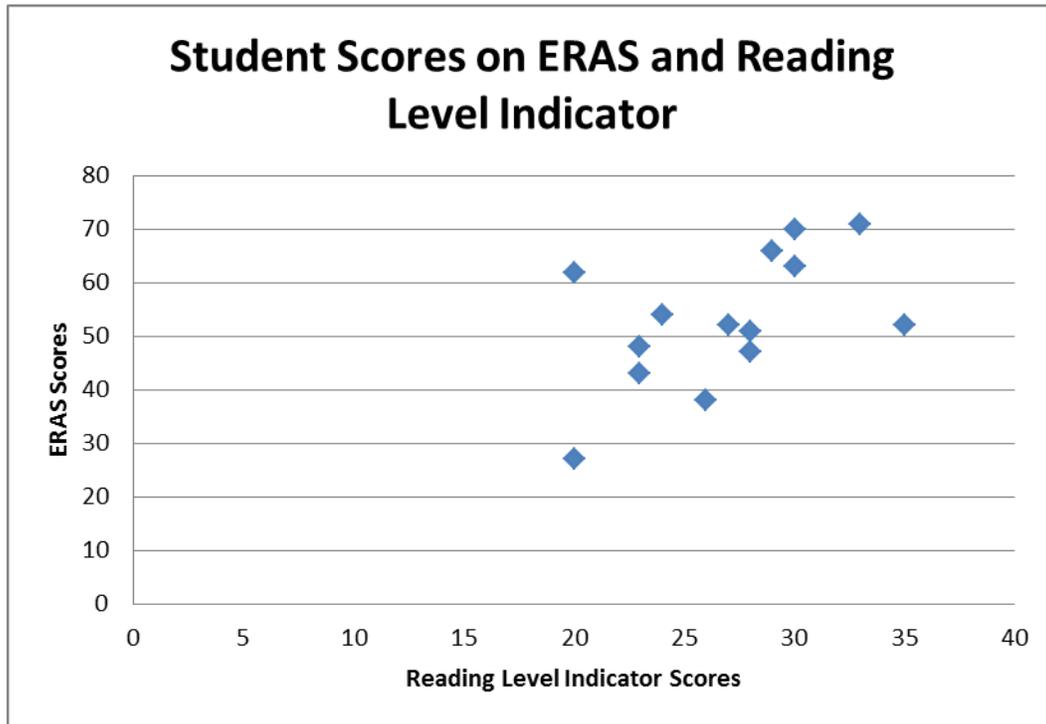


Table 3 demonstrates using a scatterplot the correlation between the two instruments (ERAS and Reading Level Indicator). Based on the data, there is a slightly positive correlation. This correlation may be impacted by the low number of participants in this study. Although the correlation is slightly positive, the researcher hypothesized a stronger correlation between the two test scores. This study is similar to the one performed by McKenna, Kear and Ellsworth (1995) which indicated a positive relationship between student reading achievement and student reading attitude.

Discussion

The test group was relatively small with 14 out of the 25 children returning their parent permission slips. The study was limited by constraints such as parent permission. If the test group had been larger, the results may have been different as indicated in the result section. The

classroom was slightly crowded with 25 students at individual desks that were pushed together forming tables. Since testing took place after lunch and recess, the students seemed restless and uninterested at times in testing. It has been proven that short-term memory performance is higher in the morning (Muyskens & Ysseldyke, 1998, p. 412). The time of day that the study was completed (in the afternoon) may be a contextual factor that affects the results.

The researcher expected a stronger and more positive correlation between the student test results, indicating a strong relationship between student reading attitude and student reading achievement. The researcher hypothesized that there would be a strong positive correlation between students' scores in the ERAS and the Reading Level Indicator. The data from this study supported the hypothesis and is similar to previous studies (McKenna, 1995).

Although the correlation between student reading attitude and student reading achievement was not strong, it can still be supposed that if a student has a positive attitude toward reading, he or she may achieve higher in reading. This relationship between attitude and achievement indicates that educators who model positive emotions toward reading in an effort to foster a love of reading in students.

Conclusion

This research is significant to the field of special education and general education because it demonstrates that there is a connection between reading attitudes and reading achievement. It explores the effects of attitude and achievement, which is significant to educators. A larger and more comprehensive study of student attitude and achievement would create more reliable and valid data. Based on the results of this study, there are multiple ways to positively affect student reading attitude in order to increase student reading achievement.

In addition to modeling positive behavior, teachers can be positive influences on student attitudes toward reading through specific reading instruction interventions. By individualizing reading instruction for each child, teachers can decrease student frustration with reading thereby promoting positive attitudes toward reading at home and at school. Effective teachers will share reading experiences with their students in order to model a passion and a love of reading before their students (Corcoran, p. 141). Teachers need to make every effort to provide reading materials that relate to the students' interests. Topics of interest may include celebrities, sports, popular cultures, and items that address multicultural topics (Hughes-Hassell, p. 44). CSR (Collaborative Strategic Reading) is a set of reading comprehension strategies that aim to improve students' ability to understand expository text. Within CSR, the teacher models the appropriate procedure and provides times for guided and individual practice. Tools such as CSR and peer-led discussion groups encourage students to work collaboratively and encourage positive views of reading. This research can be generalized to other academic topics such as mathematics, social studies and science. Teachers need to encourage students to have strategies in order to be successful readers and gather needed information from expository texts. Tools students can use for multiple topics include guided notes in order to direct students while they read.

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